ATTACHMENT A
MODULE 4 – SCHEMATIC DESIGN REVIEW COMMENTS

District: Town of Wilmington
School: Wildwood Elementary School
Owner's Project Manager: Symmes Maini & McKee Associates, Inc.
Designer Firm: Dore & Whittier Architects, Inc.
Submittal Due Date: May 1, 2025
Submittal Received Date: April 24, 2025
Review Date: April 24, 2025 – May 28, 2025
Reviewed by: E. Udy, V. Dagkalakou, C. Forde, C. Alles, K. Brown

MSBA REVIEW COMMENTS

The following comments[1] on the Schematic Design submittal are issued pursuant to a review of the project submittal document for the new construction of the proposed project and presented as a Schematic Design submission in accordance with the MSBA Module 4 Guidelines.

4.1 SCHEMATIC DESIGN SUBMITTAL

Overview of the Schematic Design Submittal	Complete	Provided; *Refer to comments following each section*	Not Provided; *Refer to comments following each section*	Receipt of District's Response; *To be filled out by MSBA Staff*
Schematic Design Submittal Notification	☒	☐	☐	☐
OPM Certification of Completeness and Conformity	☒	☐	☐	☐
4.1.1 DESE Submittal	☐	☒	☐	☐
4.1.2 Schematic Design Binder	☐	☒	☐	☐
4.1.3 Schematic Design Project Manual	☐	☒	☐	☐
4.1.4 Schematic Design Drawings	☐	☒	☐	☐

Note that Module Four states that "MSBA will not accept incomplete submittals, submittals that have not been reviewed by the OPM or submittals for which the estimated project costs exceed the District's project budget. Updates to the Total Project Budget that do not reflect the scope and schedule represented in the Schematic Design submittal will not be accepted. All value engineering activities must be complete, and the results incorporated into the Schematic Design documentation prior to being submitted to the MSBA."

[1] The written comments provided by the MSBA are solely for purposes of determining whether the submittal documents, analysis process, proposed planning concept and any other design documents submitted for MSBA review appear consistent with the MSBA's guidelines and requirements, and are not for the purpose of determining whether the proposed design and its process may meet any legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed design and process meet any applicable professional standard of care or any other standard of care. Project designers are obligated to implement detailed planning and technical review procedures to effect coordination of design criteria, buildability, and technical adequacy of project concepts. Each city, town and regional school district shall be solely responsible for ensuring that its project development concepts comply with all applicable provisions of federal, state, and local law. The MSBA recommends that each city, town and regional school district have its legal counsel review its development process and subsequent bid documents to ensure that it is in compliance with all provisions of federal, state and local law, prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project's planning process or plans and specifications.

4.1.1 DESE SUBMISSION

Provide the following Items		Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	Cover Letter	☒	☐	☐	☐
2	Special Education Delivery Methodology Letter	☒	☐	☐	☐
3	Signed Educational Space Summary	☐	☒	☐	☐
4	Floor Plans	☐	☒	☐	☐
5	Special Education Adjacency Table	☐	☒	☐	☐

MSBA Review Comments:

3, 4, 5) Subsequent to receiving the submittal, the MSBA requested revisions to the Department of Elementary and Secondary Education ("DESE") submittal. Upon receipt of the revised information, received on May 12, 2025, the MSBA forwarded to DESE for review and approval.

No further review comments for this section.

4.1.2 SCHEMATIC DESIGN BINDER

Provide the following Items		Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response *To be filled out by MSBA Staff*
1	Introduction				
	a) Summary of the MSBA approved Preferred Schematic	☒	☐	☐	☐
	b) Community outreach overview	☒	☐	☐	☐
	c) The District's Total Project Budget for the proposed project	☒	☐	☐	☐
	d) Updated description of the project	☒	☐	☐	☐
	e) Site Plan, Floor Plans, and Elevations	☒	☐	☐	☐
	f) A copy of the MSBA Preferred Schematic Report review and corresponding District response	☒	☐	☐	☐
2	Final Design Program				
	a) General and specific architectural characteristics desired	☒	☐	☐	☐
	b) Educational space summary spreadsheets	☐	☒	☐	☐
	c) Narrative of how the proposed educational space summary supports the educational program	☒	☐	☐	☐
	d) Instructional technology (existing and proposed)	☐	☒	☐	☐
	e) Functional relationships and critical adjacencies that informed the basis of design	☒	☐	☐	☐
	f) Security and visual access requirements	☐	☒	☐	☐

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response *To be filled out by MSBA Staff*
	g) Site development requirements	☐	☒	☐	☐
	h) Description of desired features of the school	☒	☐	☐	☐
3	Traffic Analysis	☐	☒	☐	☐
4	State Site Permit Tracking Worksheet	☐	☒	☐	☐
5	Updated site vulnerability risk assessment evaluation for the selected site including a description of specific identified site resiliency concerns, design mitigation options and resulting design decisions by the District	☒	☐	☐	☐
6	Environmental and Existing Building Assessment	☐	☒	☐	☐
7	Geotechnical and Geo-environmental Analysis	☐	☒	☐	☐
8	Code Analysis and List of Permitting and other Regulatory Filing Requirements	☐	☒	☐	☐
9	Utility Analysis and Soils Analysis for on-site septic/sewage treatment facilities	☒	☐	☐	☐
10	Massing Study	☒	☐	☐	☐
11	Narrative Building Systems Descriptions				
	a) Sustainable design elements	☒	☐	☐	☐
	b) Building structure	☒	☐	☐	☐
	c) Plumbing and HVAC	☒	☐	☐	☐
	d) Fire Protection	☒	☐	☐	☐
	e) Verify adequate water capacity for new system	☐	☐	☒	☐
	f) Confirm if a fire pump will be required	☐	☒	☐	☐
	g) Electrical	☒	☐	☐	☐
	h) Information Technology	☒	☐	☐	☐
12	Sustainable Building Design Guideline Documents	☐	☒	☐	☐
13	Analysis of the design's compliance with ADA and the MAAB	☒	☐	☐	☐
14	Timeline associated with filing the Project Notification Form with Massachusetts Historical Commission ("MHC") and obtaining MHC approval prior to construction bids.	☐	☒	☐	☐
15	Room Data Sheets	☐	☒	☐	☐
16	Proposed construction methodology (DBB / CMR)	☒	☐	☐	☐
17	District's anticipated reimbursement rate w/ incentive points	☐	☒	☐	☐
18	Total Project Budget spreadsheet and summary of cost reconciliation of the Designer's and OPM's estimates.	☐	☒	☐	☐

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response *To be filled out by MSBA Staff*
19	Designer's Construction Cost Estimate	☐	☒	☐	☐
20	Independent OPM Construction Cost Estimate	☐	☒	☐	☐
21	Updated Project Work Plan – indicating changes	☒	☐	☐	☐
	a) Project Directory	☒	☐	☐	☐
	b) Roles and Responsibilities	☒	☐	☐	☐
	c) Communications and Document Control Procedures	☒	☐	☐	☐
	d) Designer's Work Plan Project Schedule	☐	☒	☐	☐
22	Local Actions and Approvals Certification				
	a) Completed and signed certification	☒	☐	☐	☐
	b) SBC meeting dates, agendas, and attendees	☒	☐	☐	☐
	c) Certified SBC meeting notes with vote language and vote results	☐	☒	☐	☐
	d) Description of materials presented at such SBC meetings and where those materials may be viewed	☒	☐	☐	☐

MSBA Review Comments:

2b) Please refer to detailed comments in 'Attachment B'.

2d) A narrative of the existing Instruction Technology was not provided with the submittal. Please provide in response to these review comments.

Response:

Instruction Technology Current Practices

Hardware

Carts of Chromebooks are supplied to each elementary school. The North Intermediate School has a cart of twenty-five (25) for each classroom. The Woburn Street School has ten (10) shared Chromebook carts. The Wildwood Early Childhood Center has approximately fifty (50) Chromebooks, some set up as centers in classrooms while others are in carts. Chromebooks do not go home with the students. A pilot program of a cart of touchscreen Chromebooks was deployed this year at the Woburn Street 1st grade. Special Education Program classrooms have their own Chromebooks and iPads. Some students in program classrooms have iPads specifically assigned to them.

Faculty and administration are assigned a PC laptop with a docking station, external monitor, keyboard, and mouse. Administrative assistants have a desktop PC. Classrooms are equipped with interactive projectors and document cameras. Shared access to some robotic hardware is coordinated through the Instructional Technology Specialist. Educational Assistants are assigned a Chromebook.

Black and white networked Multifunction Printers (copiers) are located in each school, providing duplication and scanning. Additional black and white laser printers are scattered in various locations. Each building has one color laser printer, and some have a poster printer.

Classrooms requiring assisted listening access are provided portable units with a teacher-worn microphone and speaker. Larger display Chromebooks are provided to students with vision issues. In some cases, Google Meet or Zoom has been used to display information on a projector to the vision-impaired student's Chromebook.

Staffing

Wilmington currently has one dedicated Instructional Technology Specialist who supports the six elementary schools. This staff member collaborates with teachers to support technology integration through co-teaching, model teaching, and lesson planning support. The Instructional Technology Specialist brings coding, robotics, STEM, and Internet safety lessons into the classroom through the classroom teacher. The faculty schedules time with the Instructional Technology Specialists on an as-needed basis.

Technical support is handled by shared district staff with Desktop Technicians (3), a System Administrator, a Network Administrator, and a Director of Technology & Digital Learning managing their needs.

Networking

The Wildwood Early Childhood Center, Woburn Street School, and North Intermediate School have a fully wired and wireless network. Wireless access points are installed in each classroom and common areas. A limited number of wired network drops are located in classrooms, offices, and other locations. The buildings connect to the town fiber optic network via a 10 GB connection. Internet access is shared with other schools in the district via multiple load-shared 1 GB connections. Internet filtering is managed at the firewall level and through Google Management controls.

2f) The information provided indicates that the Design team met with 'Public Safety Officials'. In response to these review comments, please confirm that first-responding personnel have and will continue to be consulted throughout the planning and design process.

Response: First-responding personnel from the Police and Fire Departments have and will continue to be consulted throughout the planning and design process.

2g) In response to these review comments, please include information that describes the process, including those involved in making decisions associated with incorporating site improvement components such as landscape features, trees, planting, irrigation, orchard, etc. The MSBA encourages the District to include facilities and maintenance personnel responsible for the future care and maintenance of the proposed site components in an effort to fully understand the time, care, and resources required to maintain the intended site features. Please acknowledge.

Response: The School Building Committee established a Site and Landscape Working Group to review site improvement components for the project. Members represent the SBC, District and Town, including

personnel from the Department of Public Works responsible for maintaining school buildings and grounds.

Site/Landscape Working Group Members:

Dennis Kelley Town OF Wilmington Public Buildings Superintendent, SBC Member

Jamie Magdali – Department of Public Works, Tree Warden and Arborist

Jerry Lawrenson - Department of Public Works

Kate Bissell – Principal at Wildwood, SBC Member

Stacey Scott – Principal at Woburn Street, SBC Member

Diane Carreiro – Principal at North Intermediate

Justin Cusce, SBC Member

Stephen Tuner, SBC Member

Design Team Participants: Lee Dore (D+W), Rani Philip (D+W), Bryce Taft (D+W), Eric Wilhelmsen (CDW), Jade Cummings (TerraInk), Kelly Ashton (TerraInk)

OPM: Julie Leduc (SMMA), Sarah Traniello (SMMA)

In addition, Brett Sawin - Wilmington Recreation Director, and Dennis Ingram - Wilmington Public Schools Athletic Director were, and will continue to be, consulted in subsequent phases.

The Site and Landscape Working Group met on January 8, 2025 and January 22, 2025 to review goals, requirements, expectations and desired components as it relates to site related features. The Site and Landscape Working Group have and will continue to be consulted throughout the planning and design process.

3) The information provided indicates that the District is proposing 193 parking spaces and states the following:

> *"The proposed site design provides separated onsite bus, parent, and Pre-K drop off zones and parking for 193 cars. One hundred five (140) parking spaces will be dedicated to the school staff with 20 spaces for the dual-use Pre-K park-and-drop off/ visitors lot. Remaining spaces are intended for event parking. Wilmington Zoning has a requirement for "Educational" parking spaces: 1 space for each staff position, plus 1 space for each five persons of rated capacity of the largest auditorium, and 1 space for each student vehicle which can be expected at only one time on the premises. The proposed gym is sized for 1,115 people, which equates to 223 parking spaces. An additional 140 staff parking spaces totals 363. Ideally the gymnasium would be used after hours for events. That may reduce the requirements for event parking to just the 223 spaces. Currently the site design includes 193 proposed spaces."*
>
> *"The number of 363 parking spaces would be burdensome and the design team will aim to seek relief from the zoning requirement recognizing several points of view."*

In response to these review comments, provide a timeline associated with seeking a variance to the zoning requirement and keep the MSBA updated of any impacts to the potential project.

Response: Variance to zoning requirements will begin in the next phase as indicated in the project schedule. The MSBA will be updated of any impacts to the project in subsequent phases.

Additionally, the information provided states the following:

- *"It is recommended that further study be conducted by the Town of Wilmington to address the existing operational deficiencies at the intersection of Salem Street and Middlesex Avenue in a manner that also provides excess capacity for the projected new trips from the proposed school."*

In response to these review comments, please provide the timeline associated with the additional traffic analysis into the overall project schedule. Also, please note and acknowledge that all cost increases subsequent to a Project Scope and Budget Approval from the MSBA's Board of Directors will be the sole responsibility of the District and considered ineligible for reimbursement. Additionally, the information provided states the following:

> *"The town intends to explore potential off-site improvements at the intersections noted in the traffic study in conjunction with the proposed project."*

Subsequent to receiving the submittal, the OPM confirmed via email on April 30, 2025, that the proposed project does not include scope or costs associated with off-site improvements and the District will address the items separate from the project. In response to these review comments, please confirm this is accurate.

Also, please note that all costs associated with off-site improvements are ineligible for MSBA reimbursement.

Response: Additional traffic analysis will commence in the next phase of the project, Design Development. It is noted and acknowledged that all cost increases subsequent to a Project Scope and Budget Approval from the MSBA's Board of Directors will be the sole responsibility of the District and considered ineligible for reimbursement. It is also noted that all costs associated with off-site improvements are ineligible for MSBA reimbursement.

In response to these review comments, please provide information on the number of students who walk or bike from the neighborhood to the west of the site via the public path from Arlene Street. In future submissions consider pedestrian safety at this location including relocating the crosswalk to the terminus of this pathway or alternatively continuing the concrete sidewalk along the north of the access drive to connect with this path.

Response: Pedestrian/biker data was not collected specifically at Arlene Avenue. Pedestrian/biker information and safety will be considered for future submissions.

4) The State Site Permit Tracking Worksheet does not include Filing Dates or Expected Response Dates. In response to these review comments, provide an updated and signed State Site Permit Tracking Worksheet that includes this information. If there is not a final date yet, a projected date is acceptable.

Response: An updated and signed State Site Permit Tracking Worksheet is attached.

Additionally, the information provided in the District's response to MSBA's PSR review comments indicated Project Notification Form (PNF) would be filed with the Massachusetts

Historical Commission (MHC) in February 2025 with an expected response date of April 2025. However, the information provided in the SD State Site Permit Tracking Worksheet states: "The existing buildings do not fall on any historic register and therefore do not require any MHC permitting." In response to these review comments, please confirm that a PNF has been submitted to and received by the MHC.

Response: Research indicated the existing building does not fall on any historic register. As reflected on the updated State Site Permit Tracking Worksheet, anticipated filing of Project Notification Form to Massachusetts Historic Commission is 6/12/25.

As previously stated, MHC approval is required prior to construction bids. Also, please note that all proposed projects that will receive funding from any state or federal agency must submit a PNF to MHC for review and comment. Please acknowledge.

Response: It is acknowledged that all proposed projects that will receive funding from any state or federal agency must submit a PNF to MHC for review and comment and MHC approval is required prior to construction bids.

6) Please note that all costs associated with the removal of asbestos-containing floor and ceiling materials are ineligible for MSBA reimbursement. Also, the project team should be aware of the current policies associated with MSBA's participation in the abatement and removal of hazardous materials. Please note that work associated with removing contaminated soil and materials is considered ineligible for reimbursement. Please acknowledge and confirm the estimated cost for these items is accurately represented in the total project budget spreadsheet.

Response: It is noted that work associated with removing contaminated soil and materials is considered ineligible for reimbursement. It is acknowledged and confirmed the estimated cost for these items is accurately represented in the total project budget spreadsheet.

7) The Geotechnical and Geoenvironmental reports by Lahlaf Geotechnical Consulting and PEER Consultants stated the following recommendations:

> *"Early in Design Development phase, the project will undertake additional geotechnical exploration of the site as recommended in Section 3.1.3 of the Lahlaf report. This investigation will confirm soil conditions, foundation design, and water table elevations in an effort to further refine developmental costs for the project. Similarly, PEER Consultants will be engaged as the project LSP to continue exploration of the site geo-environmental considerations. Consideration of site cut & fill analysis as well as the anticipated quantity of presumed "natural arsenic" containing soil will be evaluated to determine if and how such soils can be re-used on site and how much can be removed and disposed of off-site."*

In response to these review comments, please confirm that the recommendations and/or potential impacts are represented in the proposed scope of work and accounted for in the cost estimates.

Response: Confirming that the recommendations and/or potential impacts are represented in the proposed scope of work and accounted for in the cost estimates.

Also, please note and acknowledge that all cost increases subsequent to a Project Scope and Budget Approval from the MSBA's Board of Directors will be the sole responsibility of the District and considered ineligible for reimbursement.

Response: It is noted and acknowledged that all cost increases subsequent to a Project Scope and Budget Approval from the MSBA's Board of Directors is the sole responsibility of the District and considered ineligible for reimbursement.

8) Several of the permitting reviews and approvals listed in the Permitting Requirements do not indicate when these items will be complete. In response to these review comments, please provide the anticipated timeline for the following:

- *Site plan review;*
- *Project Notification Form ("PNF) with the Massachusetts Historic Commission ("MHC");*
- *Notice Of Intent ("NOI");*
- *Wilmington Department of Public Works ("DPW"); and,*
- *National Pollutant Discharge Elimination System ("NPDES") with Environmental Protection Agency ("EPA") NOI.*

Response: The Project Schedule is updated to include the anticipated timelines for permitting review and approval.

In response to these review comments, please confirm all applicable federal, state, regional, and local codes are identified and incorporated into the project schedule. Also, please note that all permitting requirements and approvals must be obtained prior to construction bidding. Please acknowledge.

Response: Confirming that applicable federal, state, regional, and local codes are identified and incorporated into the project schedule to the best of our knowledge. Acknowledged that all permitting requirements and approvals must be obtained prior to construction bidding.

Additionally, the information provided states the following:

> *"The existing North Intermediate School site has a Municipal Open Space designation with "Limited Protection". The Town of Wilmington's Open Space and Recreation Plan (2021) explains the following regarding Open Space protected through Town Ownership (Page 51, Page 54):*
>
> > *"The next level of open space protection is through ownership by the Town of Wilmington… Land under the general control of the Town provides some level of protection. Development by the Town of parcels under its control will, in most instances, require the expenditure of Town funds and be subject to a majority vote of Town Meeting."*
>
> *The site use will not change with the project and continue as a town property used for educational purposes. Town votes planned in September 2025 related to this project are for the expenditure of Town funds and for a majority vote by the Town for the project to move forward."*

In response to these review comments, identify any potential challenges and steps that may be required for these resolutions, if any. Additionally, please ensure that future versions of the project schedule will include dates of anticipated approvals and key steps of the proposed site.

Response: The project does not anticipate challenges regarding the Municipal Open Space designation as the use of the property is to remain for educational purposes.

11e, f) The information provided states:

"A fire hydrant flow test will be provided in the next phase to confirm adequate volume to serve the proposed sprinkler system for the project. A fire pump is included in the SD cost estimate and space for a fire pump room can be accommodated in the current plan if required. Hydrant locations will need to be reviewed by the Fire Chief."

Also, the information provided does not indicate if the water capacity is adequate for the new system. In response to these review comments, please provide additional information to confirm whether the water capacity is adequate for the new system and if a fire pump will be required.

Response: Adequacy of the water capacity for the new system and the requirement for a fire pump will be confirmed in the next phase of the project.

12) The proposed project appears to meet the minimum sustainability requirements described in the MSBA Green Schools Program. In addition, the submittal notes a goal of 4% additional reimbursement, including 1% additional reimbursement in the three applicable IAQ LEED points, and 3% additional reimbursement by meeting the MA "Opt-in" Specialized energy code.

Please note that if the District does not meet the additional incentive requirements of the MSBA Green Schools Program, the District will not qualify for some or all of these incentive points, and the MSBA will adjust the reimbursement rate accordingly.

Response: Noted.

14) The information provided with the PSR submittal indicated a Project Notification Form ("PNF") would be submitted to the Massachusetts Historical Commission ("MHC") when the project enters the Schematic Design phase; however, the submittal did not include any information regarding the status of the PNF. Please note MHC approval is required prior to construction bids. The District should keep the MSBA informed of any decisions and/or proposed actions and should confirm that the proposed project is in conformance with Massachusetts General Law 950, CRM 71.00. In response to these review comments, please provide the timeline associated with filing a PNF with the MHC for review and approval. Additionally, please see comment in Item 4, above.

Response: As noted in Item 4 above, research indicated the existing building does not fall on any historic register and anticipated filing of Project Notification Form to Massachusetts Historic Commission is 9/17/25. Refer to updated State Site Permit Tracking Worksheet and updated Project Schedule.

15) Several Room Data Sheets (e.g. "General Classroom 345") indicate that specialties are shown on the attached plan rather than listing out the items. However, bulletin boards, marker boards, etc. are not identified on those plans, so it is unclear where and how many of these items exist. Please update and provide the information requested above in response to these review comments.

Additionally, in response to these review comments, please coordinate and address the following items:

- *Room Data Sheets have not been provided for the following spaces:*
  - *Language Based Programs (Grades1-2 and 3-5)*
  - *Extended Learning Areas (Rooms:105E, 131E, 131F, 205E, 230E, 230F, 301A, 333E, 333F);*
  - *Dry Storage; and,*

    - *Mail and Time Room. Please note while the layout for the Teacher's Work Room may include Mail and Time Room, the square footage noted does not reflect this. Please update accordingly.*

- *The Kitchen/Servery layout plan should be revised to include all required kitchen equipment.*
- *The Room Data Sheets for the 'Custodial & Maintenance' category do not currently indicate room areas. Please update the Room Data Sheets to include this information.*
- *For the Pre-Kindergarten Classroom Room Data Sheet, the square footage is missing for the toilet room. Please provide an updated Room Data Sheet that incorporates the toilet room square footage.*
- *The Fixtures and Furnishings for both General and Kindergarten Classrooms should be described similarly to how they are presented in the ELL Classroom room data sheet.*
- *Please correct room quantities for the following spaces:*
    - *STE Rooms;*
    - *Flex Classrooms; and,*
    - *Strides Pre-Kindergarten and -Kindergarten Classrooms.*
- *The ELL Classroom layout does not include a sink, as it is called for in plumbing criteria. Please update accordingly.*
- *The Teacher Collaboration layout includes drawing includes a potential divider wall that is not described. Please clarify its function and presence.*
- *The Extended Learning Area Room Data Sheets do not indicate square footage and are missing furniture information and location of the interactive projector, as described in the 'Additional requirements'. Additionally, sinks shown in building plans for the Pre-Kindergarten and Kindergarten Extended Learning Areas, are missing from the layouts, and not included in the plumbing criteria.*
- *The Strides Pre-Kindergarten/Kindergarten Classroom describes a communicating door from the adjacent room that is not shown in the plans. Please revise and confirm the correct room quantity.*
- *The Special Education rooms reference "mobile marker boards" as room dividers, but these are not shown in the layout or furniture list. Please revise as needed.*
- *On page 253 a Toilet Roon is described while the layout shown is of a Calming Room. Please coordinate and correct as necessary.*
- *The Art Classroom's plumbing criteria should include two sinks, as is shown on the layout plan. Also, the layout should indicate pottery wheel locations as described in Furnishings and Fixtures. Please update accordingly.*
- *Please confirm the quantity of both Music and Instrumental Classrooms.*
- *Lockset information is missing from the following areas:*
    - *Physical Education Storage;*
    - *Library;*

- *Kitchen/Servery;*
- *Quiet Cafe 1-3; and,*
- *Chair storage.*

Please include this information with the room data sheets.

- *The user description for the OT Classroom may be describing the larger PT space. Please review and coordinate.*
- *The Cafeteria's plumbing criteria indicates handwashing sinks, which are not currently located on the room layout. Please review and coordinate accordingly.*
- *The Assistant Principal ("AP") Office adjacency description references inclusion in the Administration Suite; however, the AP offices are located on upper floors. Please coordinate.*
- *Consider separating the Librarian Workroom square footage from the overall Media Center square footage, as it is not shown in the Media Center layout. Confirm the location of a sink in the Workroom, and ensure it is included in the plumbing criteria.*
- *Consider revising the layout to distinguish the Principal's Secretary office from the General Office/Waiting area layout as it is separately shown in the document.*

Response: Refer to updated Room Data Sheets addressing the above comments.

17) The District's base reimbursement rate for calendar year 2025 is 49.11%, which will be utilized when establishing the MSBA's potential grant.

Additionally, the information provided indicates the District's Maintenance points as 1% and the total reimbursement rate including the incentive points (1% Maintenance and 4% Green Schools), however, the District's maintenance points are 1.67%.

Please note and acknowledge that the MSBA does not calculate a potential grant until the conclusion of the schematic design phase and the District and its project team should take caution in communicating this information as the project further develops.

Response: Noted and acknowledged.

18, 19, 20) Please note that in the subsequent phases of design, the District must clearly describe any adjustments to the scope of work established at schematic design including the potential incorporation of add and/or deduct alternates and how these may impact the approved scope and budget established at schematic design. Any associated increase in cost established at schematic design as a result will be considered ineligible for reimbursement. Please acknowledge.

Response: Noted and acknowledged.

The information provided by Fontain Brothers (CMR) indicates potential value engineering changes. In response to these review comments, please clarify whether the building plans and total project budget provided in this submittal account for these value engineering exercises or provide additional information on when these changes might be considered and implemented.

Items evaluated and accepted in value engineering efforts should continue to be provided with all future project submittals. Please acknowledge.

Response: The list of potential value engineering items is not currently reflected in the total project budget. However, it serves as a resource for future budgeting considerations, should the need arise to implement cost-saving measures.

21d) In response to these review comments, provide an updated schedule that indicates the dates associated with the following:

- *The timeline for all the permitting requirements;*
- *Sustainable Design Building milestones:*
  - *Project registration;*
  - *Provisional review submittal; and*
  - *Final review submission.*
- *Receipt of general contractor bids or execution of the guaranteed maximum price (GMP);*
- *Notice to proceed for construction;*
- *Key construction milestone dates and project phases:*
  - *Occupancy date.*

Additionally, for Design Development ("DD") and 60% and 90% Construction Document ("CD") submissions, the schedule must include 21 calendar days for the MSBA to review each submission. Include 14 calendar days for the project team to respond to MSBA's review comments and incorporate those responses into the project documents prior to the next submission or finalizing project documents to make available to bidders and note that the minimum duration between each MSBA design submission (DD, 60% CD, and 90% CD) is 35 calendar days. In all subsequent project submittals, provide a schedule that includes these minimum review durations. Please acknowledge.

Response: In all subsequent project submittals, schedules will reflect minimum MSBA review durations.

22c) Provide a certified copy of the approved minutes when these are available.

Response: Certified copy of approved minutes from April 15, 2025 is enclosed.

No further review comments for this section.

4.1.3 SCHEMATIC DESIGN PROJECT MANUAL

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	Outline specifications in Uniformat Divisions	☐	☒	☐	☐
2	Itemization of all proprietary items (if any) with an explanation of each, explanation of the public interest for each item, and certification of local authorization that each item complies with state and local regulations, policies and guidelines.	☐	☒	☐	☐

MSBA Review Comments:

1) The MSBA notes several sections of the specifications do not provide a minimum of three source items/products and/or basis of design. In subsequent phases of design please ensure that a minimum of three named manufacturers are provided. Please acknowledge.

Response: Acknowledged.

2) The information provided identifies several proprietary items. The District and Design team is reminded that for each proprietary item, the District will be required to provide an affidavit which shall indicate that an elected body of the District (school committee, city or town council, or selectmen, but not ad-hoc building committee) has been presented with proposals for proprietary requirements approval action, has had an opportunity to investigate, or to require staff or consultant investigation upon each item so proposed, and has majority voted in an open public session that it is in the public interest to do so. Provide the MSBA with a certified copy of the vote of the elected body in subsequent submittals. For each item of material or equipment, the specifications shall provide for a minimum of three named brands of material or equipment and the words "or equal" or a description of material or equipment which can be met by a minimum of three manufacturers or producers, and the words "or equal". Proprietary products shall not be specified except as provided by M.G.L. c. 30, § 39M; however, when they are specified, proprietary specifications are subject to the "or equal" provisions of c. 30, § 39M.

Response: Acknowledging that the necessary procedures will be followed for any proprietary items proposed.

Additionally, please confirm that all system controls are being coordinated with the Designer's sub-consultants.

Response: Confirming that system controls will be coordinated with Designer sub-consultants.

No further review comments for this section.

4.1.4 SCHEMATIC DESIGN DRAWINGS

	Provide the following Items	Complete; *No response required*	Provided; *District's response required*	Not Provided; *District's response required*	Receipt of District's Response; *To be filled out by MSBA Staff*
1	Existing site plan	☒	☐	☐	☐
2	Site development plan	☐	☒	☐	☐
3	Schematic building floor plans	☐	☒	☐	☐
4	Interior elevations of a typical general classroom, and typical Pre-K/K Classroom and typical Science Classroom/Lab as applicable.	☐	☒	☐	☐
5	Schematic exterior building elevations	☒	☐	☐	☐

MSBA Review Comments:

2) In response to these review comments, please review and respond to the following:

- *Confirm all work is within zoning setbacks;*
- *Note that setbacks should be included in future submittals;*

- *Indication of Wetlands buffer zone;*
- *Emergency access; and,*
- *Future areas of expansion are not specifically identified on the site development plans. Please clarify.*

Response: Confirming all work is within zoning setback.

In all subsequent project submittals, setbacks will be included.

Wetlands are non-jurisdictions with no buffer zone required.

Emergency access is provided with entry to the site from both Salem and Ballardvale streets and connecting to a roadway circulating the building and site.

Future areas of expansion are indicated on the west end of academic wings as indicated on drawing sheet L.101.

3) In response to these review comments, please provide the following:

- *A narrative that describes the proposed roof access for the proposed project.*
- *Confirm that roof access provisions have been discussed with the District's maintenance, facilities, custodial personnel and local safety officials to ensure an appropriate level of access and safety has been incorporated in the proposed project. Clarify and confirm that walkway pads will be provided from all roof access points to all roof top mechanical units, skylights, and other parts of the roof that require access for maintenance and service.*
- *Also, the building floor plans do not include the gross square footage for each floor or overall dimensions. Please note this information should be included in future submittals.*

Response: Roof access is provided at (3) different locations throughout the building.
Stair 4 provides an additional access run from floor Level 3 to the Roof. This location will cover the entire Classroom wing roof.

The Mechanical Pump Room at Level 2 provides an exterior door for access to the Kitchen Roof. In addition, a roof ladder provides access from the single-story Kitchen Roof to the two story Cafeteria/Gymnasium/Library.

All roof access points have been reviewed and confirmed with the District's maintenance, facilities, custodial personnel and local safety officials. Roof walkway pads will be provided from all access points to service mechanical rooftop units.

See drawing sheets A1.10, A1.20 and A1.30 for gross square footage and overall dimensions.

4) In response to these review comments, please confirm that one of the sinks provided in the General Classrooms and Kindergarten Classrooms complies with ADA guidelines and the associated sink cabinet meets the ADA requirements.

Response: Confirming that one of the sinks provided in the General Classrooms and Kindergarten Classrooms complies with ADA guidelines and the associated sink cabinet meets the ADA requirements.

No further review comments for this section.

Additional Comments:

- *On December 13, 2024, the MSBA Board of Directors approved the District's Preferred Option PK-5 N.1 for a 163,573 square foot new construction option with an estimated total project cost of $186,619,347. This Schematic Design submittal under review shows this same option currently as a 165,035 square foot new construction option with an estimated total project cost of $173,250,626. This represents an increase of 1,462 square feet and a decrease of $13,368,721. In response to these review comments, please provide a detailed description of the cost drivers associated with the decreased costs.*

Response: The greatest cost drivers associated with the decreased costs from Preferred Schematic Report to Schematic Design:

- The Geothermal HVAC System was not selected as the preferred solution resulting in $7,074,162 construction cost savings.
- Despite the increase in building square footage, the estimated building cost per SF was reduced by $39.73 based on more detail schematic design drawings and specifications, resulting in a building cost reduction of approximately $5.5M.

End

ATTACHMENT B
MODULE 4 – SCHEMATIC DESIGN SPACE SUMMARY REVIEW

District: Town of Wilmington
School: Wildwood Elementary School
Owner's Project Manager: Symmes Maini & McKee Associates, Inc.
Designer Firm: Dore & Whittier Architects, Inc.
Submittal Due Date: May 1, 2025
Submittal Received Date: April 24, 2025
Review Date: April 24, 2025 – May 28, 2025
Reviewed by: E. Udy, V. Dagkalakou, C. Forde, C. Alles; K. Brown

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The following comments[1] on the Schematic Design submittal are issued pursuant to a review of the project submittal document for the new construction of the proposed project and presented as a Schematic Design submission in accordance with the MSBA Module 4 Guidelines.

The MSBA considers it critical that the Districts and their Designers aggressively pursue design strategies to achieve compliance with the MSBA guidelines for all proposed projects in the new program and strive to meet the gross square footage allowed per student and the core classroom space standards, as outlined in the guidelines. The MSBA also considers its stance on core classroom space critical to its mission of supporting the construction of successful school projects throughout the Commonwealth that meet current and future educational demands. The MSBA does not want to see this critical component of education suffer at the expense of larger or grander spaces that are not directly involved in the education of students.

The following review is based on a new construction project with an agreed upon design enrollment of 755 students in grades Kindergarten through 5, plus Pre-Kindergarten.

The MSBA review comments are as follows:

- **Core Academic** – The District is proposing a total of 47,700 net square feet ("nsf") which exceeds the MSBA guidelines by 13,650 nsf. The proposed area in this category has increased by 2,000 nsf since the Preferred Schematic Report ("PSR") submittal, due to relocation of student support services from the

[1] The written comments provided by the MSBA are solely for purposes of determining whether the submittal documents, analysis process, proposed planning concept and any other design documents submitted for MSBA review appear consistent with the MSBA's guidelines and requirements, and are not for the purpose of determining whether the proposed design and its process may meet any legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed design and process meet any applicable professional standard of care or any other standard of care. Project designers are obligated to implement detailed planning and technical review procedures to effect coordination of design criteria, buildability, and technical adequacy of project concepts. Each city, town and regional school district shall be solely responsible for ensuring that its project development concepts comply with all applicable provisions of federal, state, and local law. The MSBA recommends that each city, town and regional school district have its legal counsel review its development process and subsequent bid documents to ensure that it is in compliance with all provisions of federal, state and local law, prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project's planning process or plans and specifications.

Administration to the Core Academic category. The District is proposing the following spaces:

- **Kindergarten Classrooms (with Toilet)** – The District is proposing (7) Kindergarten Classrooms that vary in size totaling 8,156 nsf, which is below the MSBA guidelines by 244 nsf. Based on the information provided, the MSBA accepts this variation to the guidelines. No further action required.
- **General Classrooms** – The District is proposing (30) 900 nsf General Classrooms totaling 27,000 nsf, which exceeds the MSBA guidelines by (3) classrooms and 1,350 nsf. Based on the grade configuration and number of classes required for each grade, the MSBA accepts this variation to guidelines. No further action required.
- **Science/Technology/Engineering ("STE") Room** – The District is proposing (1) 1,080 nsf STE Room which exceeds the MSBA guidelines. Based on the information provided, the MSBA accepts this variation to the guidelines. No further action required.
- **STE Storage Room** – The District is proposing (1) 120 nsf STE Storage Room associated with the STE Room, which exceeds the MSBA guidelines. Based on the information provided, the MSBA accepts this variation to the guidelines. No further action required.
- **English Language Learners ("ELL") Classrooms** – The District is proposing (2) 450 nsf ELL Classrooms totaling 900 nsf, which exceeds the MSBA guidelines. Based on the information provided, the MSBA accepts this variation to the guidelines. No further action required.
- **Extended Learning Areas (Kindergarten)** – The District is proposing (6) Extended Learning Areas (Kindergarten) that vary in size, totaling 744 nsf, which exceeds the MSBA guidelines. Please note, the MSBA guidelines include a range in classrooms sizes which allows flexibility for districts and designers to provide spaces for educational support area either in or outside of the classroom. The information provided indicates that the District is proposing (7) Kindergarten Classrooms totaling 8,156 nsf, which is 944 nsf below MSBA's maximum allowable area under guidelines for Kindergarten Classroom size. Therefore, based on the size and number of the proposed Kindergarten Classrooms, the MSBA will participate in the proposed 744 nsf associated with the Extended Learning Areas for Kindergarten. No further action required.
- **Extended Learning Areas (Grades 1-5) –** The District is proposing (24) Extended Learning Areas for grades 1-5, that vary in size, totaling 5,000 nsf, which exceeds the MSBA guidelines. The information provided indicates that the District is proposing (30) 900 nsf General Classrooms that are each 100 nsf below the MSBA's allowable maximum classroom size. Based on the size and number of the proposed classrooms, the MSBA will participate in 3,000 nsf associated with the Extended Learning Areas

for grades 1-5 and the remaining 2,000 nsf will be considered ineligible for reimbursement. Please acknowledge.

Response: Comment is acknowledged.

- **Teacher Collaboration**– The District is proposing (3) 900 nsf Teacher Collaboration spaces totaling 2,700 nsf, which exceeds the MSBA guidelines. Please note, the MSBA does not object to the District including these spaces in the proposed project; however, the square footage exceeding guidelines will be considered ineligible for reimbursement. Please acknowledge.

  Response: Comment is acknowledged.

- **Reading Specialist -** The District is proposing (6) 200 nsf Reading Specialist spaces, totaling 1,200 nsf, which exceeds the MSBA guidelines. Based on the information provided, the MSBA accepts this variation to the guidelines. No further action required.

- **Math Tutor**– The District is proposing (4) 200 nsf Math Tutor spaces, totaling 800 nsf, which exceeds the MSBA guidelines. Based on the information provided, the MSBA accepts this variation to the guidelines. No further action required.

- **Special Education** – The District is proposing a total of 19,010 nsf which exceeds the MSBA guidelines by 9,950 nsf. The proposed area in this category has not changed since the PSR submittal. Please note that the Special Education program is subject to approval by the Department of Elementary and Secondary Education ("DESE") and that formal approval of the District's proposed Special Education program is a prerequisite for executing a Project Funding Agreement with the MSBA. Please acknowledge.

  Response: Comment is acknowledged. DESE approval received May 16, 2025.

- **Art & Music** – The District is proposing a total of 5,075 nsf which meets the MSBA guidelines. The proposed area in this category has increased by 1,035 nsf since the PSR submittal. No further action is required.

- **Health & Physical Education** – The District is proposing a total of 12,300 nsf which exceeds the MSBA guidelines by 6,000 nsf. The proposed area in this category has not changed since the PSR submittal. Please note that square footage exceeding the MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

  Response: Comment is acknowledged.

  Additionally, please refer to the attached memo regarding the MSBA's policy on physical education square footage more than the MSBA guidelines. Note the District may choose to build a gymnasium and related spaces more than MSBA guidelines, but in no event shall the gymnasium exceed 12,000 nsf. The MSBA

will participate in a gymnasium of up to 6,000 nsf unless adjusted by the MSBA to increase teaching stations for enrollment and/or the educational plan.

- **Media Center** – The District is proposing a total of 4,068 nsf which meets the MSBA guidelines. The proposed area in this category has not changed since the PSR submittal. No further action required.
- **Dining & Food Service** – The District is proposing a total of 10,058 nsf which exceeds the MSBA guidelines by 600 nsf. The proposed area in this category has increased by 600 nsf since the PSR submittal. Please note that the MSBA does not object to the additional square footage, however; square footage exceeding the MSBA guidelines will be considered ineligible for reimbursement. Please acknowledge.

  Response: Comment is acknowledged.
- **Medical** – The District is proposing a total of 710 nsf which meets the MSBA guidelines. The proposed area in this category has not changed since the PSR submittal. No further action required.
- **Administration & Guidance** – The District is proposing a total of 3,548 nsf which exceeds the MSBA guidelines by 658 nsf. The proposed area in this category has decreased by 1,760 nsf since the PSR submittal. Please note that the MSBA does not object to the additional square footage, however; square footage exceeding the MSBA guidelines will be considered ineligible for reimbursement.

  Response: Comment is acknowledged.
- **Custodial & Maintenance** – The District is proposing a total of 2,355 nsf which meets the MSBA guidelines. The proposed area in this category has not changed since the PSR submittal. No further action required.
- **Other** – The District is proposing a total of 5,500 nsf which exceeds the MSBA guidelines. The proposed area in this category has decreased by 300 nsf since the PSR submittal. The District is proposing the following spaces:
    - **Pre-Kindergarten Classrooms** – The District is proposing (3) Pre-Kindergarten Classrooms that vary in size, totaling 3,510 nsf which exceeds the MSBA guidelines. Based on the information provided, the MSBA accepts this variation to guidelines. No further action required.
    - **Extended Learning Areas (Pre-Kindergarten)**– The District is proposing (5) Extended Learning Areas (Pre-Kindergarten), that vary in size, totaling 790 nsf which exceeds the MSBA guidelines. Please note and acknowledge that square footage exceeding the MSBA guidelines will be considered ineligible for reimbursement.

      Response: Comment is acknowledged.
    - **CARES Program Coordinator Office** – The District is proposing (1) 150 nsf CARES Program Coordinator Office which exceeds the

MSBA guidelines. Please note and acknowledge that square footage exceeding the MSBA guidelines will be considered ineligible for reimbursement.

Response: Comment is acknowledged.

- **CARES Site Coordinator Office** – The District is (1) proposing 150 nsf CARES Site Coordinator Office, which exceeds the MSBA guidelines. Please note and acknowledge that square footage exceeding the MSBA guidelines will be considered ineligible for reimbursement.

  Response: Comment is acknowledged.

- **Health Classroom** – The District is proposing (1) 900 nsf Health Classroom, which exceeds the MSBA guidelines. Based on the information provided, the MSBA accepts this variation to the guidelines. No further action required.

- **Total Building Net Floor Area** – The District is proposing a total of 110,324 nsf nsf which exceeds the MSBA guidelines by 36,359 nsf. The proposed area has increased by 1,675 nsf since the PSR submittal. The MSBA accepts this variation to the guidelines; however, limits of participation associated with the 'Core Academic', 'Health & Physical Education', 'Dining & Food Service', 'Administration & Guidance', and 'Other' categories, which will be applied to the MSBA grant calculation.

- **Total Building Gross Floor Area** – The District is proposing a total of 165,035 gross square feet ("gsf") which exceeds the MSBA guidelines by 54,827 gsf, with a grossing factor of 1.50. The proposed area has increased by 1,462 gsf since the PSR submittal. The MSBA accepts this variation to the guidelines; however, limits of participation associated with the 'Core Academic', 'Health & Physical Education', 'Dining & Food Service', 'Administration & Guidance', and 'Other' categories, which will be applied to the MSBA grant calculation.

Please note that upon moving forward into subsequent phases of the proposed project, the Designer will be required to provide, with each submission, a signed, updated space summary that reflects the design and demonstrates that the design remains, except as agreed to in writing by the MSBA, in accordance with the guidelines, rules, regulations and policies of the MSBA. Should the updated space summary demonstrate changes to the previous space summary include a narrative description of the change(s) and the reason for the proposed changes to the project.

smma

SMMA
1000 Massachusetts Ave.
Cambridge, MA 02138

MAY - 7 2025
A TRUE COPY ATTEST
Elizabeth Lawrenson
TOWN CLERK

RECEIVED
TOWN CLERK
2025 MAY -7 PM 3:20
TOWN OF WILMINGTON, MA

Minutes

Project Name:	Wilmington Wildwood Early Childhood Center	Project Number:	22127
RE:	School Building Committee	Meeting Date:	04/15/2025
Prepared by:	Sarah A. Traniello	Meeting No:	32
Location:	Hybrid Meeting, Wilmington High School, Large Group Instruction Room, 159 Church Street, Wilmington, Massachusetts and Remote Participation Meeting via Zoom Webinar (recording posted on Wildwood Building Project website, WCTV and YouTube)		
Distribution:	School Building Committee		

Attendees

Wildwood School Building Committee

Diane M. Allan	*Remote*	*Dennis Kelley*	Present
Gregory B. Bendel	*Present*	*Craig Miner*	Present
Kate Bissell	*Present*	*Christine Murray*	Present
Dr. Glenn Brand, Chair	Present	Judith O'Connell	Present
Kevin A. Caira	*Remote*	*Christine Prendergast*	*Remote*
Michael Camoscio	*Remote*	*Paul J. Melaragni*	Present
Justin Cusce	Present	*David A. Ragsdale*	Present
Marianne Gallezzo	Absent	Paul Ruggiero	Present
Nicholas Golden	Absent	*Stacey Scott*	*Remote*
Christine Holloran	Present	R. Eric Slagel	Present
John C. Holloway	Absent	Stephen Turner	Present
		Vivian Varbedian, *Vice Chair*	*Remote*

SMMA OPM

Julie Leduc, Director, OPM Services & Project Manager	*Remote*
Sarah Traniello, Assistant Project Manager	*Absent*

Dore+Whittier Architects

Donald Walter, Principal-In Charge	Remote
Lee P. Dore, Principal, Designer	Absent
Rani Philip, Project Manager	Present
Bryce Taft, Designer	Absent

Fontaine Bros.

David Fontaine, Jr., CEO	Absent
Rob Day, Project Executive	Present
Mark Abdella, VP of CM Services	Present
Chelsea Mutrie, VP of PreConstruction	Remote
Chad L'Ecuyer, Project Manager	Present

Item No.	Action	Discussion
32.01	Record	Chair, Glenn Brand, called the meeting to order at 6:30 PM. Roll Call of the School Building Committee was performed by J. Leduc to account for all of those who are present through remote participation on Zoom. The attendance based on the roll call can be found on page 1 of these minutes. This meeting was conducted through Zoom Webinar as remote participation so those listed as Remote for this meeting were Remote, those Present in Large Group Instruction Room of Wilmington High School are listed as Present and those Absent were not Present via Remote Participation or In Person. **During roll call to open meeting M. Gallezzo, N. Golden, J. Holloway, C. Prendergast and V. Varbedian did not respond. M. Gallezzo, N.Golden,**

Item No.	Action	Discussion
		and J. Holloway did not announce their presence during the meeting and were absent for the entire meeting however C. Prendergast and V. Varbedian arrived via remote participation after roll call was conducted. All other members were present in person or through remote participation.
32.02	Record	**Approval of Minutes** G. Brand advised that there are 3 sets of draft minutes for approval with the March 25, 2025 School Building Committee Meeting, March 31, 2025 School Building Committee Meeting and the April 3, 2025 School Building Committee. • **G. Bendel made the motion to approval all 3 sets of meeting minutes with E. Slagle seconding the motion to approve.** S. Turner asked the question about whether or not it is possible to vote for the approval of the minutes is viable if member was not present for one of the meetings the minutes were drafted for. *P. Melaragni advised that a member can vote for the minutes if not present for one of the meetings.* • **J. Leduc conducted a roll call for the approval of all 3 sets of meeting minutes was conducted. C. Prendergast joined the meeting just prior. All present remotely and in person approved the meeting minutes and it was accepted unanimously.**
32.03	Record	**Approval of Invoices** G. Brand advised Warrant No. 23 has been submitted for approval that includes Dore+Whittier Architects' invoice of March 31, 2025 for approval in the amount of $69, 589.30. • **D. Kelley on behalf of the Finance Working Group recommends approval for this invoice in the amount of $69,589.30 with a second motion of made by G. Bendel to approve.** P. Melargani asked why there is a 10 percent charge on these invoices from Nitsch Engineering. R. Philip answered that it is because there is a 10 percent as Nitch Engineering is a subconsultant to Dore+Whittier. P. Melaragni asked if the Traffic Survey was completed and L. Dore advised that the Traffic Survey has been completed and the Town has a copy of the traffic survey for its use and reference. • **J. Leduc conducted a roll call for the approval of Warrant No. 23 was conducted. All present remotely and in person approved the meeting minutes and it was accepted unanimously.** • **C. Prendergast and V. Varbedian were both present and voted in the affirmative. C. Miner abstained from voting.**
32.04	Record	**Project Scope and Budget Update** R. Philip reviewed the correction of the record for the Schematic Design pricing that is $1,050 per square foot for the $173,250,626 Estimated Project Cost as well as on the 3011 Form for the MSBA where the square footage that was used originally was for the Preferred Schematic Report Phase as the square footage increased for the Schematic Design Phase

Item No.	Action	Discussion
		and it is indicated within the area circled in red. The square footage was updated in SD and the number has been incorporated into this Project Scope and Budget document. It did not have any impact on the project cost or construction cost because those amounts were based onthe Schematic Design square footage. However, it did impact the soft costs because it made more of the soft costs available for reimbursement which works in favor for the District. The impact was about $57,000 more that will be eligible for reimbursement that was shown initially. It did not change the bottom line as it was just an adjustment for what's eligible and ineligible. There is a meeting on Thursday to review this form to review this document and an update will come forth from that meeting. P. Melaragni asked what the original square footage was for record. R. Philip advised of the square footage and advised that the amount of square footage was a couple thousand square feet and with the Art Room being added back into the program plus 2 office spaces. These spaces were in the plan but during the transfer of information it was account for as 2 offices but the actual need was 4 offices and there was a reduction from 6 to 3 of wellness rooms that were associated with the teacher collaboration spaces. It was a few thousand square feet. P. Melaragni advised that it was a difference of 1,472 square feet.
32.05	Record	**Schematic Design Package** R. Philip reviewed the Schematic Design Package that was sent out to the School Building Committee for their perusal with the contents that will be submitted to the MSBA updated them on where the Project stands in this process. There are 4 part of this submission with the first part being a submission of what was submitted to the Department of Education and gives idea of what has been prepared for Special Education. DESE will need to approve this as a part of this process. This will come back from DESE with their approval before the Schematic Design can be approved by the MSBA. The second part of the submission is the Schematic Design Binder with any design changes that have happened with the cost and approvals to date. Also included will the Schematic Design Project Manual containing the outline specifications and the Schematic Design Drawings containing the Site/Civil, Building Floor Plans. Roof Plans and the Interior and Exterior Elevations. These will show all of the materials and systems that go into the new building and it is what the recent cost estimate was based upon. • J. O'Connell asked what the hot spots are within the Schematic Design Submission that the SBC members should be reading and/or reviewing first as it has been broken out into components for ease of reviewing instead of as 1 largevolume like the PSR was distributed for their digestion. *R. Philip advised that it will need to be reviewed at the user group level. It is broken out into sections so that it can easily be reviewed piece by piece. For example, the Sustainability Working Group might be more interested in specific sections vs. sections the Public Relations Working Group might be interested in reviewing or the Site/Landscape Working Group might be interested in reviewing, etc. Feel free to start with the Introduction and then*

Item No.	Action	Discussion
		continue to sections of interest. The report contains information that has been reviewed with the Committee by Dore+Whittier and SMMA prior to the submission. • D. Allan asked if the Schematic Design Report contains the cost of the 12,000 sf gymnasium? D. Allan further asked where the estimate for the cost of the 12,000 sf gymnasium vs, the 6,000 sf gymnasium can be found in the Schematic Design report? *R. Philip advised that a cost estimate for the 6,000 sf gymnasium would not be found in the Schematic Design Report. It would not be found in the report since the School Building Committee elected to proceed with the 12,000 sf gymnasium before entering into Schematic Design phase. Therefore, the 12,000 sf gymnasium was what Schematic Design cost estimate pricing was based upon.* • D. Allan asked how much exactly will the 12,000 sf gymnasium cost? *L. Dore advised that just before the School Building Committee decided to move forward with the 12,000 sf gymnasium, an estimate was generated to show the local share for what it would cost and it was around $8Million. Once that was established, the gymnasium placement, its design and the cost estimate, were based upon that decision. L. Dore advised that the Preferred Schematic Report would need to be referred back to see what the final verdict would be on the MSBA side of things related to reimbursement. The reimbursement discussion will come this Thursday when we meet with the MSBA and have a conversation related to reimbursement.* • S. Turner mentioned having attended a Yes for Wilmington Schools event on Sunday. He advised that there is an item within the DESE section, in the first document, that was felt to be very helpful not just for this subject but also for the PR Working Group. It showed the lower grades in the building in pink, the upper grades in purple, and public spaces in green. It was a very simple view but good visualization of how the building functions. It is something to have available when speaking with the community about how the building operates and it was a unique and different view from anything that had been put together before. When we were doing the space planning for the programming, there were areas that were really tiny but this view would be really helpful to those who need something tactile to visualize how the building will function.
32.06	Record	**Next Steps** R. Philip reviewed the Schematic Design next steps once the School Building Committee approves the Schematic Design submission that has been under review with the hyperlink provided to the documents. There will be a Project Scope and Budget Review with the MSBA, MSBA Review Comments from the Schematic Design Report submission will come forth. • Dore+Whittier and SMMA will continue to work with the Leadership Working Group on the responses to said MSBA SD Comments in preparation for the MSBA Board of Directors

Item No.	Action	Discussion
		meeting on June 18, 2025. *[Note: MSBA Board Meeting was moved from June 25, 2025 to June 18, 2025.]* ○ Particular attention will be made to provide the appropriate responses to the items that the MSBA requested to be incorporated in the Schematic Design report to ensure there is a full and thorough report and response. • There are 3 votes that need to happen in order for this project to move forward: ○ MSBA Board Vote of Schematic Design: June 18, 2025 ○ Special Town Meeting: September 13, 2025 ○ Debt Exclusion Ballot Vote: September 16, 2025 After these have been successful, the project will move on to finalize the Project Scope and Budget Agreement with the MSBA. Once this happens, the project will be moving into Design Development, 60% CDs, 90% CDs. There will be cost estimates performed again in the Fall working up to the Special Town Meeting and Ballot Vote by the Town of Wilmington. • P. Melaragni asked what happens if there is a huge disparity in the estimates at that time that are influenced by the tariffs that have been set in place by the Federal Government? *R. Philip advised that the dollar amount approved at Town Meeting and the Cost Estimates may have a larger delta than expected as a result. This will be something that is reviewed during the Project Scope and Budget Agreement processing with the MSBA. As discussed on March 31, 2025 within the Project Budget there are contingencies that have been set in place where a certain percentage has been held with the anticipation that there may be tariffs involved. The School Building Committee would be approving that Project Budget and the Project is going into the process with the knowledge that there is the potential for tariffs to be in place and contingencies have been put in place to cover a reasonable amount of tariffs should they be impacting the project. These are some of the unknowns that may be coming in the future and the project is trying to anticipate these unforeseen items that may influence the project budget. The contingencies have been put into place within a reasonable amount so that the project budget is inflated so much that there is a great amount of excess that we are trying to figure out. Discussions were had with L. Dore of Dore+Whittier Architect, J. Leduc of SMMA and the Town Manager, E. Slagle to see what the comfortable amount would be to move forward with and that is what has been included and as a Project we will continue to monitor it as time passes. We also have Fontaine Bros. at the table to help provide additional insight into the estimated amount that are coming in and set some real world perspective with outreach to trades. The function of the interim estimates throughout the process is to ensure that the project is still continuing to stay within budget as set out and enabling the project to look at any potential value*

Item No.	Action	Discussion
		engineering (VE) that may need to occur to stay within budget. Value engineering is the function of modifying or eliminating items within the project scope that might bring the project back into alignment with the budget as needed. L. Dore further expounded upon R. Philips description of the process where PM&C will perform an estimate for Dore+Whittier and Fontaine Bros. will do an estimate and then the estimates will be reconciled at each step along the way as the project gets more refined. As this goes along, there will be some check ins with the SBC if the budget costs are going off course and there is a need to do some strategic value engineering. In the early phases, there is the ability to reel it back in but as it is getting more developed there are less opportunities and there have been several items for Value Engineering to be used for in order to bring the budget back inline. It is not desired to go there but it is a possibility that it may be needed and it is built in as a part of that process. The contingencies and the unknowns for the tariffs are being built in to build enough of a safety net to cover the unknowns the are unable to be foreseen in advance. A balance has been achieved. • D. Allan asked when it will be known exactly how much reimbursement the District will get from the MSBA? It is understood that Dore+Whittier will be working with them constantly and going back and forth regarding all of these items justifying whether or not is being included in the project or not. When will the SBC get a good handle on that number? *J. Leduc advised that the MSBA Board Meeting is on June 18, 2025 and this is when the Board of Directors will be approving the project and approve the final number. We will have a ballpark number beforehand as we will be working with the MSBA but there are a lot of negotiations that go on with the form that is submitted to the MSBA relating to ineligible costs and eligible costs that we will be working with them on. For the public, a specific number will be able to be provided on June 18, 2025.* • G. Brand asked if is customary to have a 2 month period of time between the MSBA Board Meeting and the Special Town Meeting and Ballot Vote. For instance, Wilmington's MSBA Board Meeting is at the end of June and the Special Town Meeting is scheduled for September 13, 2025 and Ballot Vote on September 16, 2025. Is this customarily done like this on other projects you have worked on? *L. Dore advised that the Town of Wilmington has a lot of runway between the June MSBA Board of Directors Meeting and the Town Meeting and Ballot Vote to get word out to the community about the elementary school project. L. Dore advised that on another project that is underway the District opted to have the Town Meeting and the Ballot Vote before the MSBA Board Meeting and it is contingent upon the MSBA approval of the project. In the case of this project, we have some of June and through the summer to get the word out to the Wilmington community before bringing it before the Special Town Meeting and to*

Item No.	Action	Discussion
		Ballot Vote. To have a definitive number of what the MSBA will be providing for reimbursement and being able to communicate that to the Town is important. • The MSBA Board of Directors meeting is June 18, 2025 instead of June 25, 2025 as it was updated by the MSBA not long ago. • M. Camoscio asked whether or not there was a preferred method to respond to the documents that are being reviewed by the SBC. Is it preferred to place the comments in a Excel spreadsheet, Word document, or email and who should they be sent to and how should they be tracked. *J. Leduc advised that the responses or questions could be sent to Dore+Whittier Architects and they will be reviewed for integration into the submission as deemed appropriate before submitting to the MSBA for the Schematic Design.* • **Approval of Schematic Design Authorize SMMA and Dore+Whittier Architects to submit the Schematic Design Report to the MSBA on behalf of the School Building Committee and the Town.** ○ **Motion made by J. O'Connell and seconded by G. Bendel. Motion passed unanimously with Roll Call vote.**
32.04	Record	**Public Comments** – None
32.05	Record	**Discussion and Committee Questions** – Upcoming Meeting Schedule ○ Tuesday, May 13, 2025 Abutters Meeting to be held at 6pm at the North Intermediate School Cafetorium. Important to meet with the Abutters to work with them with respect to their feedback especialy those whose properties are immediately in contact with the North Intermediate Site including but not limited to those within the neighborhood surrounding the school. ○ P. Melaragni advised that it would be nice to see some of the people invited to be from across Salem Street with the net for Abutter outreach to be a little bit further for this round so that more are included to provide their input. *S. Turner advised that the initial set of abutters have not had a chance to see the changes that have come forth in response to their feedback at their last abutters meeting is important to keep in mind. E. Slagle advised that the invitations for this Abutters Meeting will be those attending the first Abutters Meeting and another meeting will be scheduled afterward to broaden the invitation range of households to provide additional input. It is important for those immediately abutting the North Intermediate School site to be able to see first hand what their input resulted in for changes impacting the project so they are aware their input was listened to, amendments to the plan were made and these are the*

Item No.	Action	Discussion
		results as the project stands today as we move forward after submitting the Schematic Design Report. P. Melaragni advised that he is ok with this happening as long as a larger pool of abutters are invited with the next abutters meeting to garner their input as well. P. Melaragni advised that it would be unfortunate for people to come forth before the Town Meeting advising that they were abutters and their voice was not heard and they were not invited to the meeting(s) to learn about the project and give their thoughts and concerns. J. O'Connell advised that it is a listing of abutters that comes out from K. Rasche that is put out and signed off by the assessor. The intention is not to belittle any of the intentions set forth by P. Melaragni with his concerns. However, one of the abutters that would be part of the larger net would be the Avalon Apartment rentals that the quantity of people from the development along could potentially overtake those that are direct abutters. The Town is printing, mailing and distributing these through its mail house for these abutter mailings which takes time and funds to get done. It is ultimately the decision of this body to make it happen and there are also Community Forums in addition to the very public process that the abutters to participate in. D. Ragsdale advised that time is limited before the summer months are upon us and it is essential to take advantage of as many means of outreach that are possible and keep in mind the events that people will be able to attend. S, Turner advised that there are a few small streets off of Salem Street that have only 2 or 3 houses on them and are near the building and they should be included in the mailing as they would have some input on the project being so close but maybe outside of the range being reached to for Abutters. S. Turner advised P. Melaragni is on the right path with his thoughts and it is important to keep in mind the expense of these additional steps. J. O'Connell advised that if the outreach gets too large then it does not become the intimate working group that it was intended to be at the start. D. Allan advised that she would be interested in hearing from those who live across from the North Intermediate School site and give their input as well and understand the perspectives of P. Melaragni and J. O'Connell regarding the outreach and quantities of people participating and the objectives of the meetings being established. A lot of these neighbors are going to be interested in the traffic study and seeing how the bus circulation and vehicle circulation will be in and around the site.

Item No.	Action	Discussion
		○ J. Leduc reminded the remaining meeting dates need to be approved for the School Building Committee. With the Meeting of June 18, 2025 which replaced June 25, 2025, July 22, 2025, August 19, 2025 and September 23, 2025 need to be approved. ○ J. O'Connell clarified that the June 3, 2025, June 17, 2025 and the June 18, 2025 meeting are still on the calendar with the June 17th as a TBD. J. Leduc advised that the TBD is in case anything needs to be discussed or reviewed prior to the MSBA Board Meeting on June 18, 2025 meeting. ▪ **P. Melaragni made the motion to approved these meetings and E. Slagle seconded the motion. Passed unanimously.** – **PR Working Group** ○ G. Bendel advised that during the Working Group discussion he was going to add that it would be helpful to put some of the boards with the dates for the Special Town Meeting in September and the Ballot Vote in September at the Senior Center so that they will be there as reminders of these important dates for the Fall when they need to go to vote and provide their input. It is important to get these things in front of them as soon as possible so that they can be remembered to keep them updated throughout the outreach process. There is a lot of traffic at the Senior Center so G. Bendel would be happy to help with getting that done. J. O'Connell advised about reaching out to DPW to get the electronic messaging boards put into action to remind about the upcoming town meeting and ballot vote and additional information. ○ M. Camoscio advised that the water bill was successfully distributed through J. O'Connell and J. Cusce advised that last year at Town Meeting M. Camoscio and he were outside in the lobby with the boards advertising the project willing to answer any questions and handout any flyers needed to garner information about the project with the public attending that were interested in learning more. It would be helpful to have representation again this year. In addition M. Camoscio advised that there is a need for getting the Fun on the Fourth signup done with SignUpGenius as right now there are only 4 slots that have been filled and for the most part it is for Wednesday, June 25, 2025 and there are several additional slots available to get others to be involved in the outreach for the project. M. Camoscio advised that the Fun on the Fourth event had a lot of people who staffed the table least year that will not be present this year due to being away and participation

Item No.	Action	Discussion
		from members of the Committee will be very helpful and needed to make the event a successful one for outreach on the project. o J. O'Connell advised that most everything related to the Town Meeting and Town Elections goes through Beth Lawrenson, Town Clerk, and the Moderator. Anything that is displayed during Town Meeting would need to have their approval so that there is no uncomfortable moments about the contents of poster boards, The same goes for the polling locations as long as it is neutral in nature and not choosing one side over another. o G. Brand advised that he will be providing an update at the Town Meeting for the project in addition to scheduled meetings over the next 6 or 7 weeks with all of the PTO Groups for the students at all of the schools. All of the back to school nights have been scheduled for the beginning of school in preparation for the town meeting and ballot vote there will be an opportunity to meet with and discuss for learning about the project during those sessions. o The Woburn Street and North Intermediate School will be opened for people to tour and see the status of those schools for themselves. P. Melaragni advised that perhaps for the June 3, 2025 Community Forum it should be held at one of the schools to give the community an idea of the condition of these 2 schools currently so they can see for themselves.
32.06	Record	**Correspondence** – None
32.07	Record	**Next Meeting: Tuesday, June 3, 2025**
32.08	Record	**Adjourn** G. Brand thanked the committee for their efforts and invited a motion to adjourn. – **P. Melaragni motioned to adjourn. E. Slagle seconded the motion. Roll call vote, motion carried by unanimous vote.**

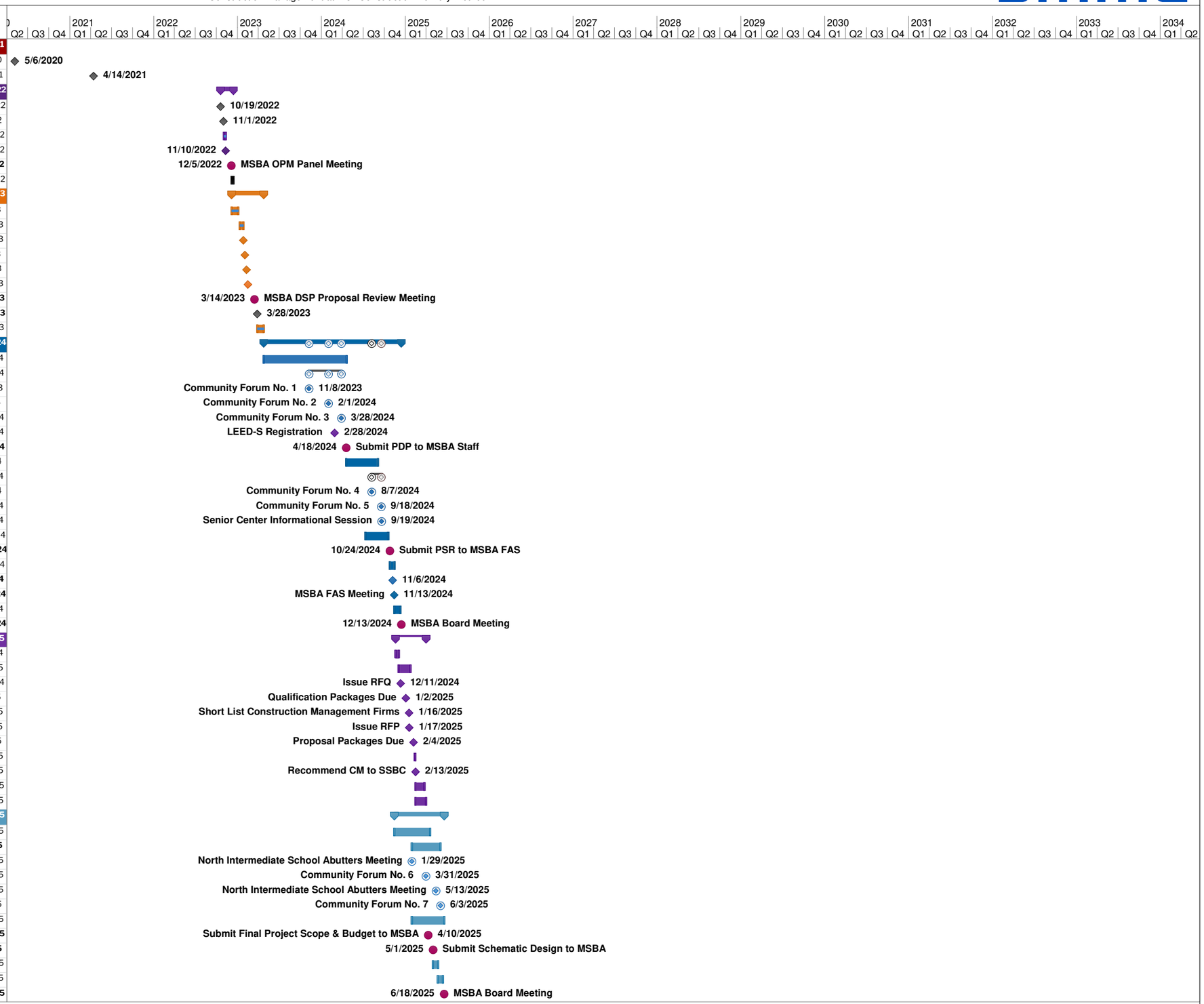
The information herein reflects the understanding reached. Please contact the author if you have any questions or are not in agreement with these Project Minutes.

November 4, 2022
Updated: June 6, 2025

Town of Wilmington
Wildwood PreK-5 Elementary School Project
Schematic Design Report | Preliminary Project Schedule
Construction Management at Risk Construction Delivery Method

smma

ID	Task Name	Duration	Start	Finish
1	**MSBA PREREQUISITES**	**241 days**	**5/6/2020**	**4/14/2021**
2	Statement of Interest	0 days	5/6/2020	5/6/2020
3	MSBA Invite into Feasibility	0 days	4/14/2021	4/14/2021
4	**RETAIN OPM**	**39 days**	**10/19/2022**	**12/13/2022**
5	Submit OPM Proposals	0 days	10/19/2022	10/19/2022
6	OPM Interview	0 days	11/1/2022	11/1/2022
7	Negotiate OPM Contract	6 days	11/3/2022	11/10/2022
8	Submit Documents to MSBA OPM Panel	0 days	11/10/2022	11/10/2022
9	**MSBA OPM Panel Meeting**	**0 days**	**12/5/2022**	**12/5/2022**
10	Execution of OPM Agreement	6 days	12/6/2022	12/13/2022
11	**RETAIN DESIGNER**	**100 days**	**12/6/2022**	**4/24/2023**
12	Draft Designer RFS and Submit to MSBA	21 days	12/6/2022	1/3/2023
13	MSBA Approve Draft RFS	11 days	1/11/2023	1/25/2023
14	Submit to Central Register	0 days	1/26/2023	1/26/2023
15	Notice in Central Register	0 days	2/1/2023	2/1/2023
16	Briefing Session	0 days	2/8/2023	2/8/2023
17	Submit Designer Proposals	0 days	2/14/2023	2/14/2023
18	**MSBA DSP Proposal Review Meeting**	**0 days**	**3/14/2023**	**3/14/2023**
19	**MSBA DSP Interview Meeting**	**0 days**	**3/28/2023**	**3/28/2023**
20	Negotiate Designer Contract	20 days	3/28/2023	4/24/2023
21	**FEASIBILITY STUDY (FS)**	**417 days**	**4/25/2023**	**12/13/2024**
22	Develop Preliminary Design Program	253 days	4/25/2023	4/19/2024
23	Community Presentations	97 days	11/8/2023	3/28/2024
24	Community Forum No. 1	0 days	11/8/2023	11/8/2023
25	Community Forum No. 2	0 days	2/1/2024	2/1/2024
26	Community Forum No. 3	0 days	3/28/2024	3/28/2024
27	LEED-S Registration	0 days	2/28/2024	2/28/2024
28	**Submit PDP to MSBA Staff**	**0 days**	**4/18/2024**	**4/18/2024**
29	Develop Preferred Schematic Report (PSR)	95 days	4/18/2024	9/3/2024
30	Community Presentations	30 days	8/7/2024	9/19/2024
31	Community Forum No. 4	0 days	8/7/2024	8/7/2024
32	Community Forum No. 5	0 days	9/18/2024	9/18/2024
33	Senior Center Informational Session	0 days	9/19/2024	9/19/2024
34	Select Board, Town Meeting & School Committee Presentations	70 days	7/10/2024	10/17/2024
35	**Submit PSR to MSBA FAS**	**0 days**	**10/24/2024**	**10/24/2024**
36	MSBA Comments	15 days	10/25/2024	11/14/2024
37	**MSBA FAS Meeting**	**0 days**	**11/6/2024**	**11/6/2024**
38	**MSBA FAS Meeting**	**0 days**	**11/13/2024**	**11/13/2024**
39	Respond to MSBA Comments	17 days	11/14/2024	12/9/2024
40	**MSBA Board Meeting**	**0 days**	**12/13/2024**	**12/13/2024**
41	**CONSTRUCTION MANAGER (CM)**	**90 days**	**11/19/2024**	**3/31/2025**
42	Develop and Submit Inspector General (IG) Application	10 days	11/19/2024	12/3/2024
43	IG Application and Approval	34 days	12/3/2024	1/22/2025
44	Issue RFQ	0 days	12/11/2024	12/11/2024
45	Qualification Packages Due	0 days	1/2/2025	1/2/2025
46	Short List Construction Management Firms	0 days	1/16/2025	1/16/2025
47	Issue RFP	0 days	1/17/2025	1/17/2025
48	Proposal Packages Due	0 days	2/4/2025	2/4/2025
49	Interview Prospective Construction Management Firms	2 days	2/11/2025	2/12/2025
50	Recommend CM to SSBC	0 days	2/13/2025	2/13/2025
51	Issue Notice to Proceed to Construction Management Firm	26 days	2/14/2025	3/24/2025
52	Negotiate CM Contract	31 days	2/14/2025	3/31/2025
53	**SCHEMATIC DESIGN (SD)**	**149 days**	**11/14/2024**	**6/18/2025**
54	Develop Schematic Design	107 days	11/14/2024	4/18/2025
55	**Community Presentations**	**87 days**	**1/29/2025**	**6/3/2025**
56	North Intermediate School Abutters Meeting	0 days	1/29/2025	1/29/2025
57	Community Forum No. 6	0 days	3/31/2025	3/31/2025
58	North Intermediate School Abutters Meeting	0 days	5/13/2025	5/13/2025
59	Community Forum No. 7	0 days	6/3/2025	6/3/2025
60	Select Board, Town Meeting & School Committee Presentations	99 days	1/29/2025	6/18/2025
61	**Submit Final Project Scope & Budget to MSBA**	**0 days**	**4/10/2025**	**4/10/2025**
62	**Submit Schematic Design to MSBA**	**0 days**	**5/1/2025**	**5/1/2025**
63	MSBA Comments	16 days	5/1/2025	5/22/2025
64	Respond to MSBA Comments	15 days	5/22/2025	6/12/2025
65	**MSBA Board Meeting**	**0 days**	**6/18/2025**	**6/18/2025**

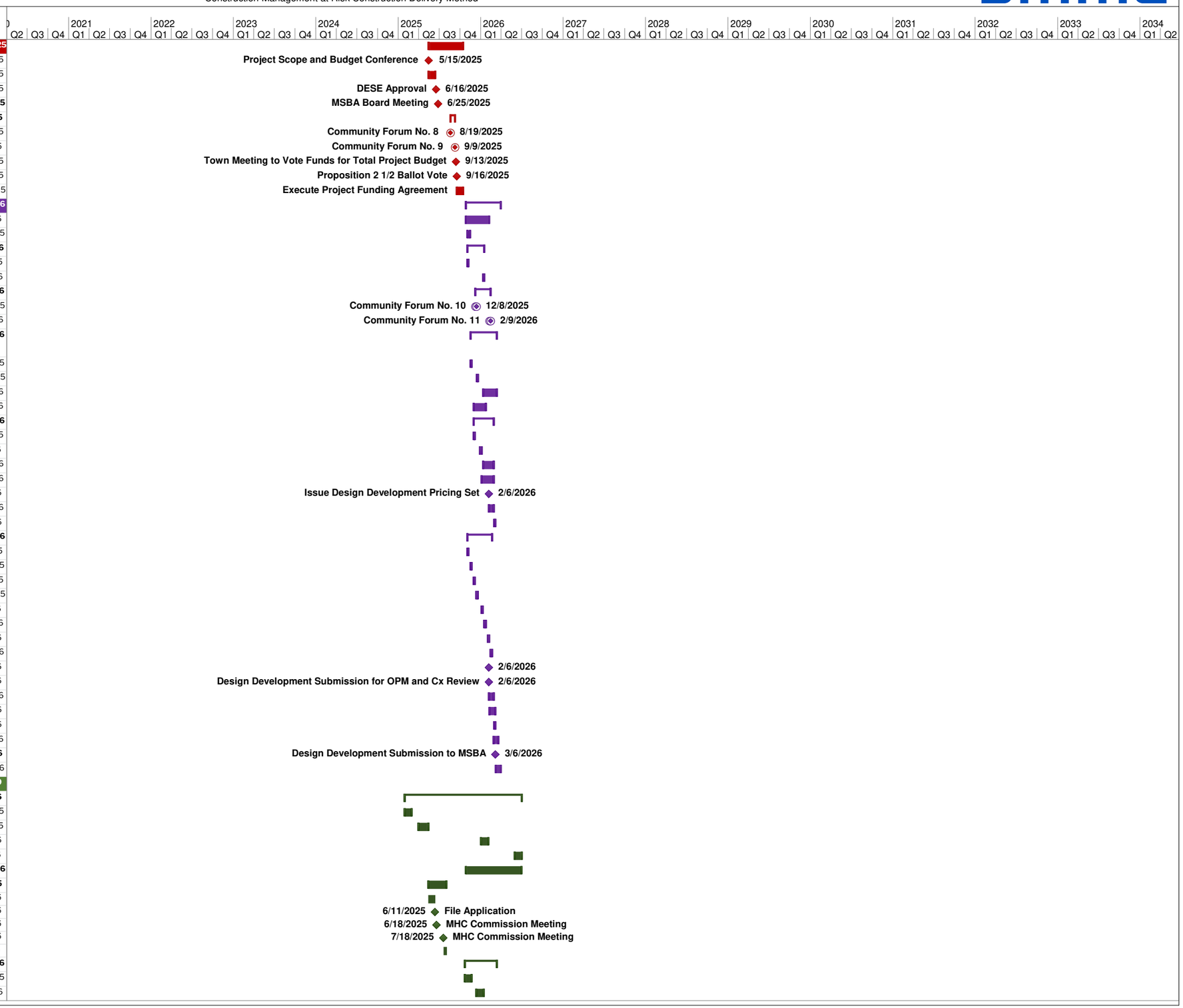


November 4, 2022
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Town of Wilmington
Wildwood PreK-5 Elementary School Project
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smma

ID	Task Name	Duration	Start	Finish
66	**PROJECT SCOPE AND BUDGET**	**106 days**	**5/15/2025**	**10/14/2025**
67	Project Scope and Budget Conference	0 days	5/15/2025	5/15/2025
68	Execute Scope and Budget Agreement	21 days	5/15/2025	6/13/2025
69	DESE Approval	0 days	6/16/2025	6/16/2025
70	**MSBA Board Meeting**	**0 days**	**6/25/2025**	**6/25/2025**
71	**Community Presentations**	**13 days**	**8/19/2025**	**9/9/2025**
72	Community Forum No. 8	0 days	8/19/2025	8/19/2025
73	Community Forum No. 9	0 days	9/9/2025	9/9/2025
74	Town Meeting to Vote Funds for Total Project Budget	0 days	9/13/2025	9/13/2025
75	Proposition 2 1/2 Ballot Vote	0 days	9/16/2025	9/16/2025
76	Execute Project Funding Agreement	21 days	9/17/2025	10/14/2025
77	**DESIGN DEVELOPMENT**	**105 days**	**10/28/2025**	**3/30/2026**
78	Develop Design Development Documents	70 days	10/28/2025	2/6/2026
79	User Group Meetings	10 days	11/3/2025	11/14/2025
80	**Coordination with AHJs [Fire, Police, Building AHJ]**	**52 days**	**11/3/2025**	**1/16/2026**
81	Meeting 1 with Fire, Police, Building AHJs	5 days	11/3/2025	11/7/2025
82	Meeting 2 with Fire, Police, Building AHJs	5 days	1/12/2026	1/16/2026
83	**Community Presentations**	**47 days**	**12/8/2025**	**2/13/2026**
84	Community Forum No. 10	5 days	12/8/2025	12/12/2025
85	Community Forum No. 11	5 days	2/9/2026	2/13/2026
86	**Local Permitting Process: Planning, Wetlands / Conservation Commission**	**80 days**	**11/17/2025**	**3/13/2026**
87	Planning, Wetlands / Conservation Commission	5 days	11/17/2025	11/21/2025
88	Planning, Wetlands / Conservation Commission	5 days	12/15/2025	12/19/2025
89	Planning, Wetlands / Conservation Commission	43 days	1/12/2026	3/13/2026
90	Opt-In Energy Code / LEED Compliance Documentation [DRAFT]	37 days	12/1/2025	1/23/2026
91	**Local Permitting Process: Water, Sewer, Layout - DPW Reviews**	**61 days**	**12/1/2025**	**2/27/2026**
92	Water, Sewer, Layout - DPW Reviews	5 days	12/1/2025	12/5/2025
93	Water, Sewer, Layout - DPW Reviews	5 days	12/29/2025	1/5/2026
94	Water, Sewer, Layout - DPW Reviews	33 days	1/12/2026	2/27/2026
95	State Permitting Process - Notice of Intent	38 days	1/5/2026	2/27/2026
96	Issue Design Development Pricing Set	0 days	2/6/2026	2/6/2026
97	Design Development Cost Estimating	15 days	2/6/2026	2/27/2026
98	Design Development Cost Estimate Reconciliation	5 days	3/2/2026	3/6/2026
99	**Consultant Bi-Weekly Coordination Meetings**	**75 days**	**11/3/2025**	**2/20/2026**
100	Consultant Coordination Meeting 1	5 days	11/3/2025	11/7/2025
101	Consultant Coordination Meeting 2	5 days	11/17/2025	11/21/2025
102	Consultant Coordination Meeting 3	5 days	12/1/2025	12/5/2025
103	Consultant Coordination Meeting 4	5 days	12/12/2025	12/18/2025
104	Consultant Coordination Meeting 5	5 days	1/5/2026	1/9/2026
105	Consultant Coordination Meeting 6	5 days	1/16/2026	1/23/2026
106	Consultant Coordination Meeting 7	5 days	2/2/2026	2/6/2026
107	Consultant Coordination Meeting 8	5 days	2/13/2026	2/20/2026
108	List of Proprietary Items	0 days	2/6/2026	2/6/2026
109	Design Development Submission for OPM and Cx Review	0 days	2/6/2026	2/6/2026
110	OPM and Cx Review	15 days	2/6/2026	2/27/2026
111	Cost Estimating	19 days	2/9/2026	3/6/2026
112	Reconciliation / Value Engineering	5 days	3/2/2026	3/6/2026
113	Value Engineering	15 days	2/27/2026	3/19/2026
114	**Design Development Submission to MSBA**	**0 days**	**3/6/2026**	**3/6/2026**
115	MSBA Comments	16 days	3/9/2026	3/30/2026
116	**SITE PERMITTING**	**1117 days**	**1/29/2025**	**7/1/2029**
117	**Town of Wilmington Abutters**	**360 days**	**1/29/2025**	**7/1/2026**
118	Introductions	22 days	1/29/2025	2/28/2025
119	Schematic Design Phase Update	32 days	3/31/2025	5/13/2025
120	Design Development Phase Update	22 days	1/2/2026	2/3/2026
121	Construction Documents Phase Update	22 days	6/1/2026	7/1/2026
122	**Wilmington Planning Board - Site Plan Approval**	**169 days**	**10/28/2025**	**6/30/2026**
133	**Massachusetts Historical Commission - Project Notification Form**	**55 days**	**5/14/2025**	**8/1/2025**
134	Prepare Application Documents	20 days	5/14/2025	6/11/2025
135	File Application	0 days	6/11/2025	6/11/2025
136	MHC Commission Meeting	0 days	6/18/2025	6/18/2025
137	MHC Commission Meeting	0 days	7/18/2025	7/18/2025
138	Appeal Period	10 days	7/21/2025	8/1/2025
139	**Wilmington Conservation Commission and MA-DEP**	**97 days**	**10/23/2025**	**3/13/2026**
140	Project Notification Form Compiled	22 days	10/23/2025	11/21/2025
141	Project Notification Filing	22 days	12/12/2025	1/14/2026

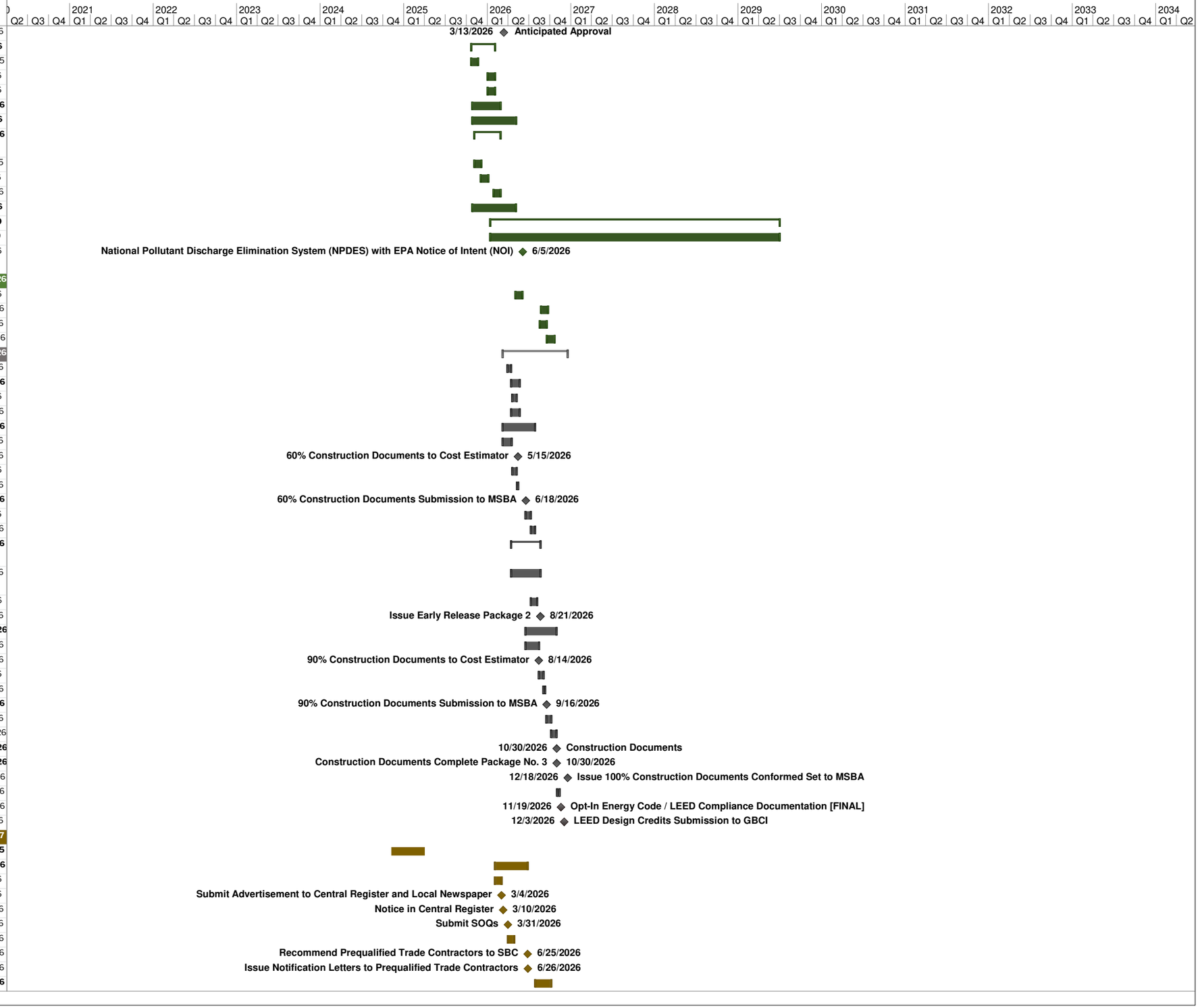


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smma

ID	Task Name	Duration	Start	Finish
142	Anticipated Approval	0 days	3/13/2026	3/13/2026
143	**Wilmington Department of Public Works, Fire and Police**	**70 days**	**10/23/2025**	**2/3/2026**
144	Plan Review Update	22 days	10/23/2025	11/21/2025
145	Informal Plan Review	22 days	1/2/2026	2/3/2026
146	Informal Plan Review Update	22 days	1/2/2026	2/3/2026
147	**Wilmington Conservation Commission - ANRAD**	**84 days**	**10/28/2025**	**2/27/2026**
154	**Wilmington Conservation Commission - NOI**	**132 days**	**10/28/2025**	**5/6/2026**
162	**Town of Wilmington Utility [Water, Sewer and Drainage] Connection Permitting**	**78 days**	**11/5/2025**	**2/27/2026**
163	Connection Permits for Water	22 days	11/5/2025	12/5/2025
164	Connection Permits for Sewer	22 days	12/3/2025	1/5/2026
165	Connection Permits for Drainage	22 days	1/28/2026	2/27/2026
166	**Wilmington Planning Board - Site Plan Approval**	**131 days**	**10/28/2025**	**5/5/2026**
172	**Wilmington Department of Public Works**	**875 days**	**1/13/2026**	**7/1/2029**
173	Roadway, Driveway, and General Utility Layout	876 days	1/13/2026	7/1/2029
174	National Pollutant Discharge Elimination System (NPDES) with EPA Notice of Intent (NOI)	0 days	6/5/2026	6/5/2026
175	**BUILDING PERMITTING**	**119 days**	**5/4/2026**	**10/21/2026**
176	Site Enabling and Preparation Package Permit	22 days	5/4/2026	6/3/2026
177	Foundation Permit	22 days	8/24/2026	9/23/2026
178	Structure Permit	22 days	8/18/2026	9/17/2026
179	Building Permit	23 days	9/18/2026	10/21/2026
180	**CONSTRUCTION DOCUMENTS**	**199 days**	**3/9/2026**	**12/18/2026**
181	Incorporate MSBA DD Comments	12 days	3/30/2026	4/14/2026
182	**Early Release Package 1: Site Preparation [Site, Civil, Soil]**	**28 days**	**4/15/2026**	**5/22/2026**
183	OPM and Cx Review	15 days	4/20/2026	5/8/2026
184	Early Release Package 1: Site Preparation [Site, Civil, Soil]	28 days	4/15/2026	5/22/2026
185	**60% Construction Documents**	**100 days**	**3/9/2026**	**7/28/2026**
186	Develop 60% Contract Documents	30 days	3/9/2026	4/17/2026
187	60% Construction Documents to Cost Estimator	0 days	5/15/2026	5/15/2026
188	60% Construction Documents Cost Estimating	15 days	4/20/2026	5/8/2026
189	60% Construction Documents Cost Estimate Reconciliation	5 days	5/11/2026	5/15/2026
190	**60% Construction Documents Submission to MSBA**	**0 days**	**6/18/2026**	**6/18/2026**
191	MSBA Review of 60% CD Submission	16 days	6/17/2026	7/9/2026
192	Incorporate MSBA 60% CD Comments	13 days	7/10/2026	7/28/2026
193	**Early Release Package 2: Foundation and Structural [Foundation, Dampproofing, Structural, Elevator]**	**91 days**	**4/15/2026**	**8/21/2026**
194	Early Release Package 2: Foundation and Structural [Foundation, Dampproofing, Structural, Elevator]	91 days	4/15/2026	8/21/2026
195	Structural Peer Review of Early Foundation and Structural Package	20 days	7/10/2026	8/6/2026
196	Issue Early Release Package 2	0 days	8/21/2026	8/21/2026
197	**90% Construction Documents**	**95 days**	**6/17/2026**	**10/30/2026**
198	Develop 90% Contract Documents	42 days	6/17/2026	8/14/2026
199	90% Construction Documents to Cost Estimator	0 days	8/14/2026	8/14/2026
200	90% Construction Documents Cost Estimating	15 days	8/14/2026	9/3/2026
201	90% Construction Documents Cost Estimate Reconciliation	5 days	9/3/2026	9/10/2026
202	**90% Construction Documents Submission to MSBA**	**0 days**	**9/16/2026**	**9/16/2026**
203	MSBA Review of 90% CD Submission	16 days	9/16/2026	10/7/2026
204	Incorporate MSBA 90% CD Comments	17 days	10/7/2026	10/30/2026
205	**Construction Documents**	**0 days**	**10/30/2026**	**10/30/2026**
206	**Construction Documents Complete Package No. 3**	**0 days**	**10/30/2026**	**10/30/2026**
207	Issue 100% Construction Documents Conformed Set to MSBA	0 days	12/18/2026	12/18/2026
208	LEED-S Design Submission	9 days	11/2/2026	11/12/2026
209	Opt-In Energy Code / LEED Compliance Documentation [FINAL]	0 days	11/19/2026	11/19/2026
210	LEED Design Credits Submission to GBCI	0 days	12/3/2026	12/3/2026
211	**PROCUREMENT**	**559 days**	**11/8/2024**	**1/28/2027**
212	**CM Selection**	**97 days**	**11/8/2024**	**3/31/2025**
213	**Prequalification - Package No. 2 Trade Contractors**	**101 days**	**2/3/2026**	**6/26/2026**
214	Develop Draft RFQs	21 days	2/3/2026	3/4/2026
215	Submit Advertisement to Central Register and Local Newspaper	0 days	3/4/2026	3/4/2026
216	Notice in Central Register	0 days	3/10/2026	3/10/2026
217	Submit SOQs	0 days	3/31/2026	3/31/2026
218	Review SOQs	19 days	4/1/2026	4/27/2026
219	Recommend Prequalified Trade Contractors to SBC	0 days	6/25/2026	6/25/2026
220	Issue Notification Letters to Prequalified Trade Contractors	0 days	6/26/2026	6/26/2026
221	**Prequalification - Package No. 3 Trade Contractors**	**50 days**	**7/29/2026**	**10/7/2026**

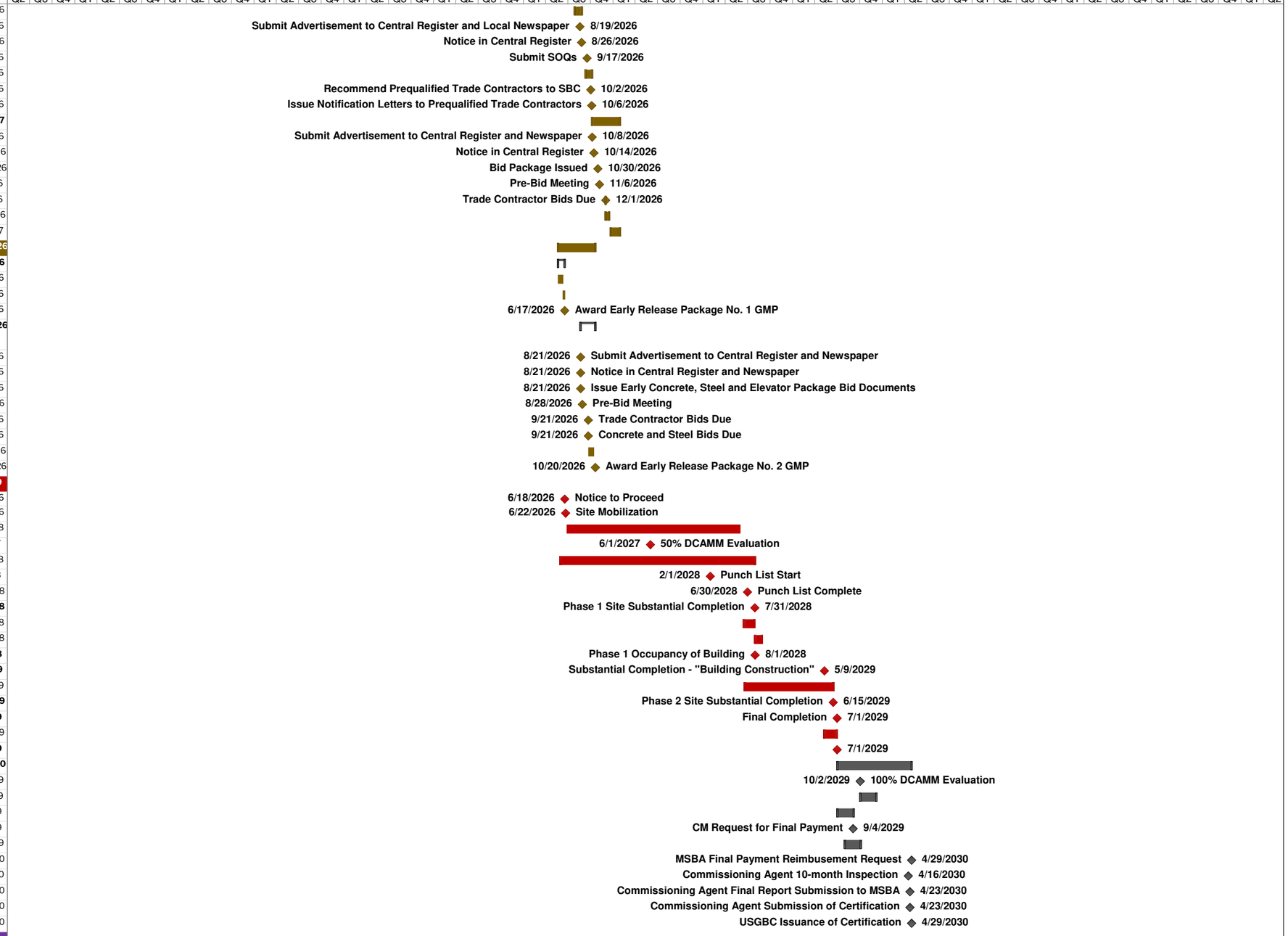


November 4, 2022
Updated: June 6, 2025

Town of Wilmington
Wildwood PreK-5 Elementary School Project
Schematic Design Report | Preliminary Project Schedule
Construction Management at Risk Construction Delivery Method

smma

ID	Task Name	Duration	Start	Finish
222	Develop Draft RFQs	21 days	7/29/2026	8/26/2026
223	Submit Advertisement to Central Register and Local Newspaper	0 days	8/19/2026	8/19/2026
224	Notice in Central Register	0 days	8/26/2026	8/26/2026
225	Submit SOQs	0 days	9/17/2026	9/17/2026
226	Review SOQs	19 days	9/11/2026	10/7/2026
227	Recommend Prequalified Trade Contractors to SBC	0 days	10/2/2026	10/2/2026
228	Issue Notification Letters to Prequalified Trade Contractors	0 days	10/6/2026	10/6/2026
229	**100% Construction Documents - Package No. 3**	**76 days**	**10/8/2026**	**1/28/2027**
230	Submit Advertisement to Central Register and Newspaper	0 days	10/8/2026	10/8/2026
231	Notice in Central Register	0 days	10/14/2026	10/14/2026
232	Bid Package Issued	0 days	10/30/2026	10/30/2026
233	Pre-Bid Meeting	0 days	11/6/2026	11/6/2026
234	Trade Contractor Bids Due	0 days	12/1/2026	12/1/2026
235	CM Develop GMP	11 days	12/1/2026	12/15/2026
236	GMP Approval	24 days	12/23/2026	1/28/2027
237	**EARLY PACKAGES PROCUREMENT**	**104 days**	**5/22/2026**	**10/20/2026**
238	**Early Release Package No. 1 [Site, Civil, Soil]**	**18 days**	**5/22/2026**	**6/17/2026**
239	CM Bid Early Site Preparation Package	13 days	5/22/2026	6/10/2026
240	Develop Early Site Preparation Package GMP	6 days	6/10/2026	6/17/2026
241	Award Early Release Package No. 1 GMP	0 days	6/17/2026	6/17/2026
242	**Early Release Package No. 2 [Foundation, Dampproofing, Structural and Elevator]**	**40 days**	**8/21/2026**	**10/20/2026**
243	Submit Advertisement to Central Register and Newspaper	0 days	8/21/2026	8/21/2026
244	Notice in Central Register and Newspaper	0 days	8/21/2026	8/21/2026
245	Issue Early Concrete, Steel and Elevator Package Bid Documents	0 days	8/21/2026	8/21/2026
246	Pre-Bid Meeting	0 days	8/28/2026	8/28/2026
247	Trade Contractor Bids Due	0 days	9/21/2026	9/21/2026
248	Concrete and Steel Bids Due	0 days	9/21/2026	9/21/2026
249	Descoping and Development of GMP Amendment	15 days	9/22/2026	10/13/2026
250	Award Early Release Package No. 2 GMP	0 days	10/20/2026	10/20/2026
251	**CONSTRUCTION**	**779 days**	**6/1/2026**	**7/1/2029**
252	Notice to Proceed	0 days	6/18/2026	6/18/2026
253	Site Mobilization	0 days	6/22/2026	6/22/2026
254	Construction of Building	490 days	6/26/2026	5/31/2028
255	50% DCAMM Evaluation	0 days	6/1/2027	6/1/2027
256	FFE/Technology Installation	549 days	6/1/2026	7/31/2028
257	Punch List Start	0 days	2/1/2028	2/1/2028
258	Punch List Complete	0 days	6/30/2028	6/30/2028
259	**Phase 1 Site Substantial Completion**	**0 days**	**7/31/2028**	**7/31/2028**
260	Demolish Existing North Intermediate School	29 days	6/16/2028	7/28/2028
261	Teacher/Staff Move-In	20 days	8/1/2028	8/28/2028
262	**Phase 1 Occupancy of Building**	**0 days**	**8/1/2028**	**8/1/2028**
263	**Substantial Completion - "Building Construction"**	**0 days**	**5/9/2029**	**5/9/2029**
264	Site Amenities Construction Including Parking Lot & Playfields	250 days	6/20/2028	6/15/2029
265	**Phase 2 Site Substantial Completion**	**0 days**	**6/15/2029**	**6/15/2029**
266	**Final Completion**	**0 days**	**7/1/2029**	**7/1/2029**
267	Final Completion, Closeout and Commissioning	34 days	5/10/2029	6/28/2029
268	**Final Completion**	**0 days**	**7/1/2029**	**7/1/2029**
269	**Closeout**	**208 days**	**7/2/2029**	**4/29/2030**
270	100% DCAMM Evaluation	0 days	10/2/2029	10/2/2029
271	LEED-S Construction Submission	46 days	10/3/2029	12/7/2029
272	Final Completion	46 days	7/2/2029	9/5/2029
273	CM Request for Final Payment	0 days	9/4/2029	9/4/2029
274	Closeout	46 days	8/1/2029	10/4/2029
275	MSBA Final Payment Reimbusement Request	0 days	4/29/2030	4/29/2030
276	Commissioning Agent 10-month Inspection	0 days	4/16/2030	4/16/2030
277	Commissioning Agent Final Report Submission to MSBA	0 days	4/23/2030	4/23/2030
278	Commissioning Agent Submission of Certification	0 days	4/23/2030	4/23/2030
279	USGBC Issuance of Certification	0 days	4/29/2030	4/29/2030
280	**MOVE-IN MANAGEMENT**			


2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034
Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1

Date:	6/9/2025
District:	Wilmington School District
Project Name:	Wildwood Early Childhood Center - PK-5 Elementary School Project
MSBA Project ID:	

SITE PERMIT	REQUIREMENTS	FILING DATE	EXPECTED RESPONSE DATE	TRIGGER - YES/NO	AGENCY COMMENTS/SUGGESTED ACTIONS	DESIGNER RESPONSES
CONCOM	NOI	12/12/2025	3/13/2026			On-site wetlands were flagged and identified as non-jurisdictional. A meeting with the local Conservation agent to confirm the non-jurisdictional status to be held during the permitting process.
MHC	PNF	9/17/2025	12/2/2026			The existing building does not fall on any historic register and therefore does not require any MHC permitting.
MA-DOT	PNF with MHC	9/17/2025	12/2/2026			This project will work on local Town managed property.
MA-DEP	NOI	12/12/2025	3/13/2026			On-site wetlands were flagged and identified as non-jurisdictional. A meeting with the local Conservation agent to confirm the non-jurisdictional status to be held during the permitting process.
NHESP	NOI	12/12/2025	3/13/2026			This project does not require a NHESP permit.
MEPA	PNF with MHC	9/17/2025	12/2/2026			This project does not trigger any MEPA thresholds and does not require a MEPA permit.

Instructions to complete the permit tracking table:

1. Enter the date the PNF/NOI was filed.
2. Enter the date when the response is expected.
3. If a response is received from CONCOM/MHC/MA-DOT/MA-DEP/NHESP/MEPA, mention 'YES' in the 'trigger' column. Summarize the proposed/requested/mandated action by the agencies in a few words and corresponding Designer responses in the appropriate column. Please include the full response as an attachment with this submittal for MSBA's reference.
4. If there is no response by the expected response date, mention 'NO' in the 'trigger' column.
5. Indicate “Not Applicable” (where appropriate) in the "trigger" column and describe why each item is not applicable.
6. Describe the status of the following approvals. Any status updates/concerns/notes can be mentioned in the 'Designer Responses' column.
7. Make sure to attach the sheet with every submittal for the project to track any changes.
8. Provide the status of any other state or federal approval not listed above (the following list is not a comprehensive itemization of required state approvals; other requirements may apply, and some items listed below may not be applicable to this project).
9. Provide a copy of the PNF, NOI, appropriate application forms and/or approval letters where applicable.

Architect and Engineer Certification

By signing this certification, I hereby certify that all of the information provided in this "Permit Tracking Table" is true, complete and accurate to the best of my knowledge and belief.

Name of Architecture Firm: Dore & Whittier Architects, Inc.

Name of Architect: Lee Dore

Signature of Architect: Lee Dore Digitally signed by Lee Dore DN: C=US, E=ldore@doreandwhittier.com, O="Dore + Whittier", CN=Lee Dore Date: 2025.06.09 17:37:09-04'00'

Date: 6/9/2025

By signing this certification, I hereby certify that all of the information provided in this "Permit Tracking Table" is true, complete and accurate to the best of my knowledge and belief.

Name of Engineering Firm: CDW Consultants, Inc.

Name of Engineer: Eric Wilhelmsen

Signature of Engineer:

Date: 6/9/2025

Room Function Number 01.023

Room Name	KINDERGARTEN
Room Number	140
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	140	Programmed	1,100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for Kindergarten instruction, including a toilet room.
Quantity:	7
Occupant Load:	(18) Students (1) General Education Teacher (1) Para Professional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, ground floor, other Kindergarten classrooms and special education spaces, central location. Paired with another Pre-K classroom
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Wall Board, painted Magnetic writable surface at teaching wall location, 2’ to 7’ for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Set.
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets. Flexible space with various furniture configurations: • Tables and desks on casters for mobility. • Kidney-shaped table included. Teacher desk should allow flexibility in arrangement.
Equipment:	Types & Configurations indicated in the attached room layout sheets

Room Function Number 01.023

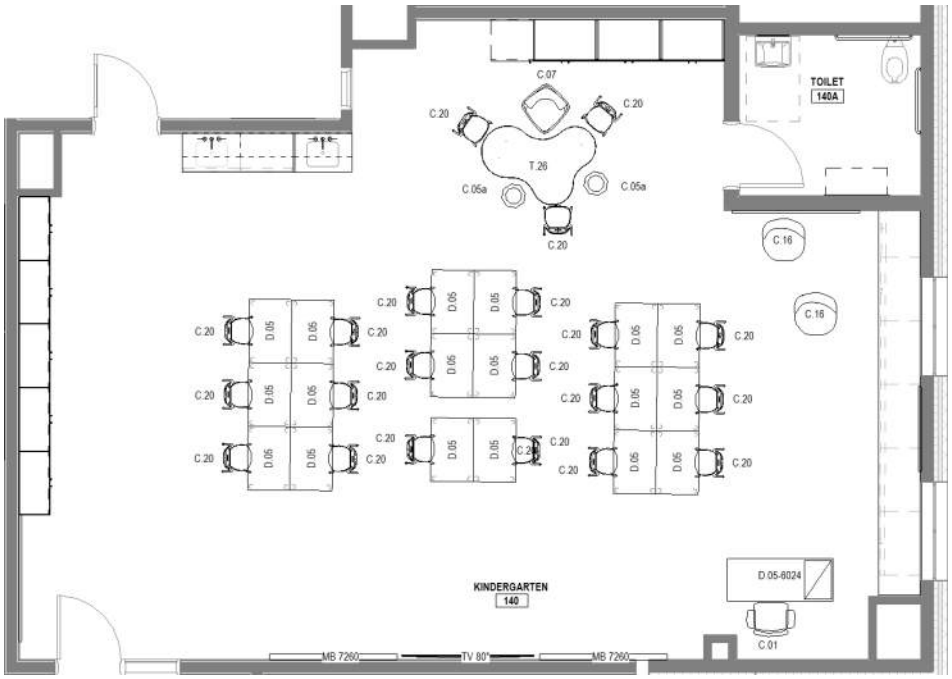
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. Lockable Storage:• Secure cabinets for school records and laptops (with charging capabilities).• 1-2 file drawers for additional needs.• Tall cabinets: one for the wardrobe and another for shelves.Casework for grade-level materials and retail-style book display.Dedicated headphone storage.

Additional Requirements:

Communicating doors between Classrooms

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	2
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	22
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	19
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 01.008

Room Name	GENERAL CLASSROOM
Room Number	216
Department (Name)	CORE ACADEMIC SPACES

Categorization		**Areas**	
Room Number	216	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	30
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets. Flexible space with various furniture configurations: • Tables and desks on casters for mobility. • Kidney-shaped table included. Teacher desk should allow flexibility in arrangement.

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.008

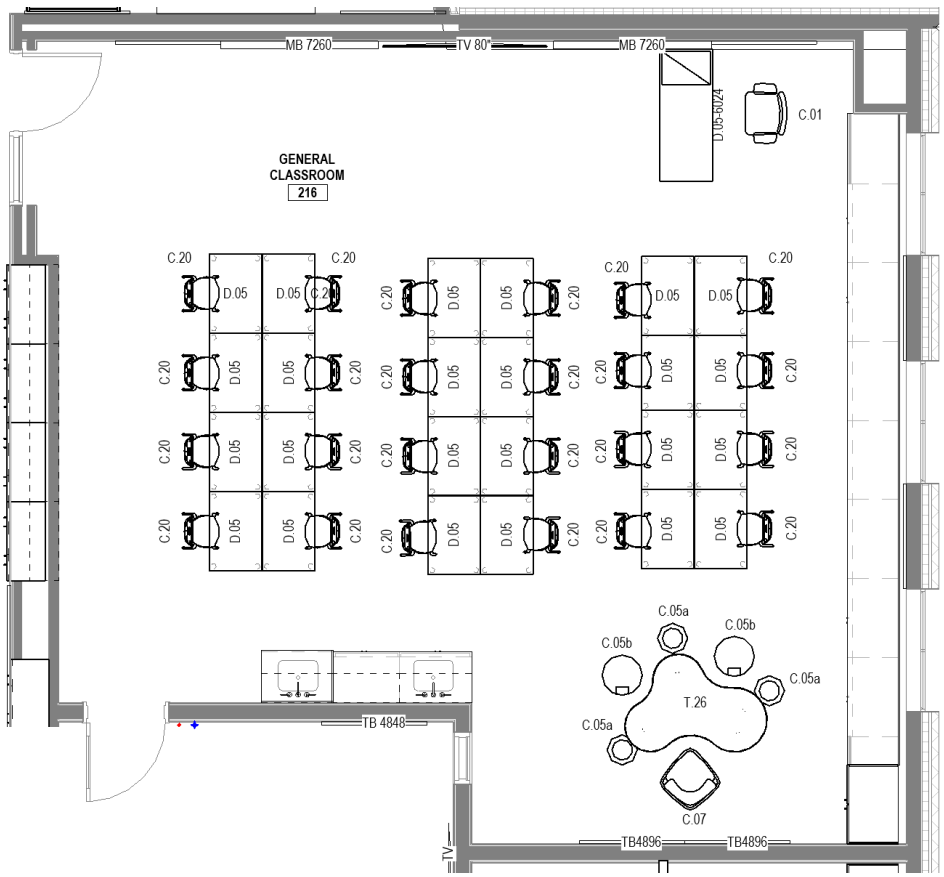
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. Lockable Storage:• Secure cabinets for school records and laptops (with charging capabilities).• 1-2 file drawers for additional needs.• Tall cabinets: one for the wardrobe and another for shelves.Casework for grade-level materials and retail-style book display.Dedicated headphone storage.

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	3
C.05b	Steelcase Turnstone - Buoy - Seating - Buoy	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	24
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	24
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 01.028

Room Name	GENERAL CLASSROOM
Room Number	242
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	242	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	30
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets. Flexible space with various furniture configurations: • Tables and desks on casters for mobility. • Kidney-shaped table included. Teacher desk should allow flexibility in arrangement.

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.028

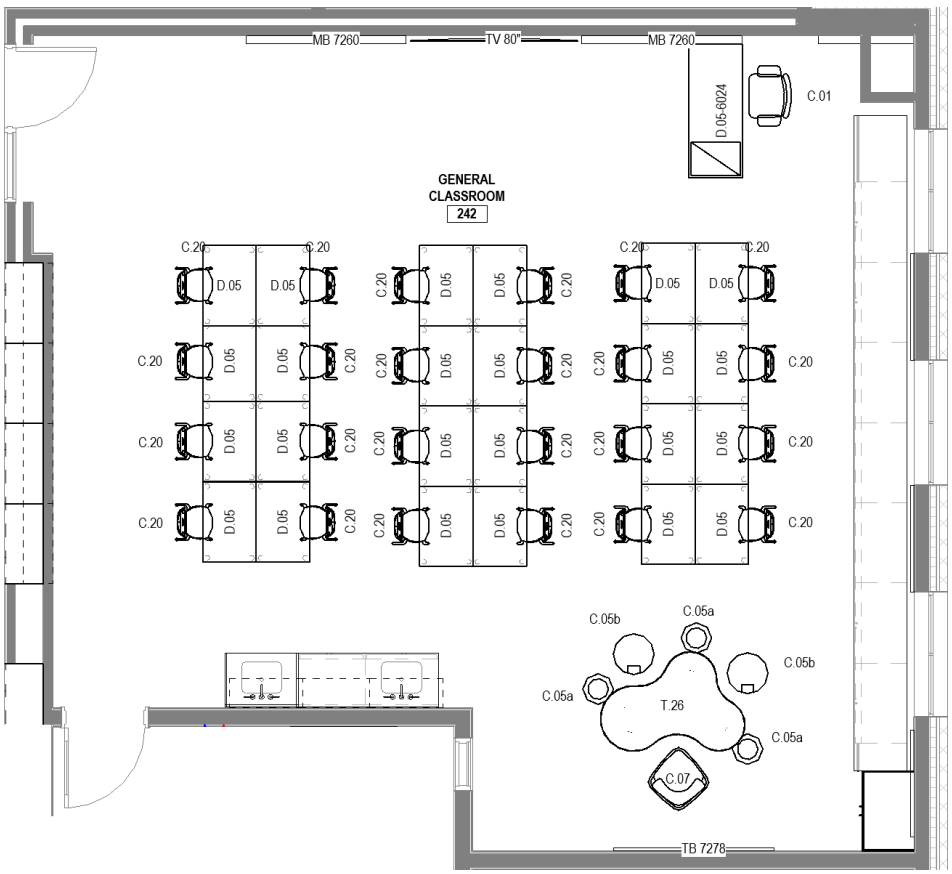
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. Lockable Storage:• Secure cabinets for school records and laptops (with charging capabilities).• 1-2 file drawers for additional needs.• Tall cabinets: one for the wardrobe and another for shelves.Casework for grade-level materials and retail-style book display.Dedicated headphone storage.

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	3
C.05b	Steelcase Turnstone - Buoy - Seating - Buoy	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	20
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	20
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 01.015

Room Name	GENERAL CLASSROOM
Room Number	319
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	319	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	30
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets. Flexible space with various furniture configurations: • Tables and desks on casters for mobility. • Kidney-shaped table included. Teacher desk should allow flexibility in arrangement.

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.015

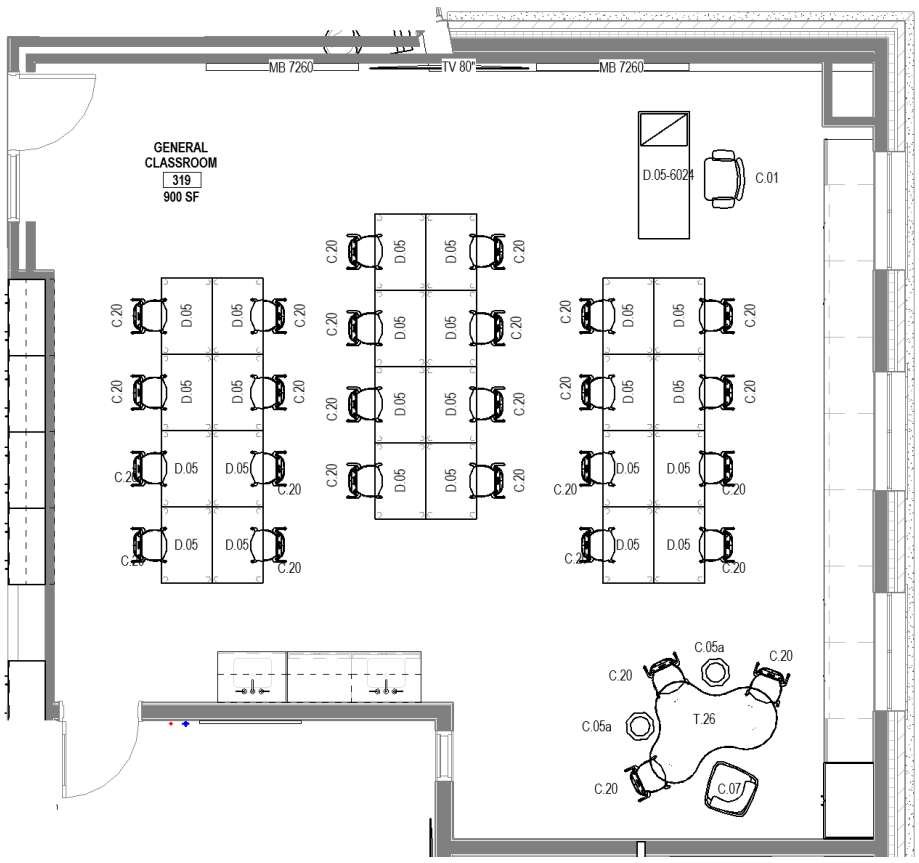
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. Lockable Storage:• Secure cabinets for school records and laptops (with charging capabilities).• 1-2 file drawers for additional needs.• Tall cabinets: one for the wardrobe and another for shelves.Casework for grade-level materials and retail-style book display.Dedicated headphone storage.

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	27
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	24
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
S.06	Steelcase Turnstone - Bivi - Storage - Depot - 2 High	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 01.032

Room Name	GENERAL CLASSROOM
Room Number	345
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	345	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	30
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets. Flexible space with various furniture configurations: • Tables and desks on casters for mobility. • Kidney-shaped table included. Teacher desk should allow flexibility in arrangement.

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.032

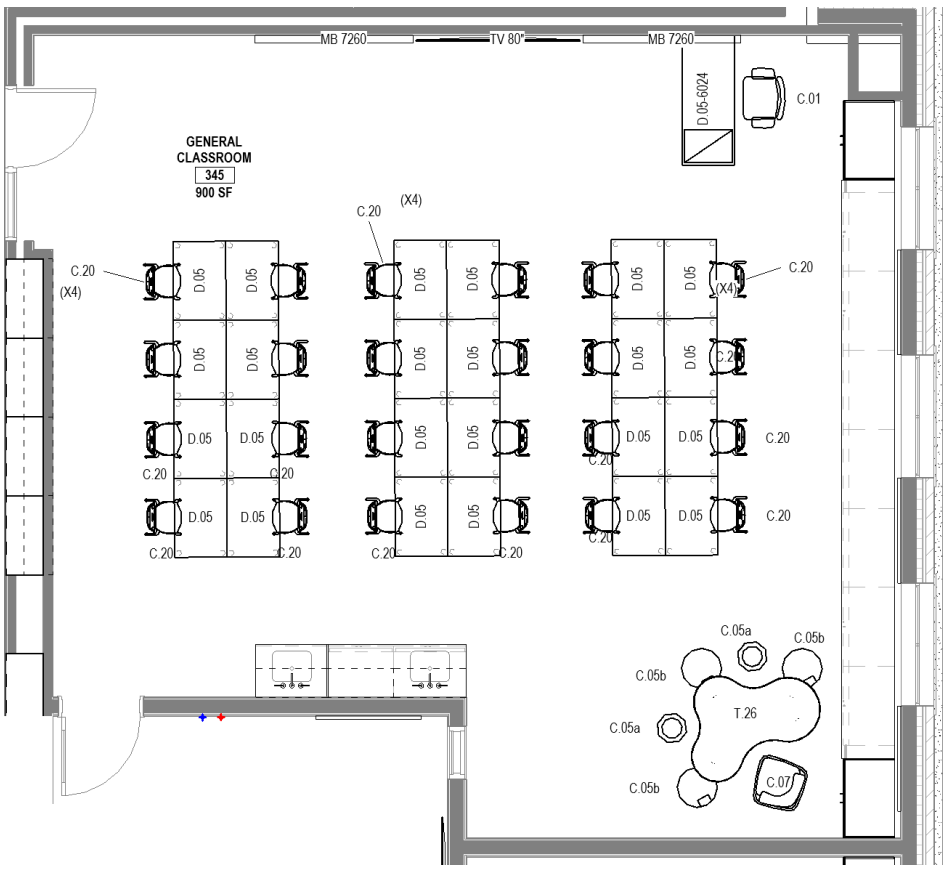
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. Lockable Storage:• Secure cabinets for school records and laptops (with charging capabilities).• 1-2 file drawers for additional needs.• Tall cabinets: one for the wardrobe and another for shelves.Casework for grade-level materials and retail-style book display.Dedicated headphone storage.

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.05b	Steelcase Turnstone - Buoy - Seating - Buoy	3
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	25
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	25
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 01.036

Room Name	GENERAL CLASSROOM
Room Number	353
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	353	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	30
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets. Flexible space with various furniture configurations: • Tables and desks on casters for mobility. • Kidney-shaped table included. Teacher desk should allow flexibility in arrangement.

Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 01.036

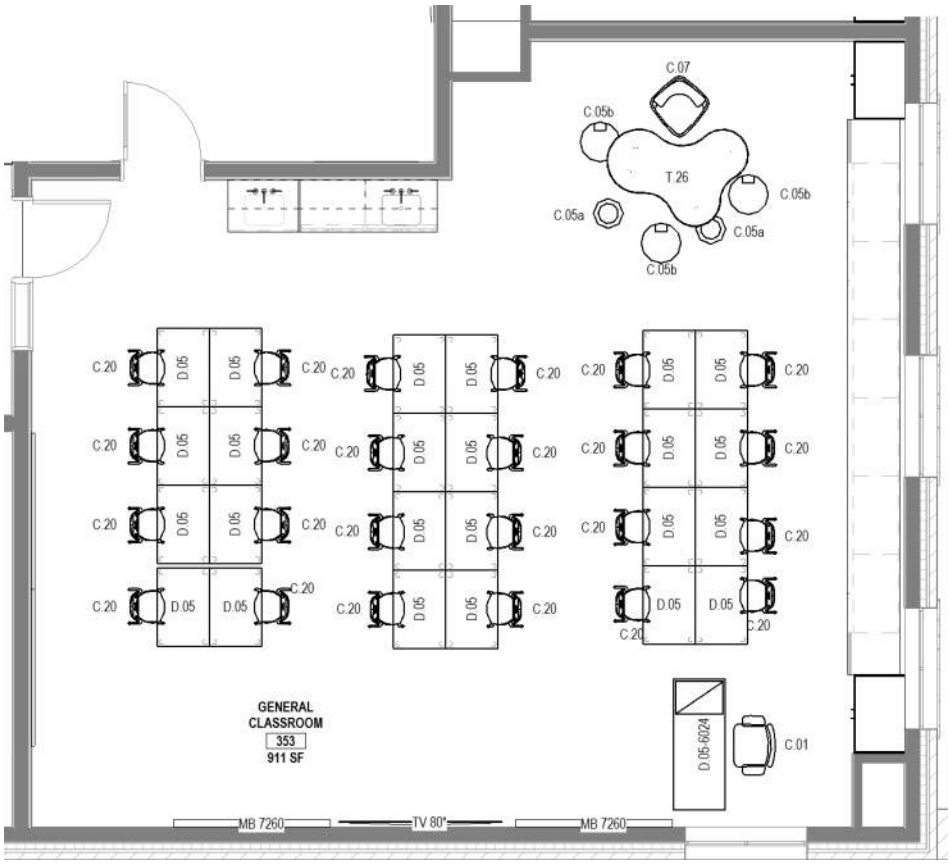
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. Lockable Storage:• Secure cabinets for school records and laptops (with charging capabilities).• 1-2 file drawers for additional needs.• Tall cabinets: one for the wardrobe and another for shelves.Casework for grade-level materials and retail-style book display.Dedicated headphone storage.

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.05b	Steelcase Turnstone - Buoy - Seating - Buoy	3
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	20
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	20
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 01.001

Room Name	STE CLASSROOM
Room Number	256
Department (Name)	CORE ACADEMIC SPACES

Categorization		**Areas**	
Room Number	256	Programmed	1,080.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for STE instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	1
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location.
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Room Data Sheet

SD - Submission

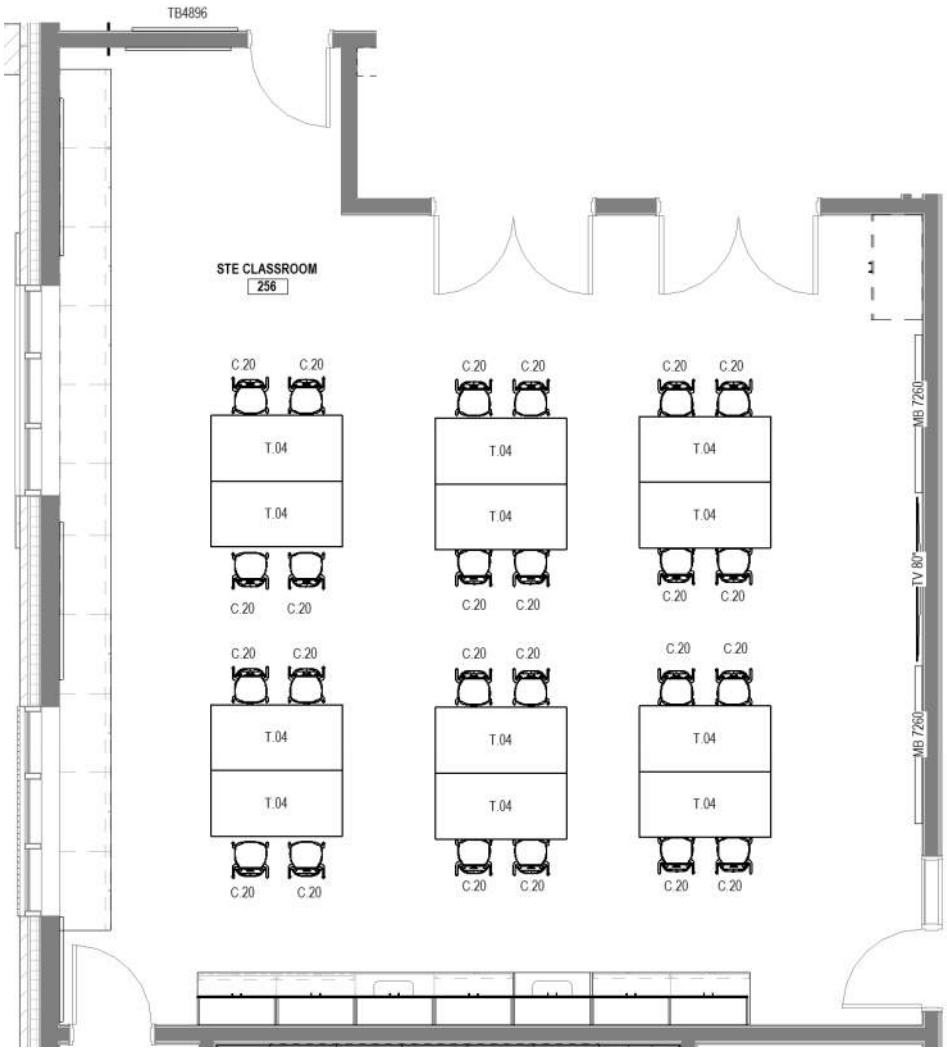
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Wilmington Wildwood EC Center

Room Function Number 01.001

Furniture

Item: BIM ID	Name	Quantity
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	24
T.04	120000-Furniture-Table Rectangular - 60X30 FLIP TOP - Inset Leg	12



Room Function Number 01.002

Room Name	STE STORAGE
Room Number	256A
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	256A	Programmed	120.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage room
Quantity:	1
Occupant Load:	None

Location Criteria:

Users:	Teachers and students
Adjacency:	Within STE classroom
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	None
Doors:	Flush wood doors. Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in lighting
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment. Wireless network access.

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	None
Furnishings:	None
Equipment:	Typical perimeter power requirements. Additional power required to support specific room equipment
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

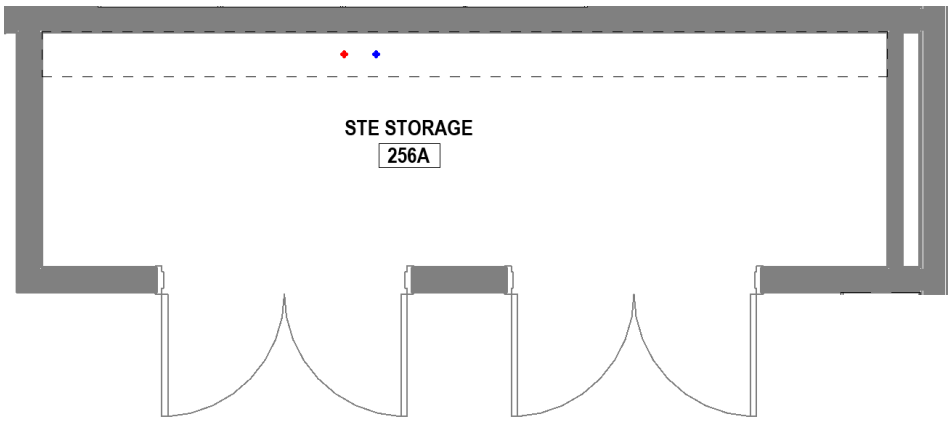
Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 01.002



Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 01.006

Room Name	ELL
Room Number	146
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	146	Programmed	450.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for English Language Learner specialists and pull-out instruction in small groups
Quantity:	2
Occupant Load:	(1) Staff (1-15) Students

Location Criteria:

Users:	Accommodates up to 15 students: Peer modeling benefits larger groups. Instruction flexibility: 1-on-1 or full group sessions.
Adjacency:	Central to the grade level teams. Direct access off corridor.
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light and acoustical seals. Office hardware set.
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered Sink installation needed for classroom activities
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Interactive touch panel with wireless access and docking stations. Smart board included for interactive learning. Additional power required to support specific room equipment Public Address system Clock System Wireless network access interactive projector /d

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets. Flexible space with various furniture configurations: • Tables and desks on casters for mobility. • Kidney-shaped table included. Teacher desk should allow flexibility in arrangement.
Equipment:	Types & Configurations indicated in the attached room layout sheets

Room Function Number 01.006

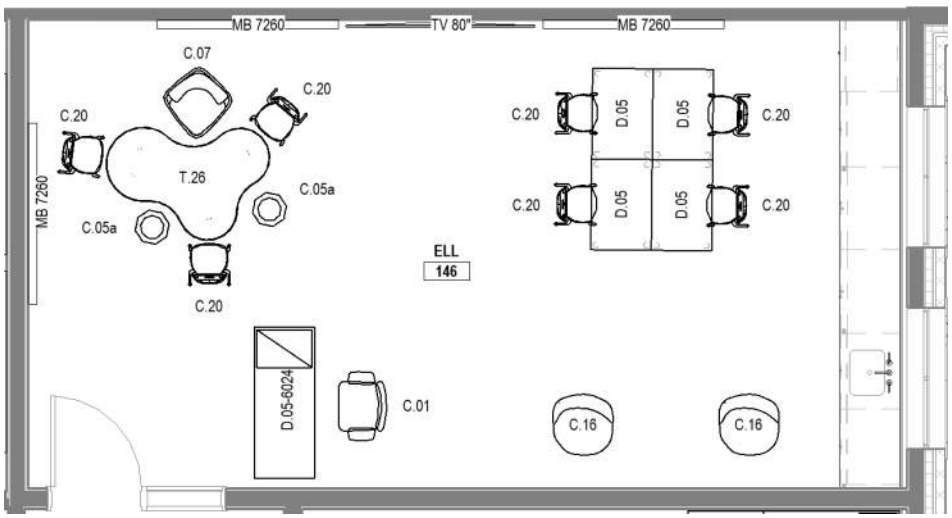
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. Lockable Storage:• Secure cabinets for school records and laptops (with charging capabilities).• 1-2 file drawers for additional needs.• Tall cabinets: one for the wardrobe and another for shelves.Casework for grade-level materials and retail-style book display.Dedicated headphone storage.

Additional Requirements:

Acoustics can be challenging due to noise:
- Activities like singing and testing occur in the room.
- Testing requires a quieter environment to avoid disruptions.
- Sink installation needed for classroom activities.
- Interactive touch panel with wireless access and docking stations.
- Smart board included for interactive learning.

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	2
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	7
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	4
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 01.038

Room Name	ELL
Room Number	348
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	348	Programmed	450.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for English Language Learner specialists and pull-out instruction in small groups
Quantity:	2
Occupant Load:	(1) Staff (1-15) Students

Location Criteria:

Users:	Accommodates up to 15 students: Peer modeling benefits larger groups. Instruction flexibility: 1-on-1 or full group sessions.
Adjacency:	Central to the grade level teams. Direct access off corridor.
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light and acoustical seals Office hardware set
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered Sink installation needed for classroom activities
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Interactive touch panel with wireless access and docking stations. Smart board included for interactive learning. Additional power required to support specific room equipment Public Address system Clock System Wireless network access interactive projector /d

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Teacher's desk. Teachers storage wardrobe Bookshelves. Secure cabinets for school records and laptops (with charging capabilities). 1-2 file drawers for additional needs. Tall cabinets: one for the wardrobe and another for shelves. Casework for grade-level materials and retail-style book display.
Specialties:	Types & Configurations indicated in the attached room layout sheets including: (2) Marker Board Surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

Room Data Sheet

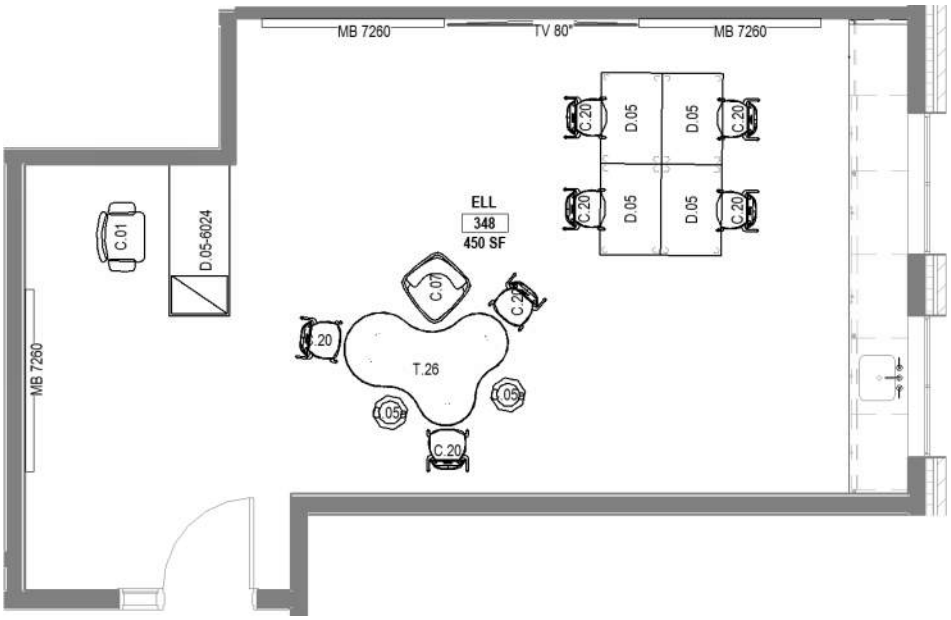
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Wilmington Wildwood EC Center

Room Function Number 01.038

n/a



Room Function Number 01.037

Room Name	TEACH COLLAB
Room Number	125
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	125	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Collaboration and group planning rooms for teachers
Quantity:	3
Occupant Load:	(20) Teachers/Faculty

Location Criteria:

Users:	Teachers, specialists, paraprofessionals
Adjacency:	Between learning communities
Orientation / Views:	Views to exterior preferred

Technical Criteria:

Floor Finishes:	Carpet tile
Wall Finishes:	Gypsum Wall Board, painted Tile backsplash Projectable Magnetic writable surface for collaboration purposes
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom lockset
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (2) Interactive projectors

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Folding partition to increase flexibility in space utilization
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Full size refrigerator Microwave, copy machine
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	18
C.08b	Chair-Stool-KI-Calida - 30" Stool	4
T.04	120000-Furniture-Table Rectangular - 60X30 FLIP TOP - Inset Leg	8
T.09	Table-Cafe-KI-Tributaire-Round-X-Base - 30"Dia,36"H,Knife Edge	2

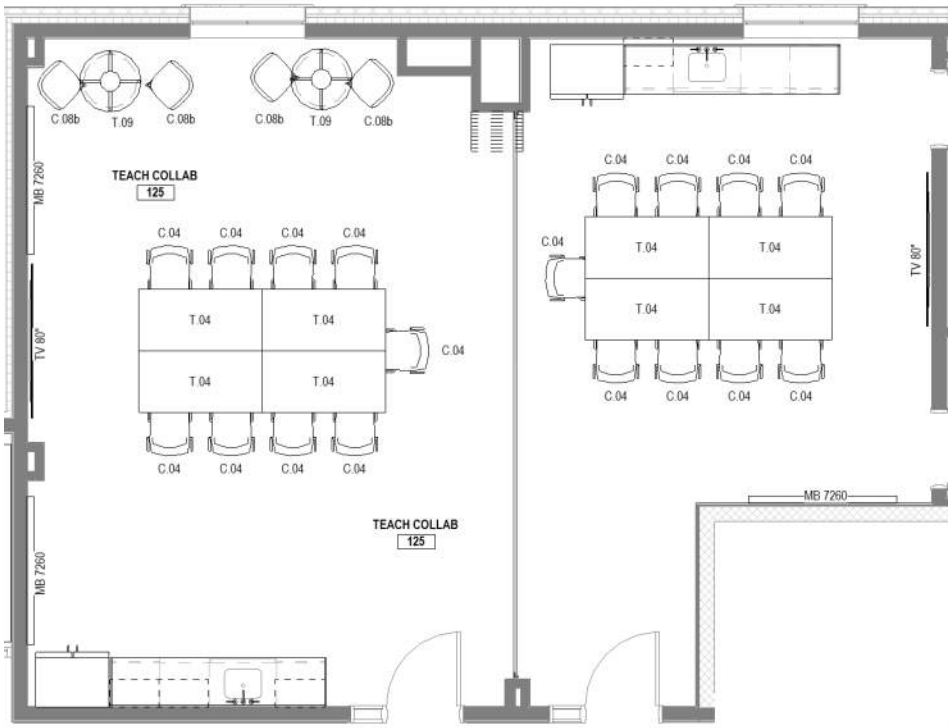
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.037


C.08b
T.09
C.08b
C.08b
T.09
C.08b
TEACH COLLAB
125
MB 7260
TV 80"
C.04
T.04
C.04
C.04
C

Room Function Number 01.057

Room Name	EXTENDED LEARNING
Room Number	131A
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	131A	Programmed	41.00
User Room Number			
Additional Number	131B, 131C, 131D		
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning
Occupant Load:	4) Teachers/Para professionals (50) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive display panel, wall mounted

Room Data Sheet

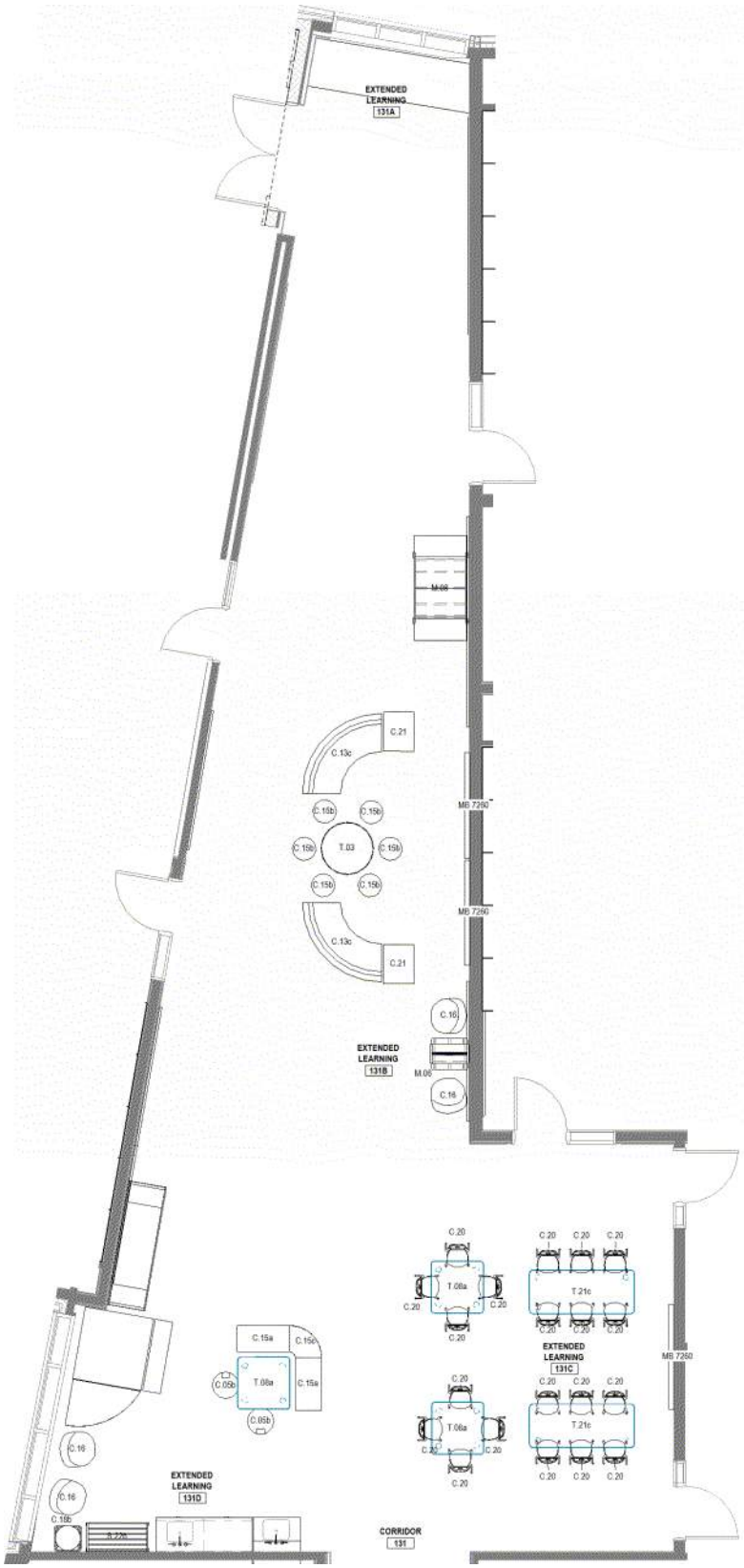
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.057

(1) Teachers connection stations to coordinate with interactive projector (data & power)



Room Function Number 01.062

Room Name	EXTENDED LEARNING
Room Number	230A
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	230A	Programmed	43.00
User Room Number			
Additional Number	230B, 230C, 230D		
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning
Occupant Load:	4) Teachers/Para professionals (50) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive display panel, wall mounted

Room Data Sheet

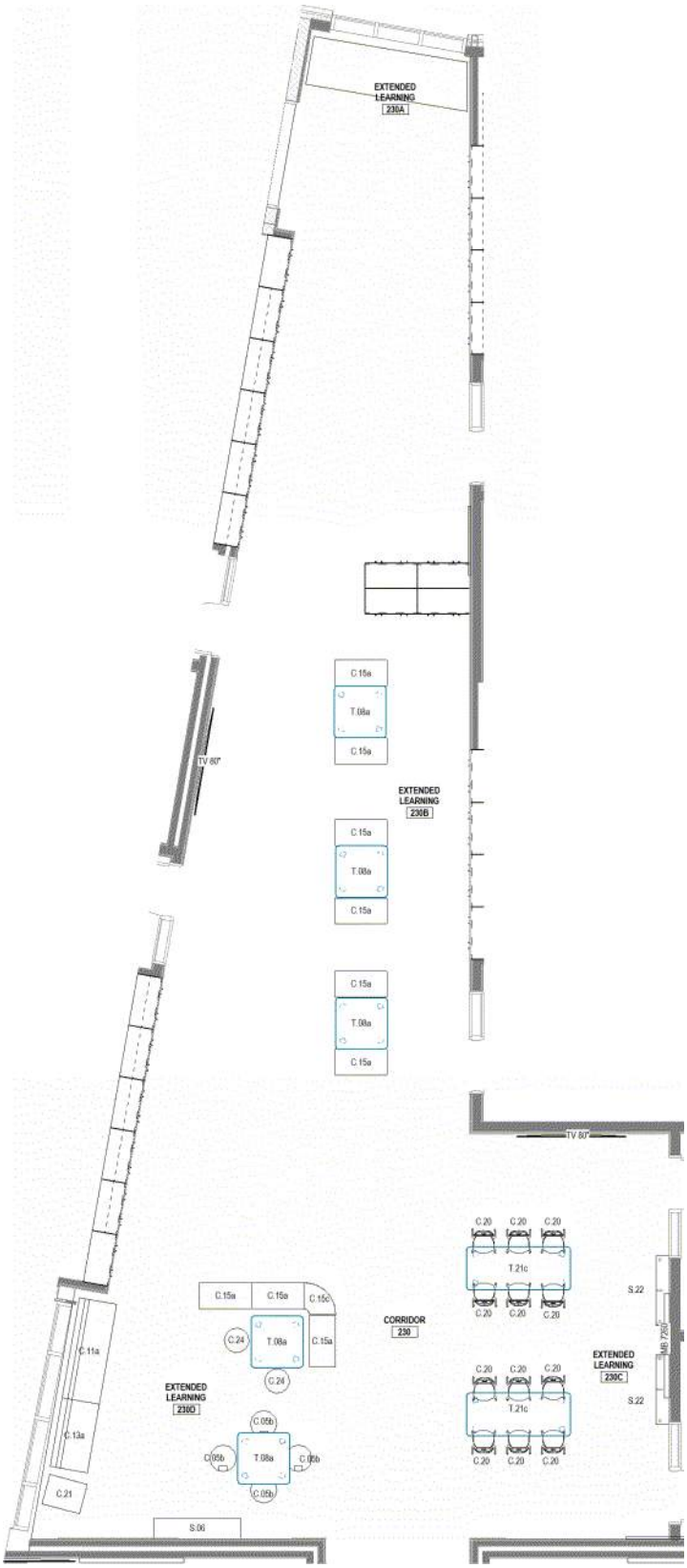
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.062

(1) Teachers connection stations to coordinate with interactive projector (data & power)



Room Function Number 01.079

Room Name	EXTENDED LEARNING
Room Number	301A
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	301A	Programmed	371.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning
Occupant Load:	(1) Teachers/Para professionals (15) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive display panel, wall mounted

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.079

(1) Teachers connection stations to coordinate with interactive projector (data & power)

Furniture

Item: BIM ID	Name	Quantity
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.08a	120000-Furniture-Stool - 30"	3
C.10c	Steelcase Turnstone - Campfire - Lounge - Half	1
C.10d	Steelcase Turnstone - Campfire - Lounge - Inside Corner - 90deg	1
C.11a	120000-Furniture-Chair-Bench 2 - 120000-Furniture-Chair-Office-Loveseat	1
C.11b	Steelcase Turnstone - Campfire - Lounge - Big	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	4
S.28	SmithSystem_AM_Storage_Education_Constellate_StandAlone_LowUnit - with Totes	1
T.02	Steelcase Turnstone - Campfire - Slim Table1 - 66W 2	1
T.09a	Steelcase Turnstone - Campfire - Big Table - 24D x 40H	1
T.21a	SmithSystem_AM_Table_Education_Elemental_NestAndFold_24D - 24D x 60W	2

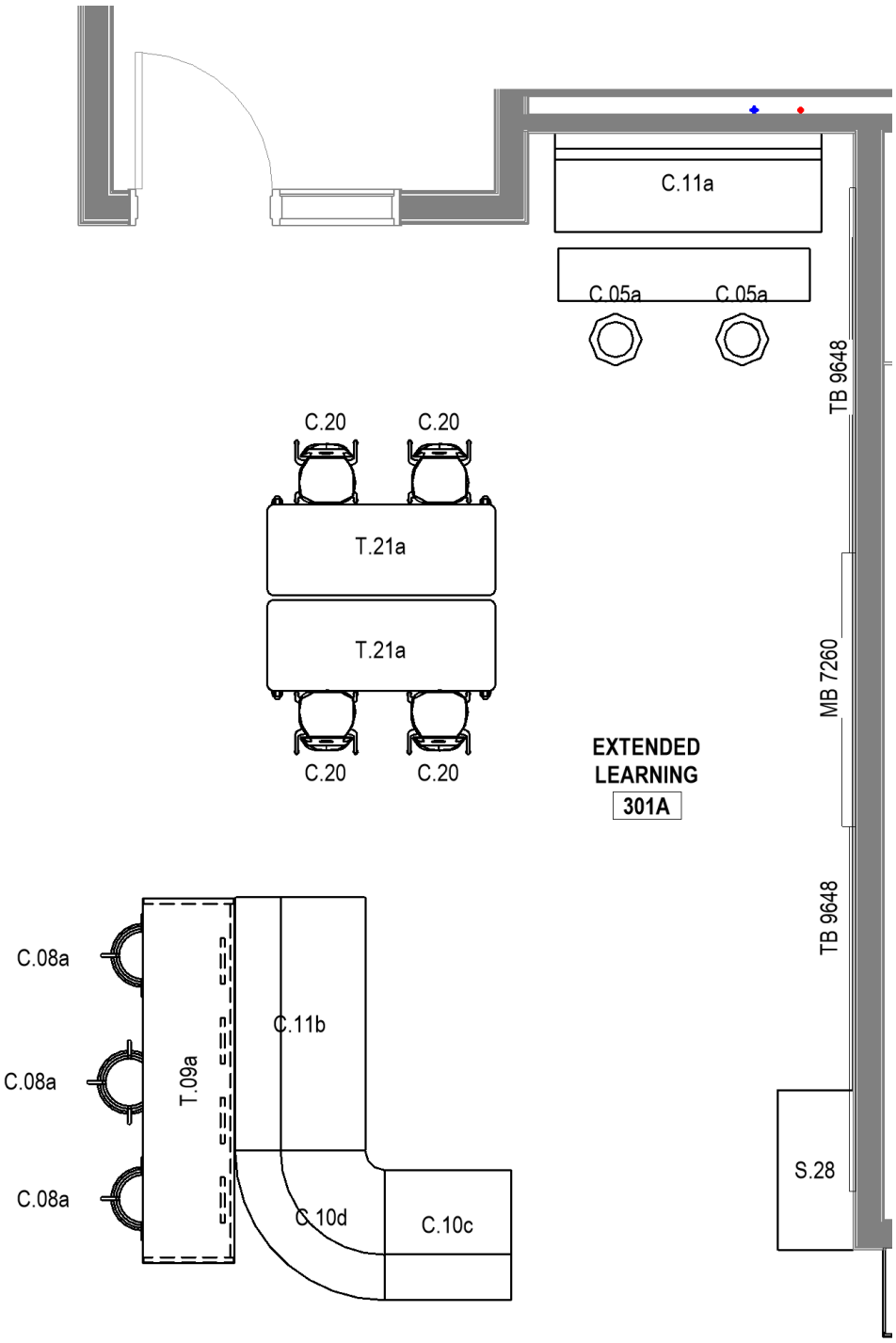
Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 01.079



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Room Function Number 01.021

Room Name	EXTENDED LEARNING
Room Number	301B
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	301B	Programmed	359.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning
Occupant Load:	4) Teachers/Para professionals (50) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive display panel, wall mounted

Room Data Sheet

SD - Submission

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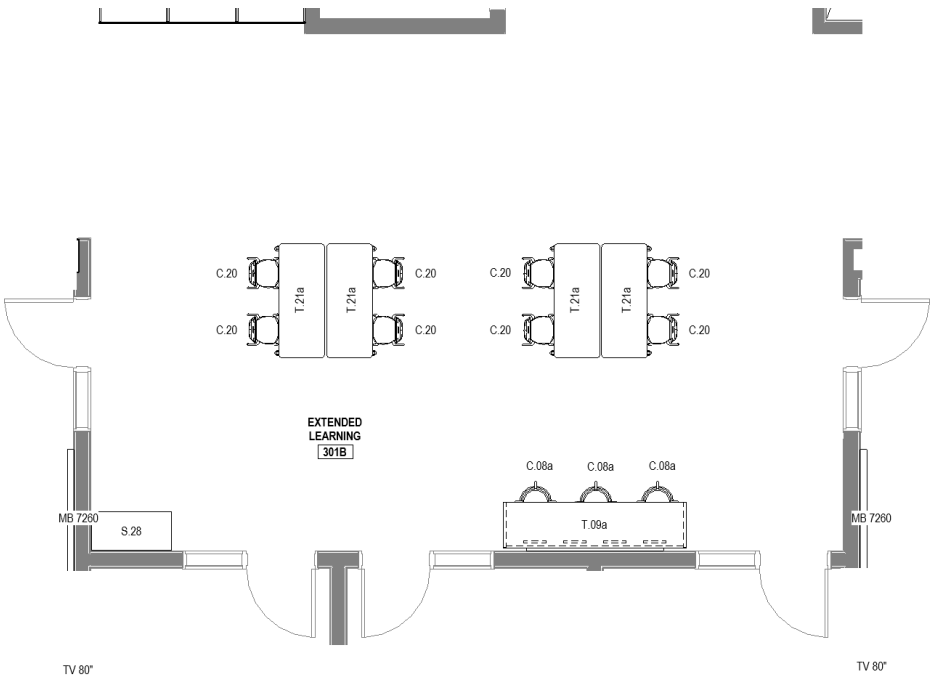
Wilmington Wildwood EC Center

Room Function Number 01.021

(1) Teachers connection stations to coordinate with interactive projector (data & power)

Furniture

Item: BIM ID	Name	Quantity
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	8
T.21a	SmithSystem_AM_Table_Education_Elemental_NestAndFold_24D - 24D x 60W	4



Room Function Number 01.073

Room Name	EXTENDED LEARNING
Room Number	302A
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	302A	Programmed	44.00
User Room Number			
Additional Number	302B, 302C, 302D		
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning
Occupant Load:	4) Teachers/Para professionals (50) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive display panel, wall mounted

Room Data Sheet

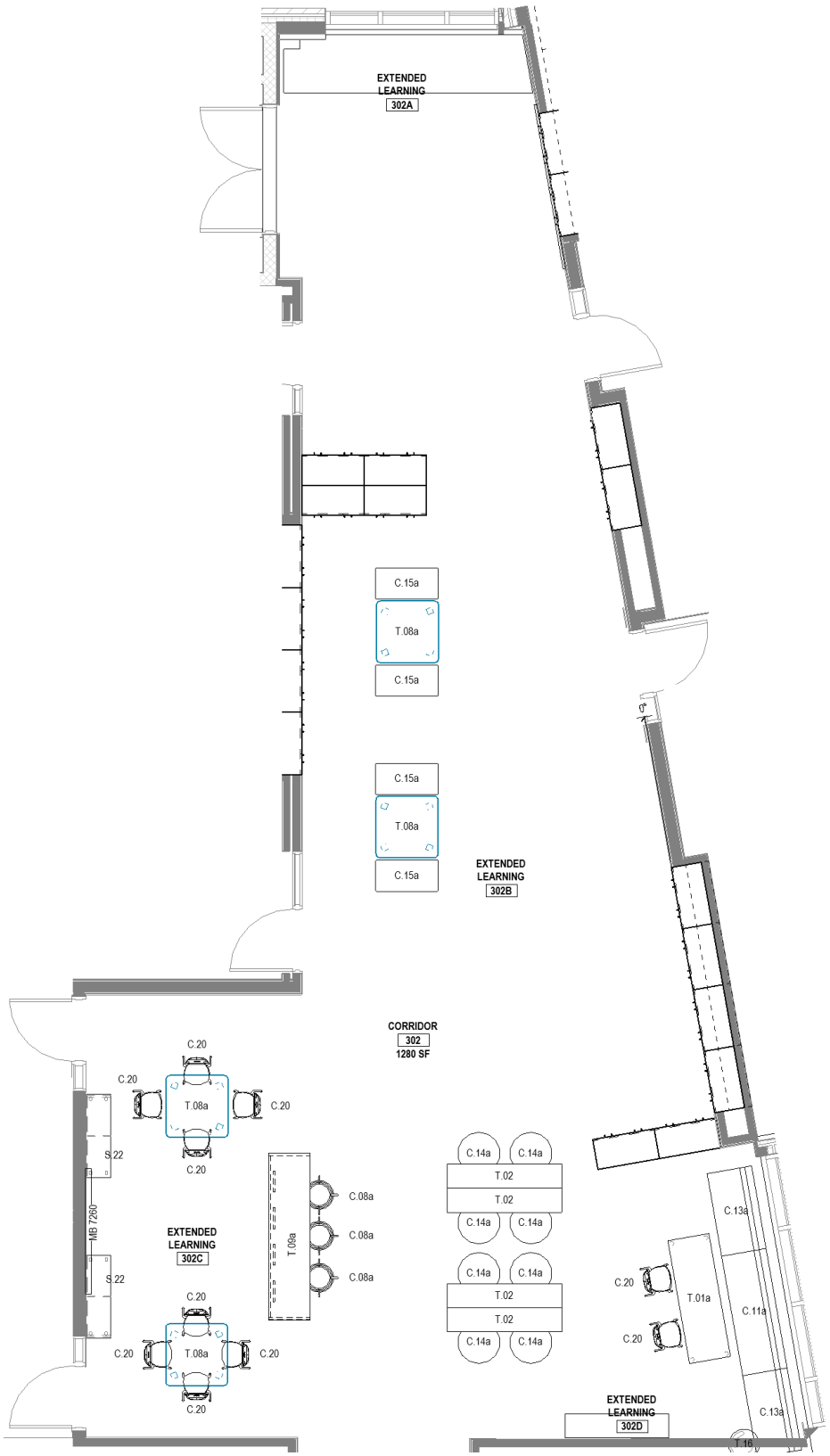
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 01.073

(1) Teachers connection stations to coordinate with interactive projector (data & power)



Room Function Number 01.074

Room Name	EXTENDED LEARNING
Room Number	333A
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	333A	Programmed	43.00
User Room Number			
Additional Number	333B, 333C, 333D		
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning
Occupant Load:	4) Teachers/Para professionals (50) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive display panel, wall mounted

Room Data Sheet

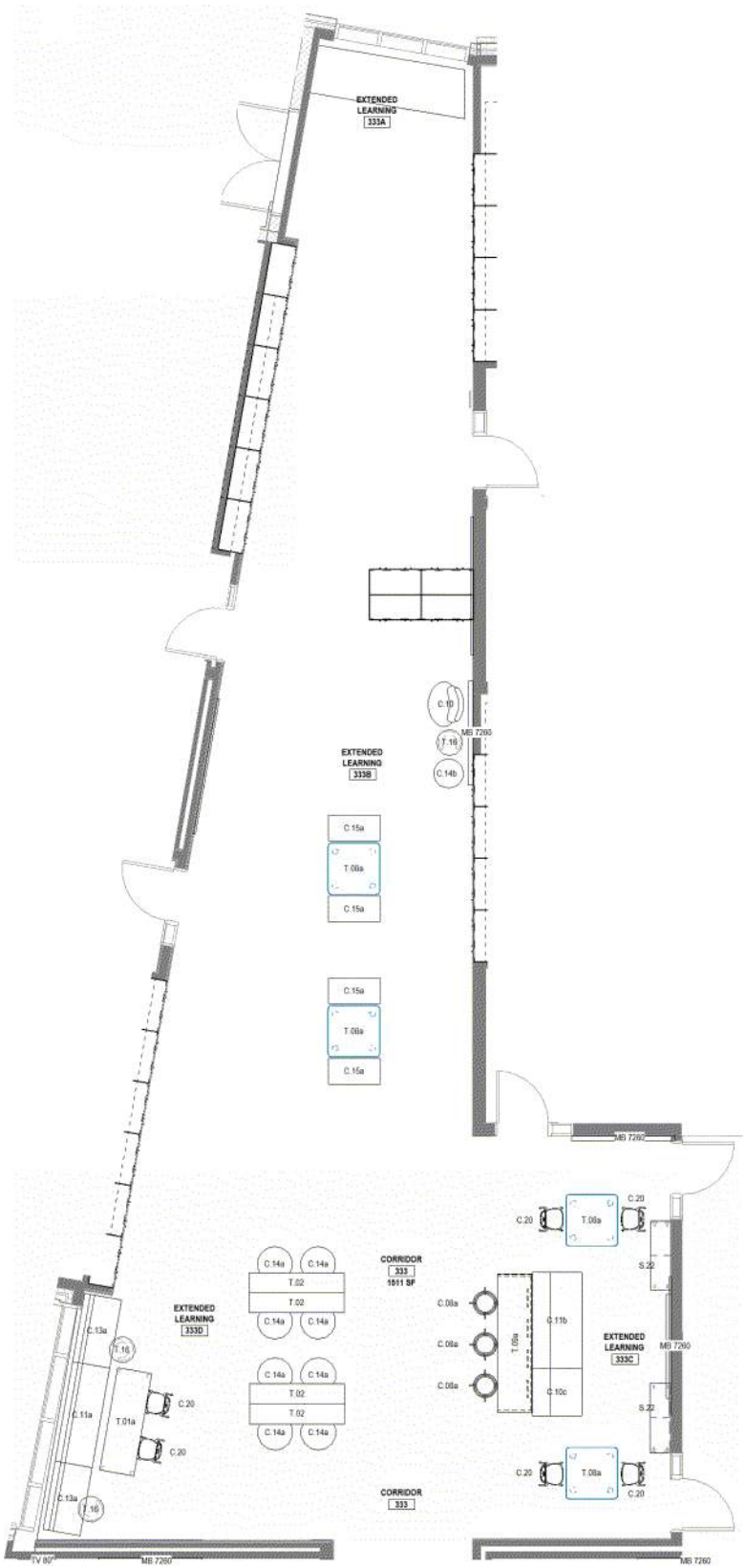
SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 01.074

(1) Teachers connection stations to coordinate with interactive projector (data & power)



Room Function Number 01.020

Room Name	EXTENDED LEARNING
Room Number	350A
Department (Name)	CORE ACADEMIC SPACES

Categorization		Areas	
Room Number	350A	Programmed	573.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning
Occupant Load:	4) Teachers/Para professionals (50) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive display panel, wall mounted

Room Data Sheet

SD - Submission

Dore & Whittier

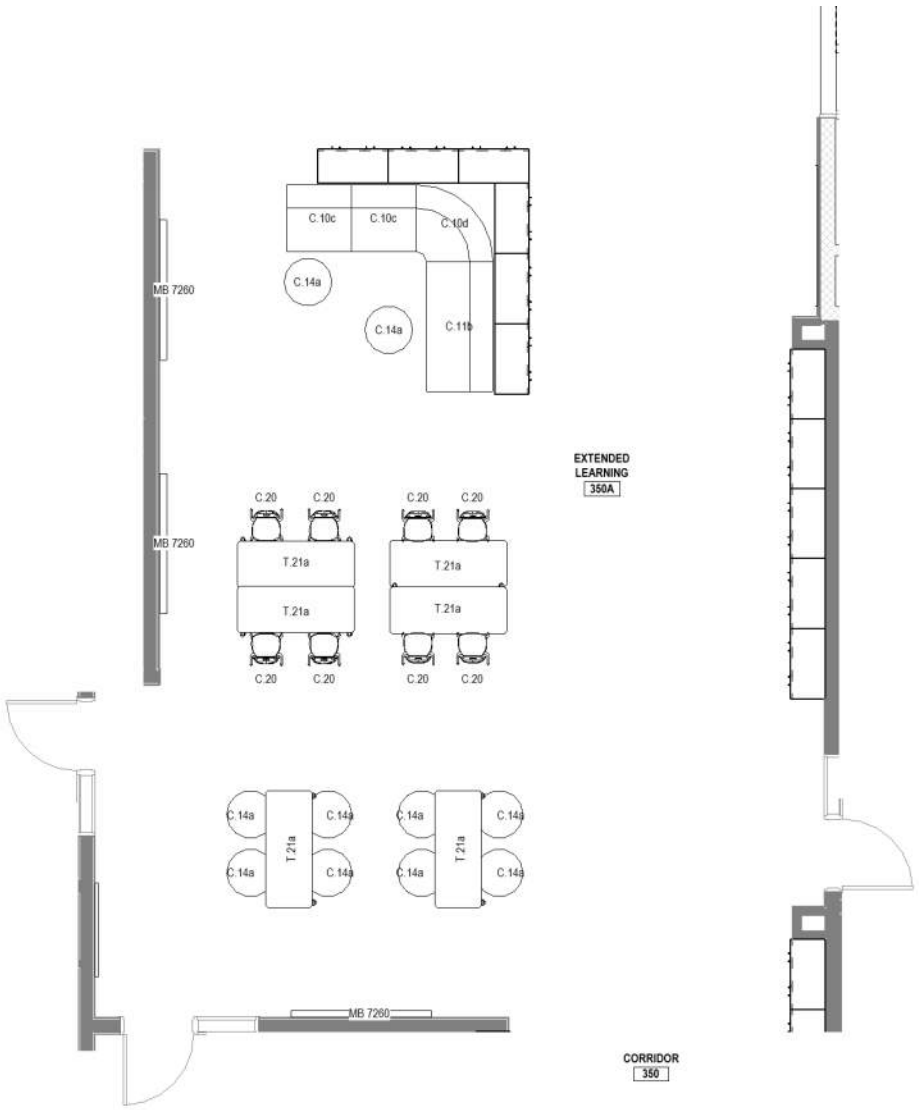
Wilmington Wildwood EC Center

Room Function Number 01.020

(1) Teachers connection stations to coordinate with interactive projector (data & power)

Furniture

Item: BIM ID	Name	Quantity
C.10c	Steelcase Turnstone - Campfire - Lounge - Half	2
C.10d	Steelcase Turnstone - Campfire - Lounge - Inside Corner - 90deg	1
C.11b	Steelcase Turnstone - Campfire - Lounge - Big	1
C.14a	Steelcase Turnstone - Alight - Seating - Ottoman - Round	8
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	6
T.21a	SmithSystem_AM_Table_Education_Elemental_NestAndFold_24D - 24D x 60W	6



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.004

Room Name	STRIDES PK-K
Room Number	115
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	115	Programmed	1,100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space to serve a substantially separate population of students in grades PREK-K who require intensive, direct, specialized instruction and related services for the majority of the school day.
Quantity:	3
Occupant Load:	(8) Students (1) Special Education Teacher (2-3) Assistants

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within learning communities w/ access to Extended Learning Areas
Orientation / Views:	Views to Exterior & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door, with acoustic seals - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (2) Accessible stainless-steel sink
Lighting:	Linear pendant direct/indirect, dimmable
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Storage for teachers and paraprofessionals. Storage for 12 students private materials, i.e. lunch boxes, homework folders. Coats, boots etc. will be stored with general classroom in Extended Learning areas. Storage accessed by students Storage not accessible by students
Specialties:	Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Furnishings:	Types & Configurations indicated in the attached room layout sheet
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	n/a

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	3
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1

Room Data Sheet

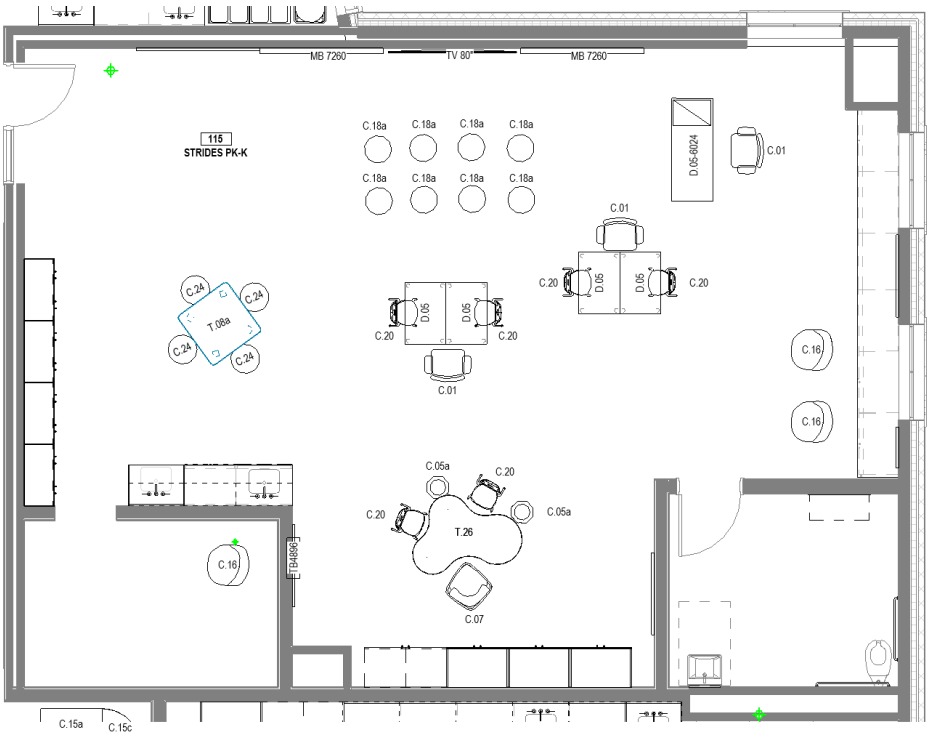
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.004

Item: BIM ID	Name	Quantity
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	2
C.18a	Amphi-Jnr-Mats-NorvaNivel - WKPAD	8
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	6
C.24	SmithSystem_AM_Seating_Education_Oodle_ThreeRockerBaseStool - 3 High	4
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	4
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.08a	Elemental Activity Table - RectangleSquare1 - 0.914 m x 0.914 m	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 02.016

Room Name	STAGES 1ST-2ND
Room Number	218
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	218	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space to serve a substantially separate population of students in grades 1-2 who require intensive, direct, specialized instruction and related services for the majority of the school day.
Quantity:	1
Occupant Load:	(8) Students (1) Special Education Teacher (2-3) Assistants

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within learning communities w/ access to Extended Learning Areas
Orientation / Views:	Views to Exterior & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door, with acoustic seals - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (2) Accessible stainless-steel sink
Lighting:	Linear pendant direct/indirect, dimmable
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Storage for teachers and paraprofessionals. Storage for 8 students private materials, i.e. lunch boxes, homework folders. Coats, boots etc. will be stored with general classroom in Extended Learning areas. Storage accessed by students Storage not accessible by students
Specialties:	Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Furnishings:	Types & Configurations indicated in the attached room layout sheet
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	n/a

Additional Requirements:

Safety at windows - limited opening for security; soft edge sill
limited ledges/cabinets to avoid climbing

Furniture

Room Data Sheet

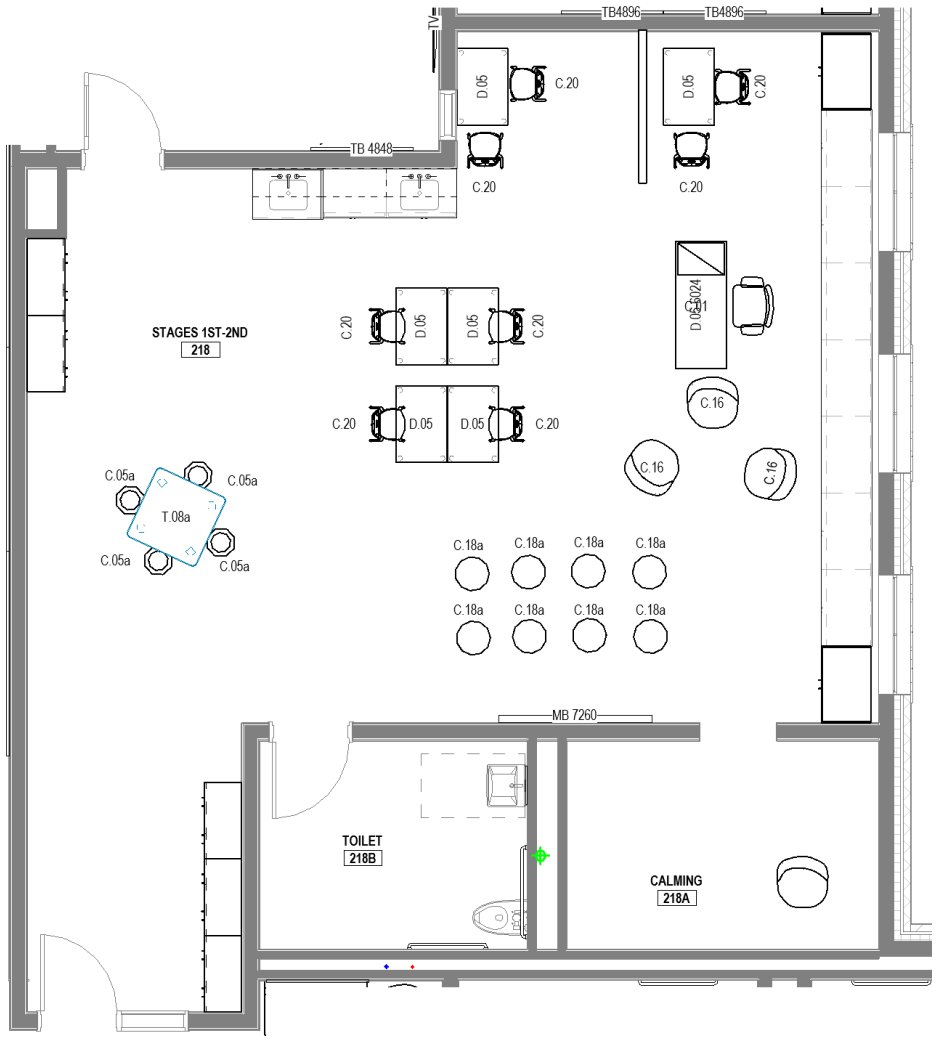
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.016

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	4
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	3
C.18a	Amphi-Jnr-Mats-NorvaNivel - WKPAD	8
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	8
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	6
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.08a	Elemental Activity Table - RectangleSquare1 - 0.914 m x 0.914 m	1



Room Function Number 02.020

Room Name	STRIDES 1ST-2ND
Room Number	231
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	231	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space to serve a substantially separate population of students in grades 1-2 who require intensive, direct, specialized instruction and related services for the majority of the school day.
Quantity:	1
Occupant Load:	(8) Students (1) Special Education Teacher (2-3) Assistants

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within learning communities w/ access to Extended Learning Areas
Orientation / Views:	Views to Exterior & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door, with acoustic seals - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (2) Accessible stainless-steel sink
Lighting:	Linear pendant direct/indirect, dimmable
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Storage for teachers and paraprofessionals. Storage for 8 students private materials, i.e. lunch boxes, homework folders. Coats, boots etc. will be stored with general classroom in Extended Learning areas.Storage accessed by students Storage not accessible by students
Specialties:	Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Furnishings:	Types & Configurations indicated in the attached room layout sheet
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	n/a

Additional Requirements:

Closed storage in toilet rooms for toilet training in younger grades (diapers/wipes/gloves) and changing table/pad

Furniture

Room Data Sheet

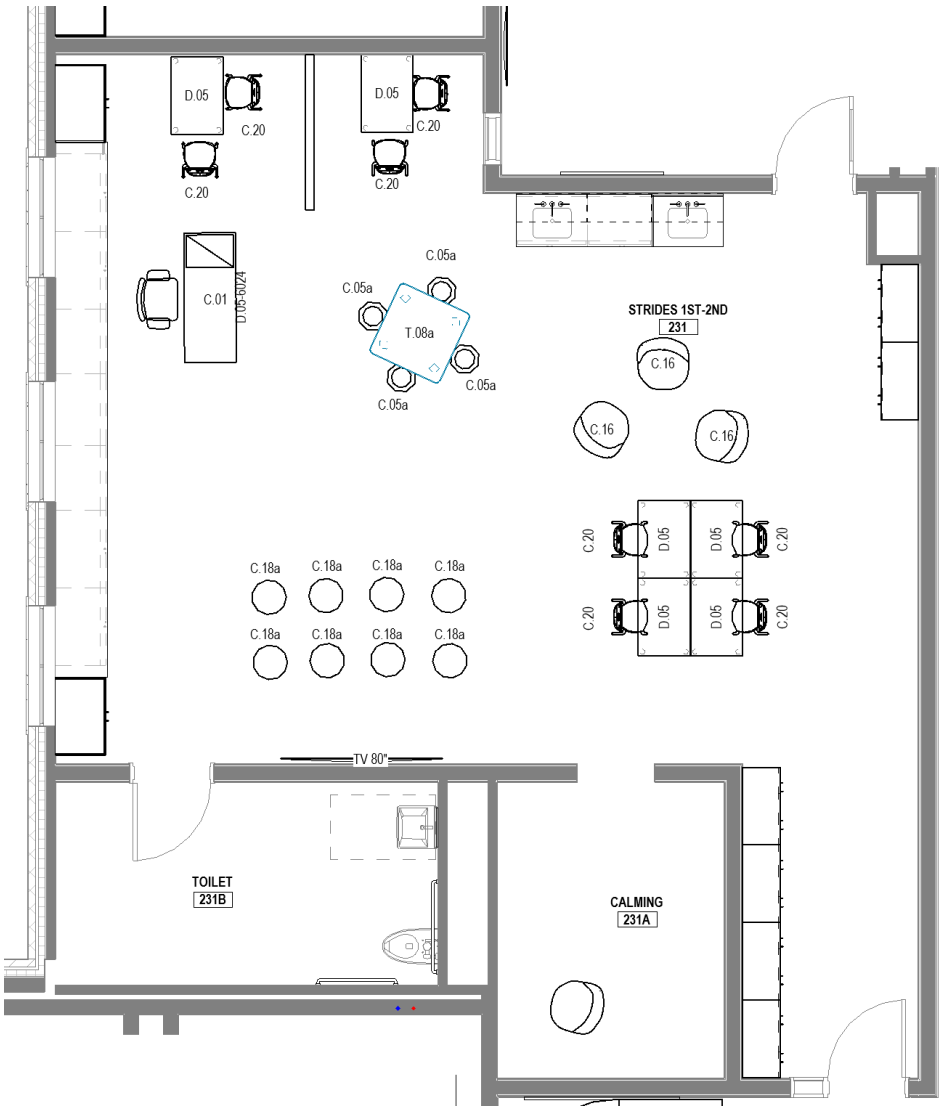
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.020

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	4
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	3
C.18a	Amphi-Jnr-Mats-NorvaNivel - WKPAD	8
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	8
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	6
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.08a	Elemental Activity Table - RectangleSquare1 - 0.914 m x 0.914 m	1



Room Function Number 02.027

Room Name	STAGES 3RD-5TH
Room Number	321
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	321	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space to serve a substantially separate population of students in grades 3-5 who require intensive, direct, specialized instruction and related services for the majority of the school day.
Quantity:	1
Occupant Load:	(8) Students (1) Special Education Teacher (2-3) Assistants

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within learning communities w/ access to Extended Learning Areas
Orientation / Views:	Views to Exterior & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door, with acoustic seals - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (2) Accessible stainless-steel sink
Lighting:	Linear pendant direct/indirect, dimmable
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system

Fixtures & Furnishings:

Casework:	ypes & Configurations indicated in the attached room layout sheets including: Storage for teachers and paraprofessionals. Storage for 8 students private materials, i.e. lunch boxes, homework folders. Coats, boots etc. will be stored with general classroom in Extended Learning areas.Storage accessed by students Storage not accessible by students
Specialties:	Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Furnishings:	Types & Configurations indicated in the attached room layout sheet
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	n/a

Additional Requirements:

Safety at windows - limited opening for security; soft edge sill
limited ledges/cabinets to avoid climbing

Furniture

Room Data Sheet

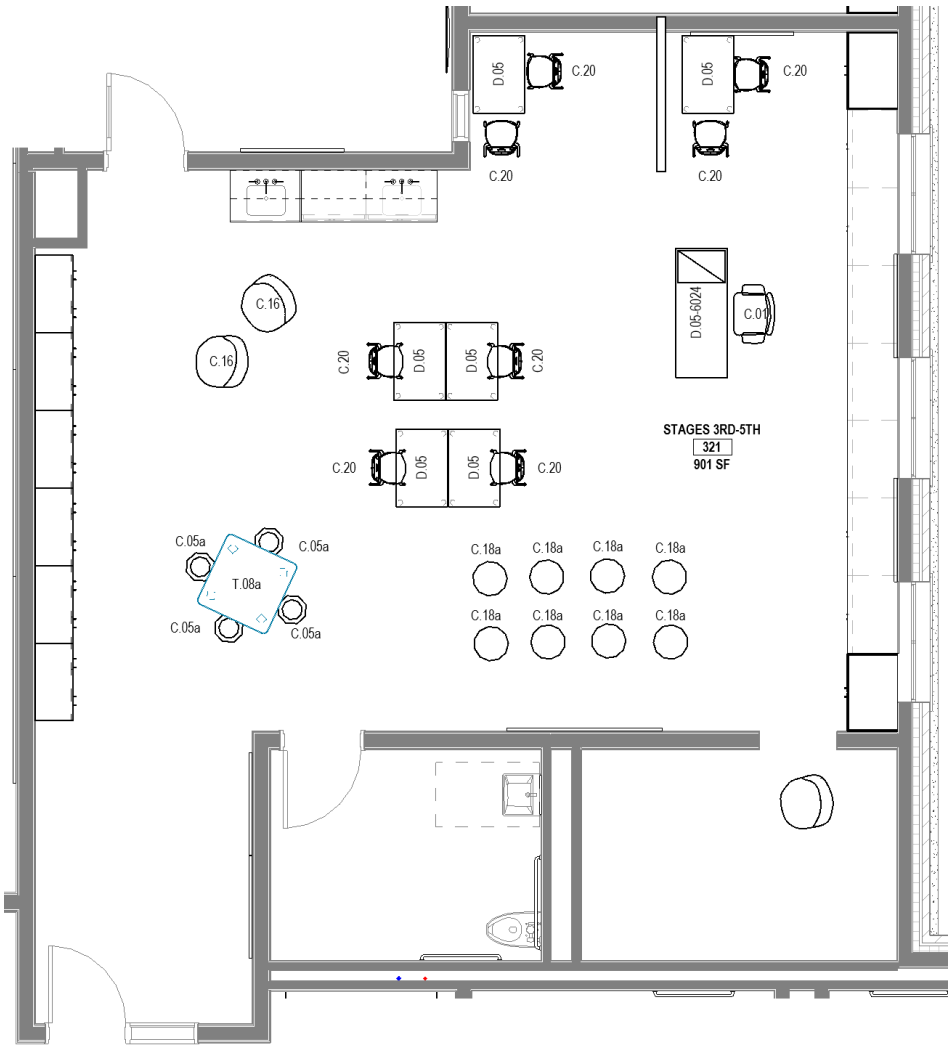
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.027

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	4
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	8
C.18a	Amphi-Jnr-Mats-NorvaNivel - WKPAD	8
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	8
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	6
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.08a	Elemental Activity Table - RectangleSquare1 - 0.914 m x 0.914 m	1



TB 9648

Room Function Number 02.031

Room Name	STRIDES 3RD-5TH
Room Number	334
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	334	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space to serve a substantially separate population of students in grades 3-5 who require intensive, direct, specialized instruction and related services for the majority of the school day.
Quantity:	2
Occupant Load:	(8) Students (1) Special Education Teacher (2-3) Assistants

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within learning communities w/ access to Extended Learning Areas
Orientation / Views:	Views to Exterior & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door, with acoustic seals - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (2) Accessible stainless-steel sink
Lighting:	Linear pendant direct/indirect, dimmable
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Storage for teachers and paraprofessionals. Storage for 8 students private materials, i.e. lunch boxes, homework folders. Coats, boots etc. will be stored with general classroom in Extended Learning areas. Storage accessed by students Storage not accessible by students
Specialties:	Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Furnishings:	Types & Configurations indicated in the attached room layout sheet
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	n/a

Additional Requirements:

Closed storage in toilet rooms for toilet training in younger grades (diapers/wipes/gloves) and changing table/pad

Furniture

Room Data Sheet

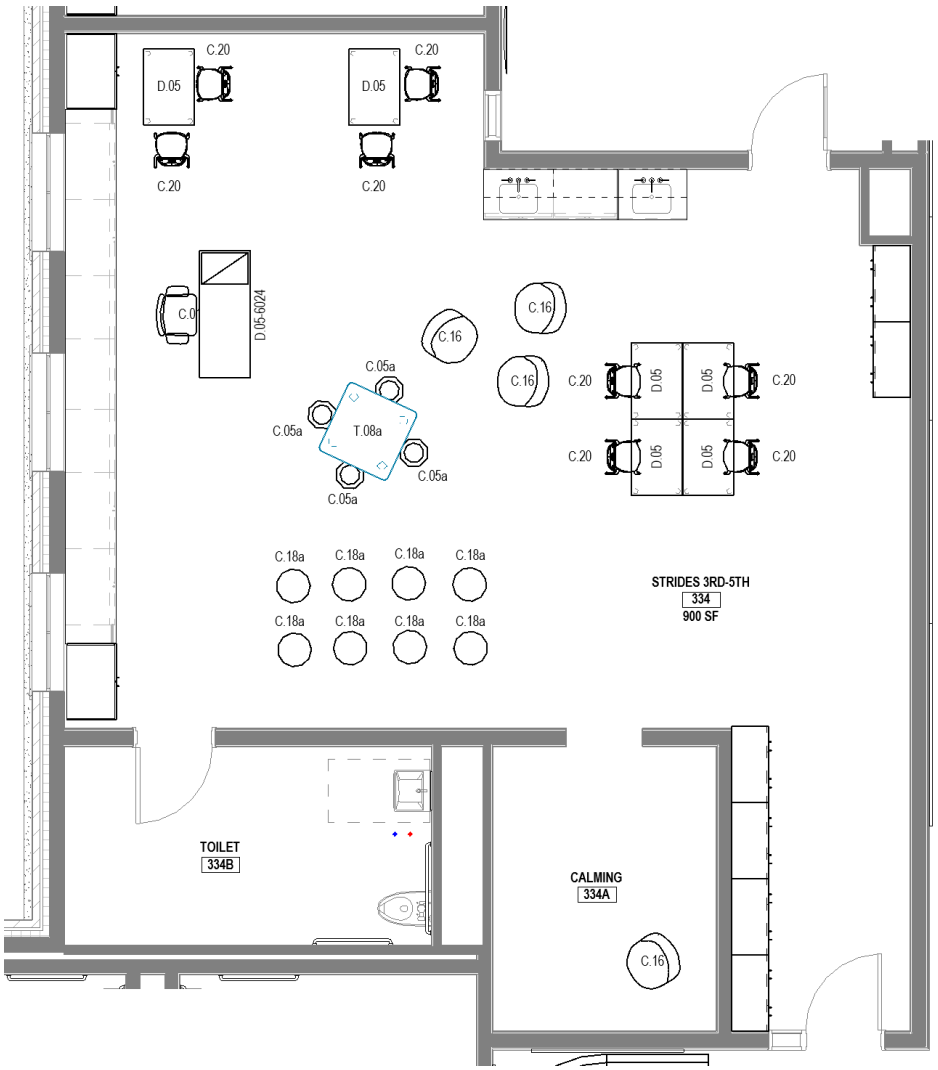
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.031

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	4
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	3
C.18a	Amphi-Jnr-Mats-NorvaNivel - WKPAD	8
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	8
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	6
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.08a	Elemental Activity Table - RectangleSquare1 - 0.914 m x 0.914 m	1



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.008

Room Name	TOILET
Room Number	115B
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	115B	Programmed	105.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Toilet room for self contained SPED classroom
Quantity:	8
Occupant Load:	1

Location Criteria:

Users:	Students
Adjacency:	Within self contained SPED classrooms

Technical Criteria:

Floor Finishes:	Porcelain/Ceramic tile
Wall Finishes:	Tile, Painted Gypsum
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED Standards
Windows:	None
Plumbing / FP:	Accessible plumbing fixtures; height will vary by age range served
Lighting:	Lay in fixtures
Technology:	None

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	Soap & paper towel dispensers, mirror, H/C grab bars
Shelving / Storage:	Storage for toileting and cleaning supplies, clean clothing

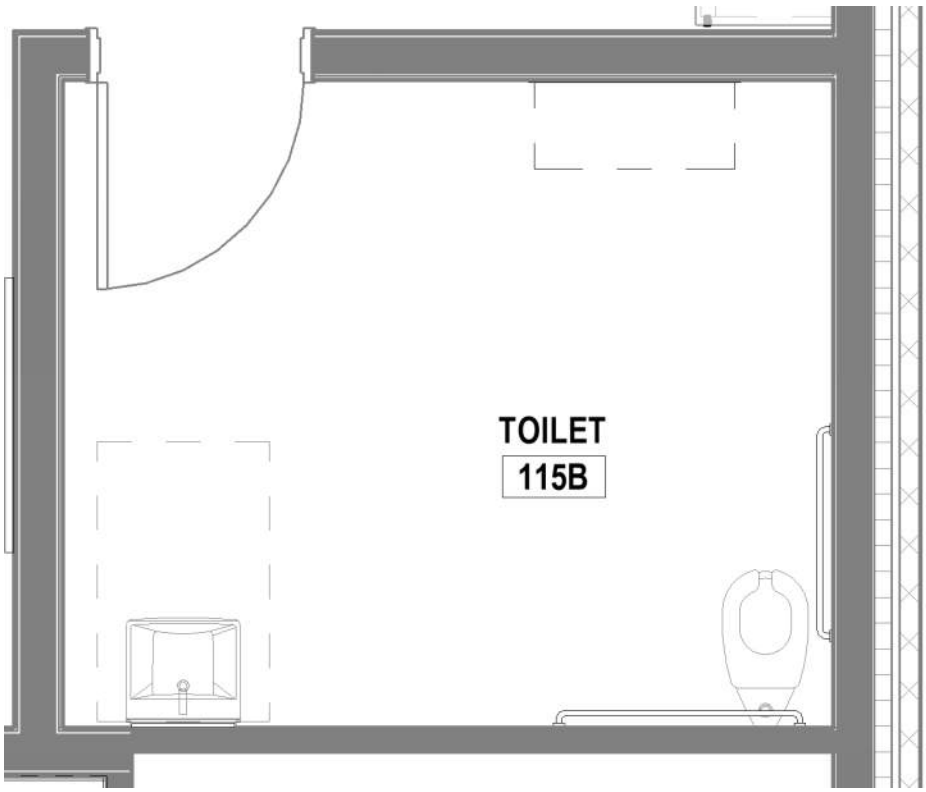
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.008



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.062

Room Name	TOILET
Room Number	132B
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	132B	Programmed	114.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Toilet room for self contained SPED classroom
Quantity:	8
Occupant Load:	1

Location Criteria:

Users:	Students
Adjacency:	Within self contained SPED classrooms

Technical Criteria:

Floor Finishes:	Porcelain/Ceramic tile
Wall Finishes:	Tile, Painted Gypsum
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED Standards
Windows:	None
Plumbing / FP:	Accessible plumbing fixtures; height will vary by age range served
Lighting:	Lay in fixtures
Technology:	None

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	Soap & paper towel dispensers, mirror, H/C grab bars
Shelving / Storage:	Storage for toileting and cleaning supplies, clean clothing

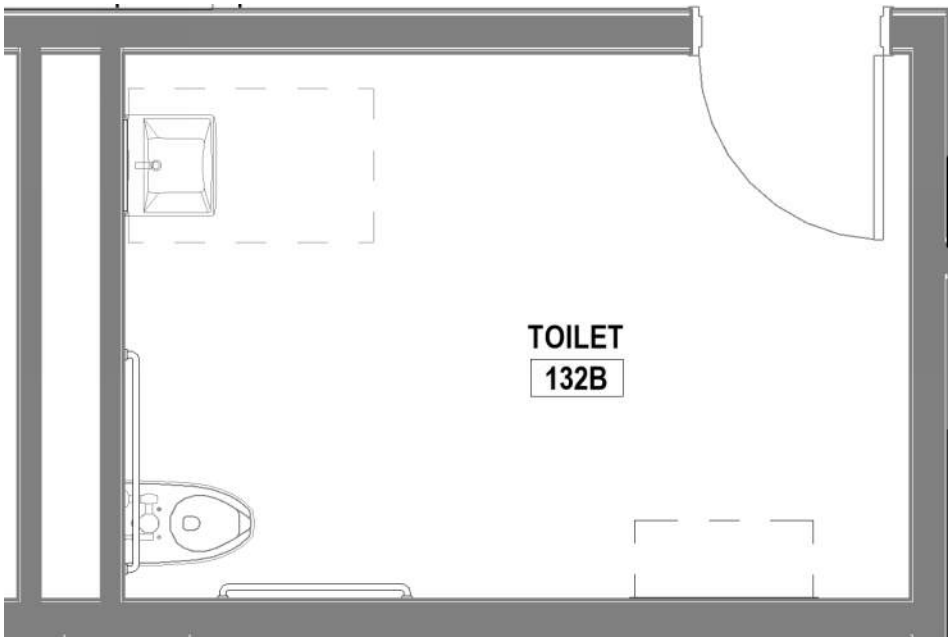
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.062



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.022

Room Name	TOILET
Room Number	231B
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	231B	Programmed	116.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Toilet room for self contained SPED classroom
Quantity:	8
Occupant Load:	1

Location Criteria:

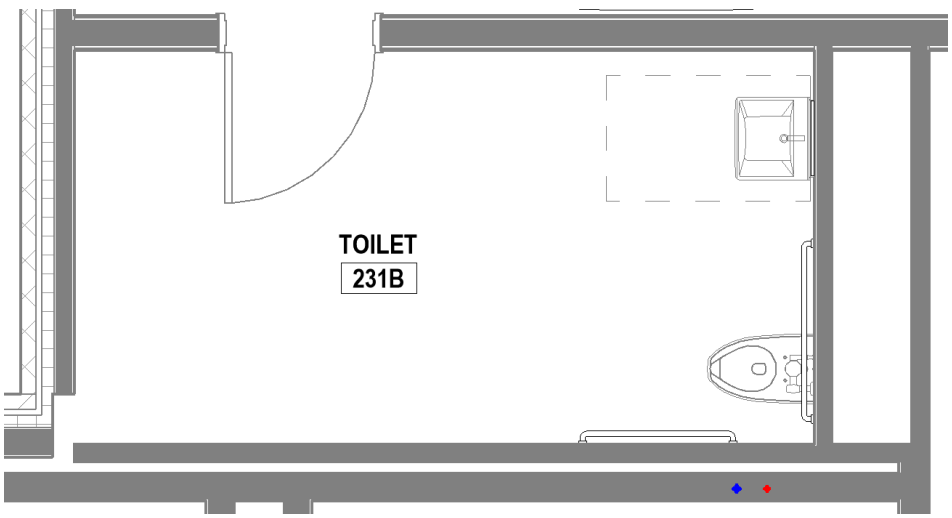
Users:	Students
Adjacency:	Within self contained SPED classrooms

Technical Criteria:

Floor Finishes:	Porcelain/Ceramic tile
Wall Finishes:	Tile, Painted Gypsum
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED Standards
Windows:	None
Plumbing / FP:	Accessible plumbing fixtures; height will vary by age range served
Lighting:	Lay in fixtures
Technology:	None

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	Soap & paper towel dispensers, mirror, H/C grab bars
Shelving / Storage:	Storage for toileting and cleaning supplies, clean clothing



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Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.033

Room Name	TOILET
Room Number	334B
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	334B	Programmed	114.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Toilet room for self contained SPED classroom
Quantity:	8
Occupant Load:	1

Location Criteria:

Users:	Students
Adjacency:	Within self contained SPED classrooms

Technical Criteria:

Floor Finishes:	Porcelain/Ceramic tile
Wall Finishes:	Tile, Painted Gypsum
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED Standards
Windows:	None
Plumbing / FP:	Accessible plumbing fixtures; height will vary by age range served
Lighting:	Lay in fixtures
Technology:	None

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	Soap & paper towel dispensers, mirror, H/C grab bars
Shelving / Storage:	Storage for toileting and cleaning supplies, clean clothing

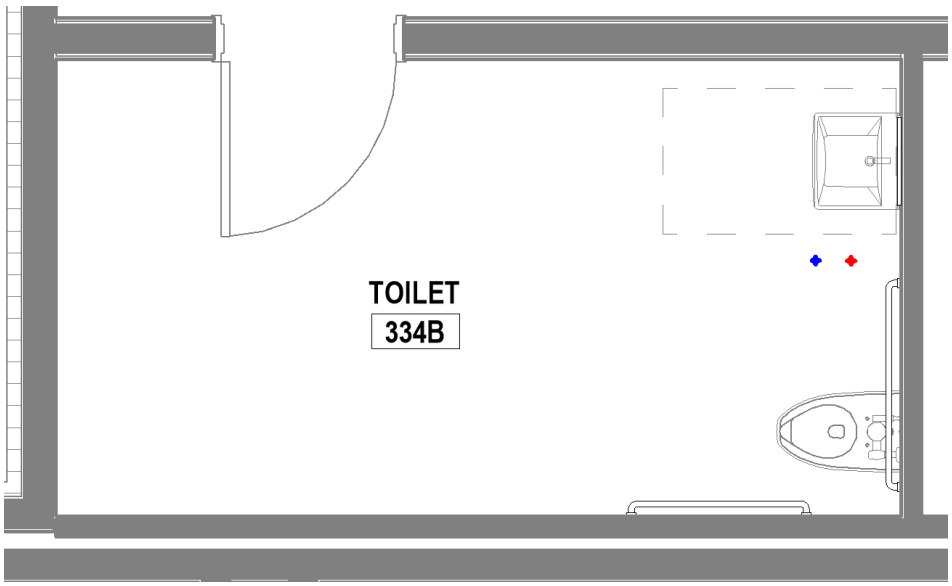
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.033



Room Function Number 02.011

Room Name	LEARNING CENTER
Room Number	210
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	210	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for English Language Learner specialists and pull-out instruction in small groups
Quantity:	6
Occupant Load:	(5-6) Students per group (1) Special Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Centrally located.
Orientation / Views:	Exterior required & views to Extended Learning Area desired

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush wood doors with side light and acoustical seals Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	6
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.07	120000-Furniture-Table Round - 36"	1
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

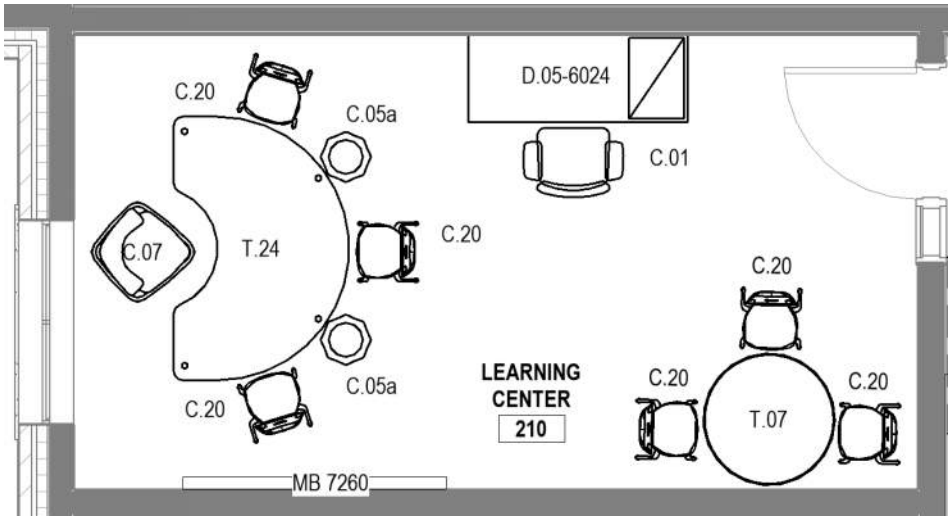
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.011



Room Function Number 02.035

Room Name	LEARNING CENTER
Room Number	306
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	306	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for English Language Learner specialists and pull-out instruction in small groups
Quantity:	6
Occupant Load:	Max 12 students (1) Special Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Centrally located.
Orientation / Views:	Exterior required & views to Extended Learning Area desired

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush wood doors with side light and acoustical seals Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	7
T.07	120000-Furniture-Table Round - 36"	1
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

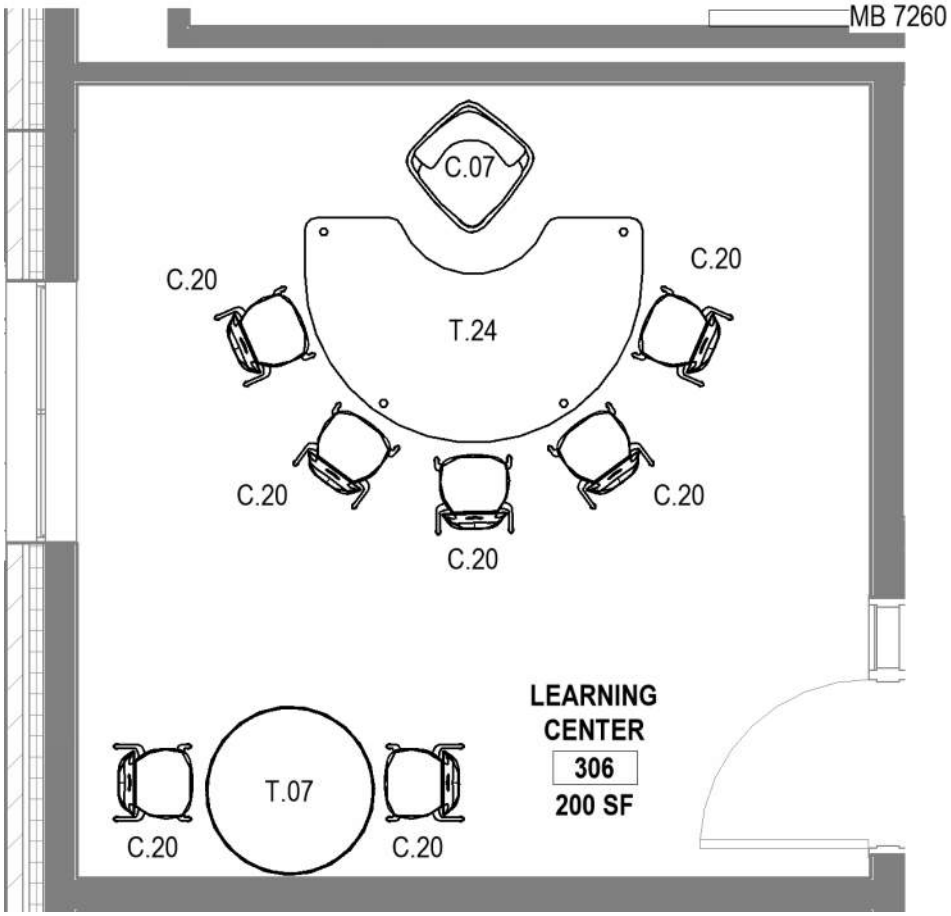
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.035



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.065

Room Name	SMALL GROUP ROOM
Room Number	113
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	113	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Room to delivery small group instruction with specialists
Quantity:	26
Occupant Load:	(1) Teacher (1-6) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Shared between 2 clasrooms
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	3
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	2
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

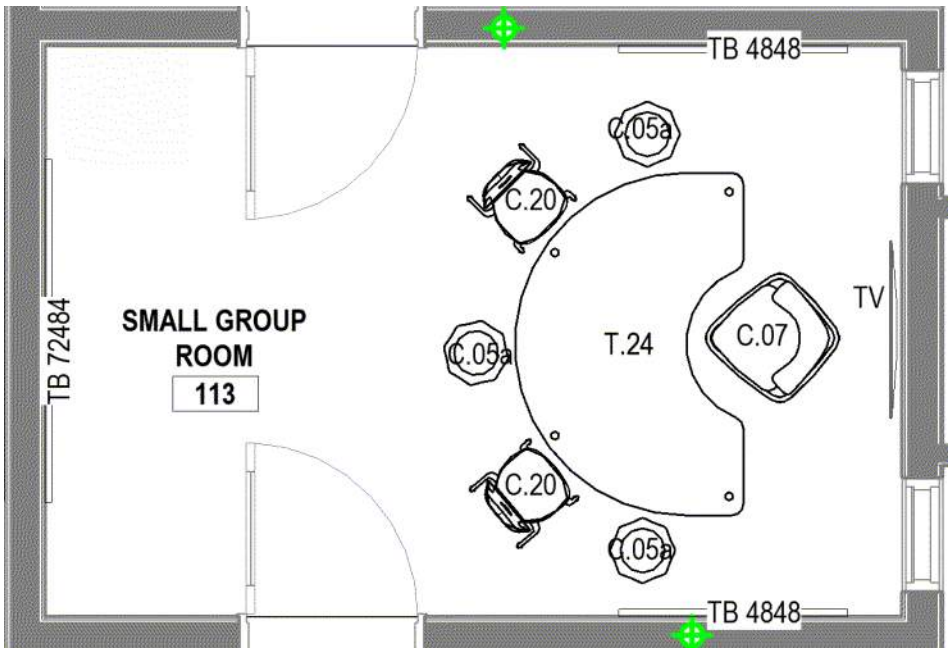
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.065



Room Function Number 02.061

Room Name	SMALL GROUP ROOM
Room Number	139
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	139	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Room to delivery small group instruction with specialists
Quantity:	26
Occupant Load:	(1) Teacher (1-6) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Shared between 2 clasrooms
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	4
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

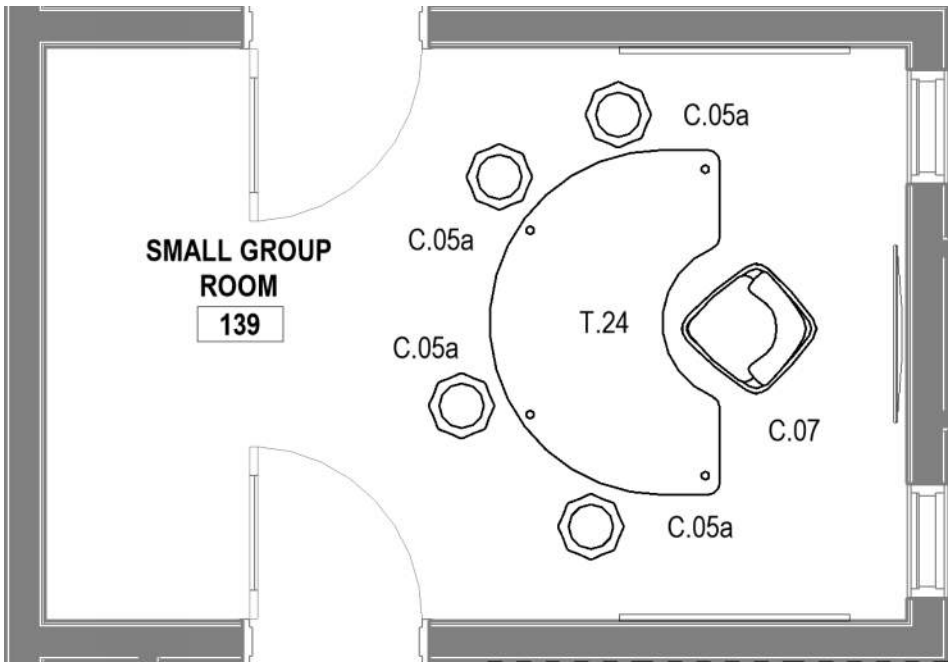
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.061



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.017

Room Name	SMALL GROUP ROOM
Room Number	217
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	217	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Room to delivery small group instruction with specialists
Quantity:	26
Occupant Load:	(1) Teacher (1-6) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Shared between 2 clasrooms
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	3
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

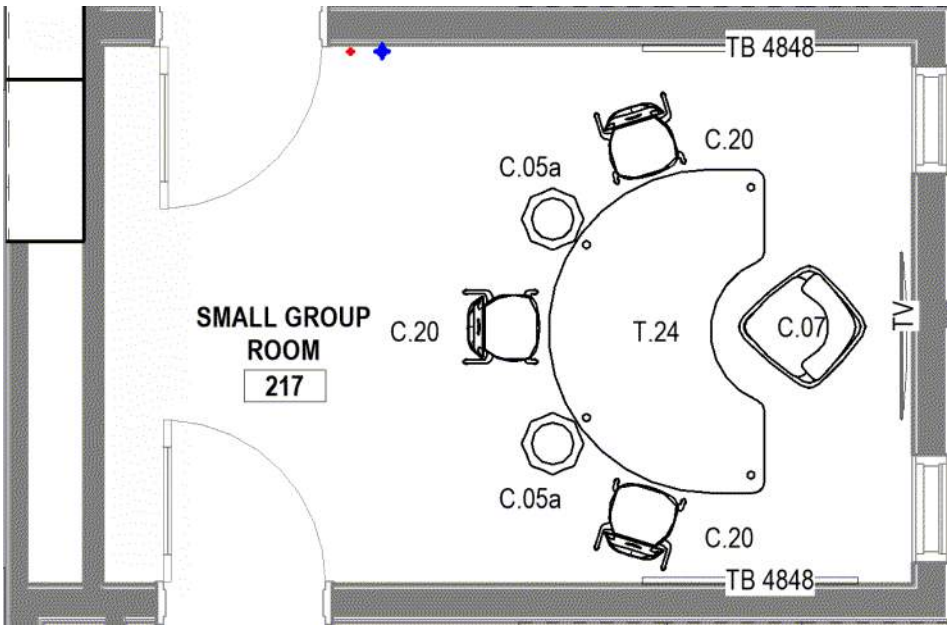
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.017



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.047

Room Name	SMALL GROUP ROOM
Room Number	243
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	243	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Room to delivery small group instruction with specialists
Quantity:	26
Occupant Load:	(1) Teacher (1-6) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Shared between 2 clasrooms
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	4
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

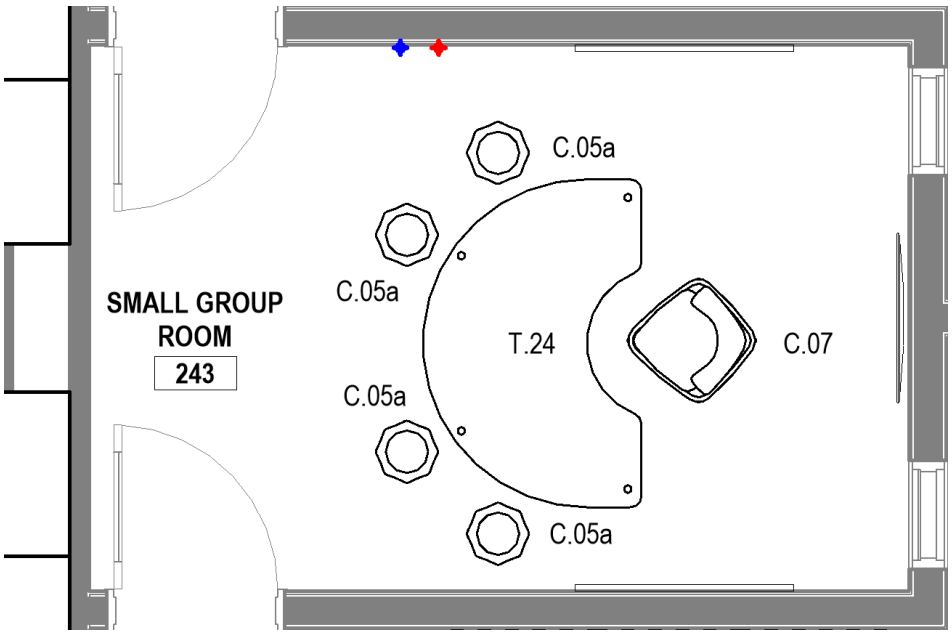
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.047



Room Function Number 02.028

Room Name	SMALL GROUP ROOM
Room Number	320
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	320	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Room to delivery small group instruction with specialists
Quantity:	26
Occupant Load:	(1) Teacher (1-6) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Shared between 2 clasrooms
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	5
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

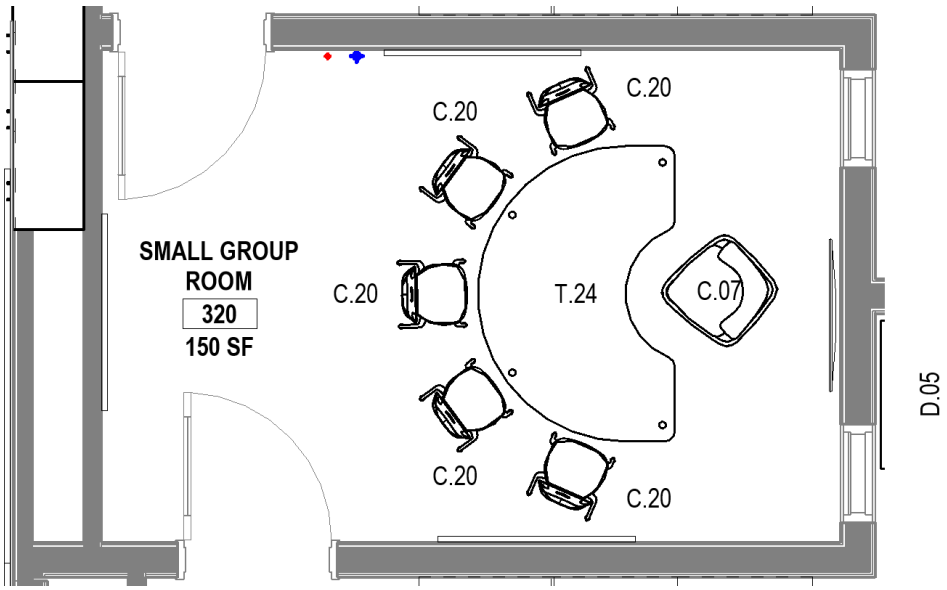
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.028



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.051

Room Name	SMALL GROUP ROOM
Room Number	346
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	346	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Room to delivery small group instruction with specialists
Quantity:	26
Occupant Load:	(1) Teacher (1-6) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Shared between 2 clasrooms
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	3
T.24	120000-Furniture-Table Kidney - T.01b Kidney Table - 72"x48"	1

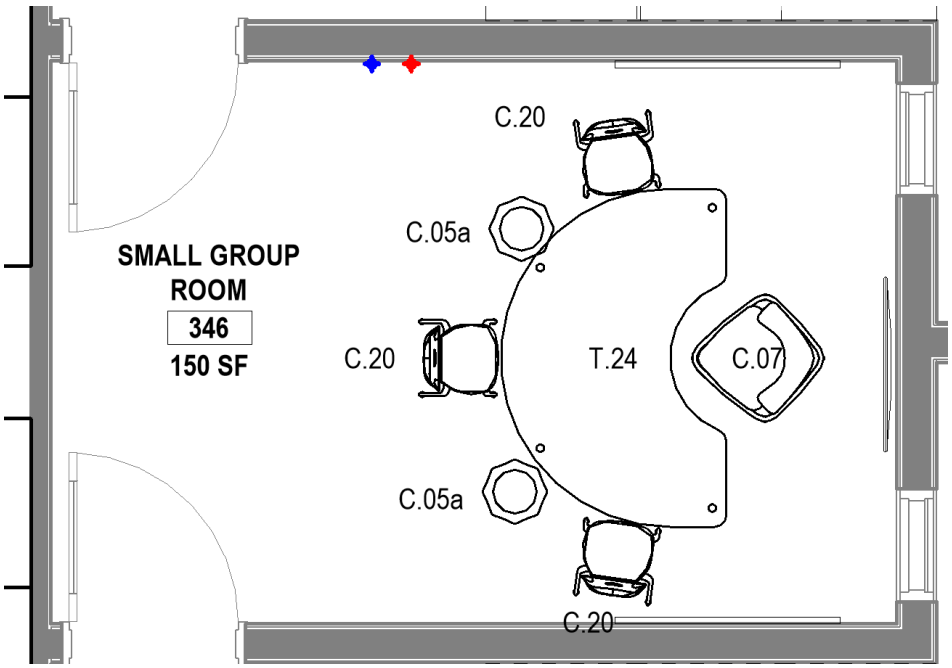
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.051



Room Function Number 02.007

Room Name	CALMING
Room Number	115A
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	115A	Programmed	100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space accessible from within the SPED classroom for students in need of de-escalation or a sensory break
Quantity:	8
Occupant Load:	(1-2) Students (1) Special Educator or Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals.
Adjacency:	Within SPED Classrooms.
Orientation / Views:	Exterior views not required. Accessed through classroom.

Technical Criteria:

Floor Finishes:	Resilient athletic flooring
Wall Finishes:	Abuse-Resistant Gypsum Wall Board, painted,
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	None
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in lighting
Electrical:	No power outlets or lighting controls located within the room.
Technology:	Public Address system Wireless network access

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	None
Shelving / Storage:	None

Additional Requirements:

No protruding corners for student safety.

Furniture

Item: BIM ID	Name	Quantity
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	1

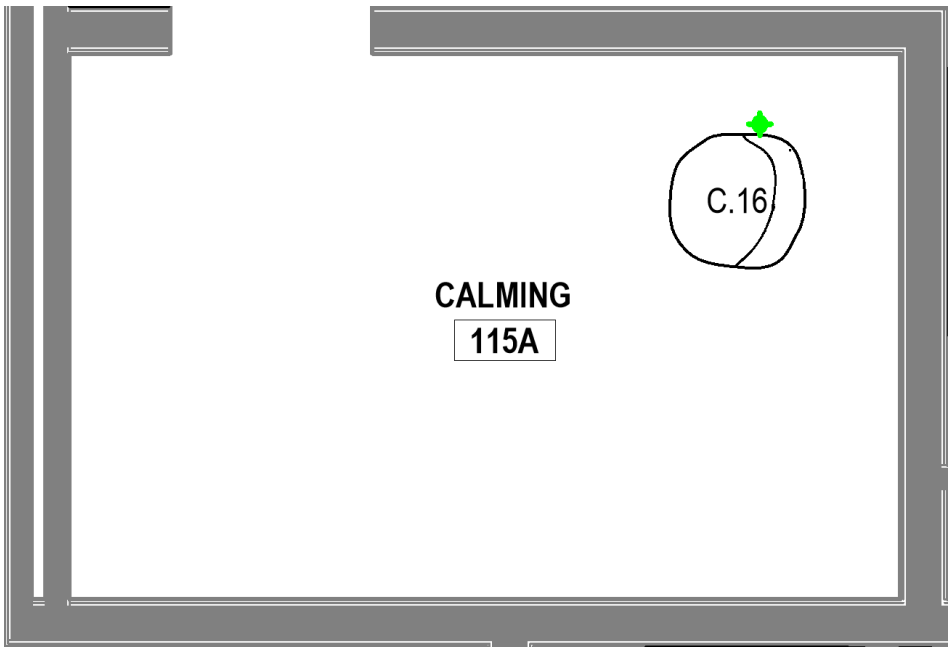
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.007



Room Function Number 02.023

Room Name	CALMING
Room Number	231A
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	231A	Programmed	100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space accessible from within the SPED classroom for students in need of de-escalation or a sensory break
Quantity:	8
Occupant Load:	(1-2) Students (1) Special Educator or Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals.
Adjacency:	Within SPED Classrooms.
Orientation / Views:	Exterior views not required. Accessed through classroom.

Technical Criteria:

Floor Finishes:	Resilient athletic flooring
Wall Finishes:	Abuse-Resistant Gypsum Wall Board, painted,
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	None
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in lighting
Electrical:	No power outlets or lighting controls located within the room.
Technology:	Public Address system Wireless network access

Fixtures & Furnishings:

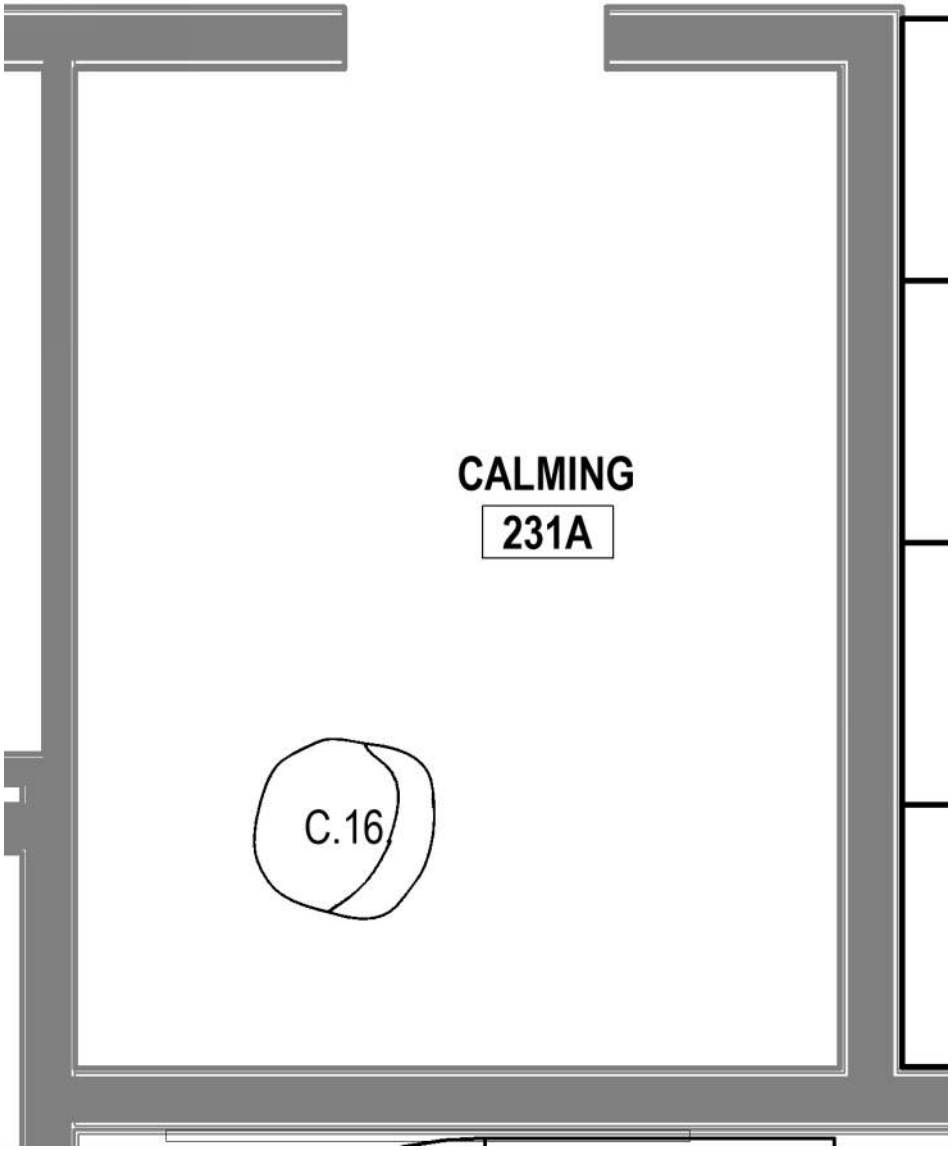
Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	None
Shelving / Storage:	None

Additional Requirements:

No protruding corners for student safety.

Furniture

Item: BIM ID	Name	Quantity
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	1


CALMING
231A
C.16

Room Function Number 02.034

Room Name	CALMING
Room Number	334A
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	334A	Programmed	100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	A space accessible from within the SPED classroom for students in need of de-escalation or a sensory break
Quantity:	8
Occupant Load:	(1-2) Students (1) Special Educator or Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals.
Adjacency:	Within SPED Classrooms.
Orientation / Views:	Exterior views not required. Accessed through classroom.

Technical Criteria:

Floor Finishes:	Resilient athletic flooring
Wall Finishes:	Abuse-Resistant Gypsum Wall Board, painted,
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	None
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in lighting
Electrical:	No power outlets or lighting controls located within the room.
Technology:	Public Address system Wireless network access

Fixtures & Furnishings:

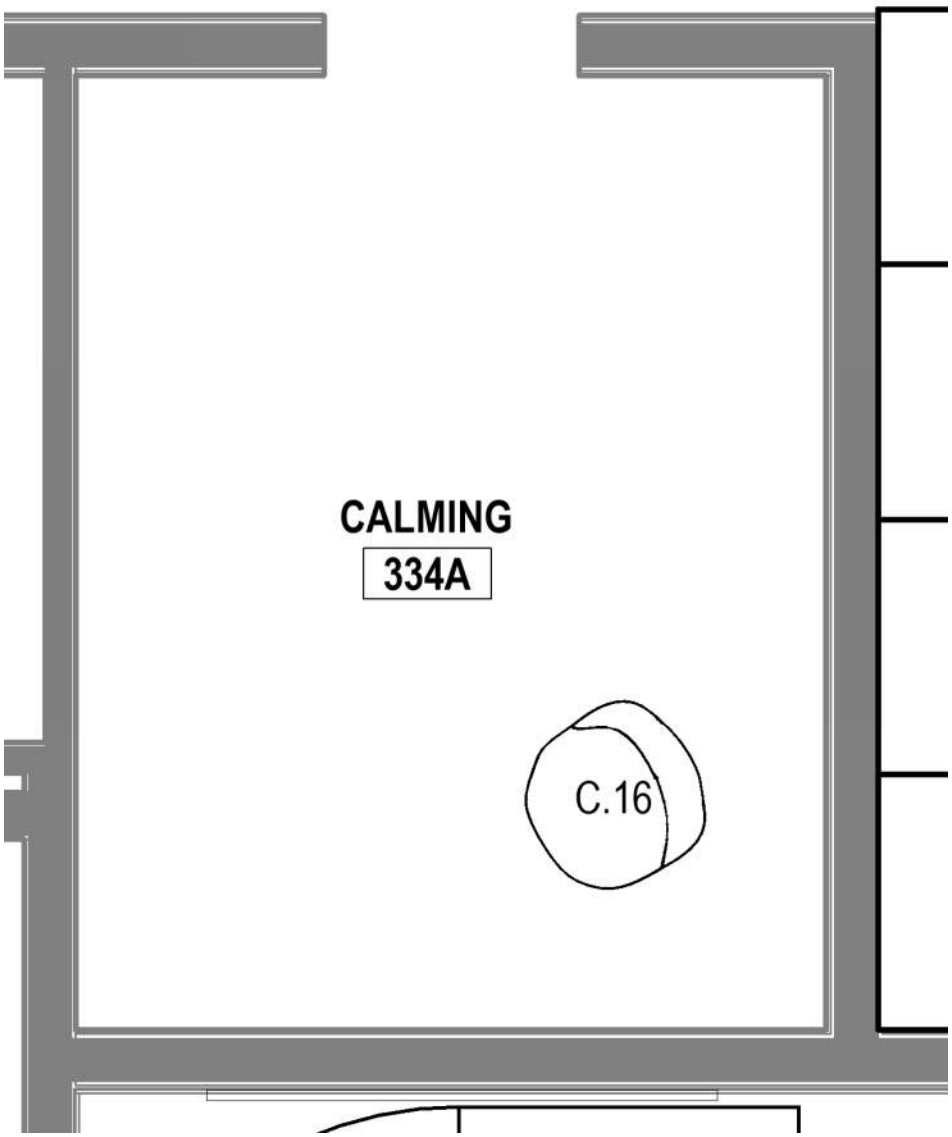
Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	None
Shelving / Storage:	None

Additional Requirements:

No protruding corners for student safety.

Furniture

Item: BIM ID	Name	Quantity
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	1


CALMING
334A
C.16

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.041

Room Name	OT CLASSROOM
Room Number	193
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	193	Programmed	250.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	The Occupational Therapist has knowledge and understanding of interventions in the areas of fine motor, sensorimotor, sensory processing, activities of Daily Living (ADL's), visual-motor and visual-perceptual skills. Home base for two professionals, location for drive-in services, other services provided near classrooms
Quantity:	1
Occupant Load:	(4) Students (1) Occupational Therapist (1) Para Professional

Location Criteria:

Users:	This room in the suite will serve the grade PK - 5 population.
Adjacency:	Adjacent to the Gymnasium and the PT storage space
Orientation / Views:	Views to Exterior desired

Technical Criteria:

Floor Finishes:	Athletic rubber floor
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Double Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed LED lighting
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors Voice amplification/ Sound field system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets.
Specialties:	Types & Configurations indicated in the attached room layout sheets.
Furnishings:	Types & Configurations indicated in the attached room layout sheets.
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	storage along perimeter of classroom with open central space (walkers, standers)

Furniture

Item: BIM ID	Name	Quantity
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	2
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1

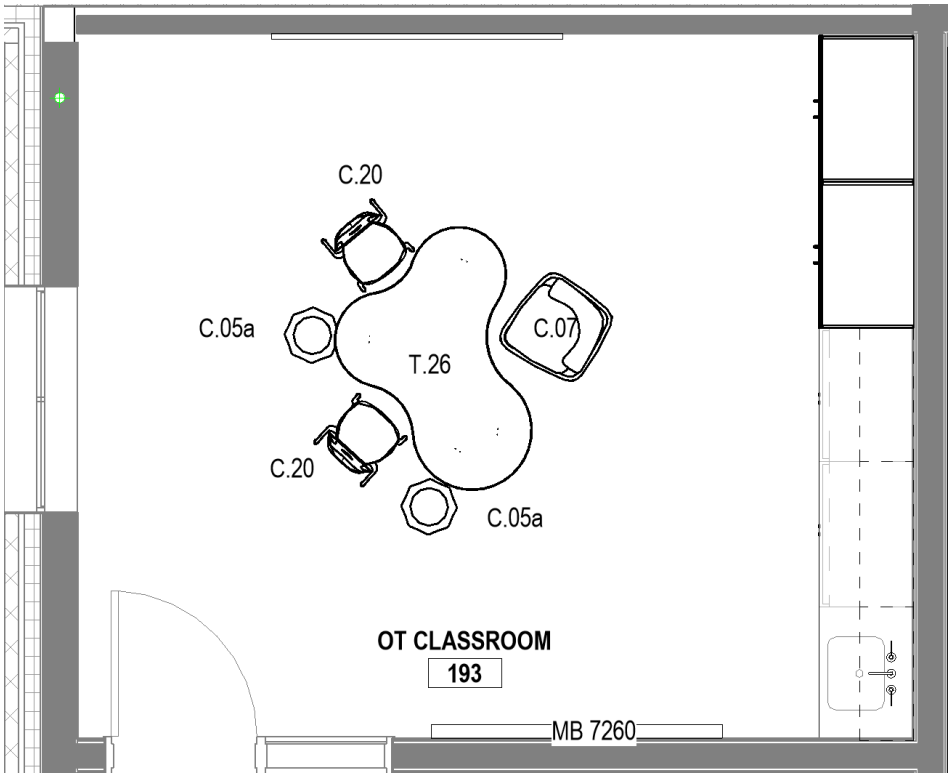
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.041



Room Function Number 02.040

Room Name	PT CLASSROOM
Room Number	192
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	192	Programmed	1,000.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	The Physical Therapist has knowledge and understanding of interventions in the areas of sensorimotor processing, range of motion, cardiovascular functioning, adaptation of equipment, wheelchair mobility, activities of Daily Living (ADL's), postural awareness, ambulation and gait training, recommendation and monitoring of orthosis and assistive devices, prevention of injury for students with disabilities.
Quantity:	1
Occupant Load:	(4) Students (1) Physical Therapist (1) Para Professional

Location Criteria:

Users:	This larger room in the suite will serve the grade PK - 5 population. Room will be divided between lower- and upper-age needs and functions will include mats, jumping, floor exercises, balancing, sensory, table for developmental play, plus storage for this equipment.
Adjacency:	Adjacent to the Gymnasium and the PT storage space
Orientation / Views:	Views to Exterior desired

Technical Criteria:

Floor Finishes:	Athletic rubber floor
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Double Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed LED lighting
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors Voice amplification/ Sound field system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets.
Specialties:	Types & Configurations indicated in the attached room layout sheets.
Furnishings:	Types & Configurations indicated in the attached room layout sheets.
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	storage along perimeter of classroom with open central space (walkers, standers)

Furniture

Room Data Sheet

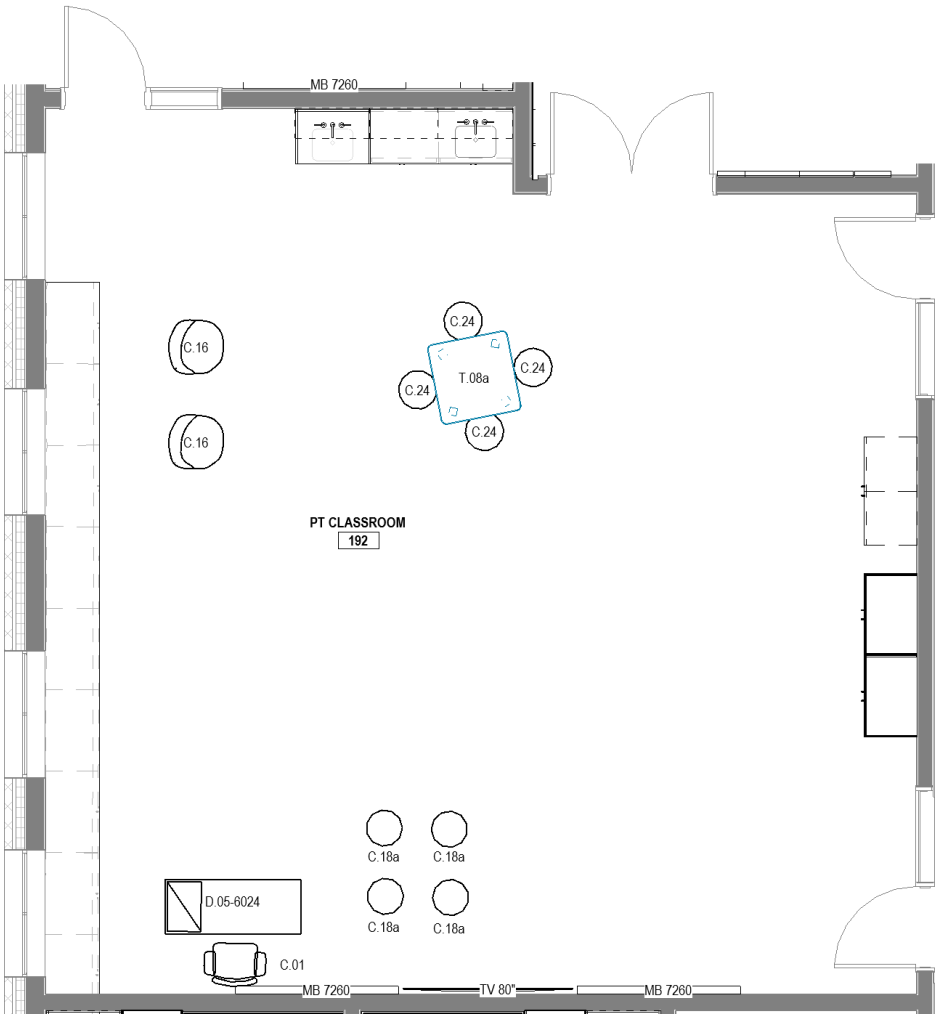
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.040

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	2
C.18a	Amphi-Jnr-Mats-NorvaNivel - WKPAD	4
C.24	SmithSystem_AM_Seating_Education_Oodle_ThreeRockerBaseStool - 3 High	4
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.08a	Elemental Activity Table - RectangleSquare1 - 0.914 m x 0.914 m	1



Room Function Number 02.003

Room Name	SCHOOL PSYCH
Room Number	108
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	108	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for school psychologist capable of supporting typical office tasks, storage of confidential files, confidential phone calls, and in-person meetings with students.
Quantity:	2
Occupant Load:	(1) Staff (1-4) Students / Visitors

Location Criteria:

Users:	School Psychologist & students
Adjacency:	Main office and close to Medical Suite
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access Interactive digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets.
Specialties:	Types & Configurations indicated in the attached room layout sheets.
Furnishings:	Types & Configurations indicated in the attached room layout sheets.
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets.

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	4
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

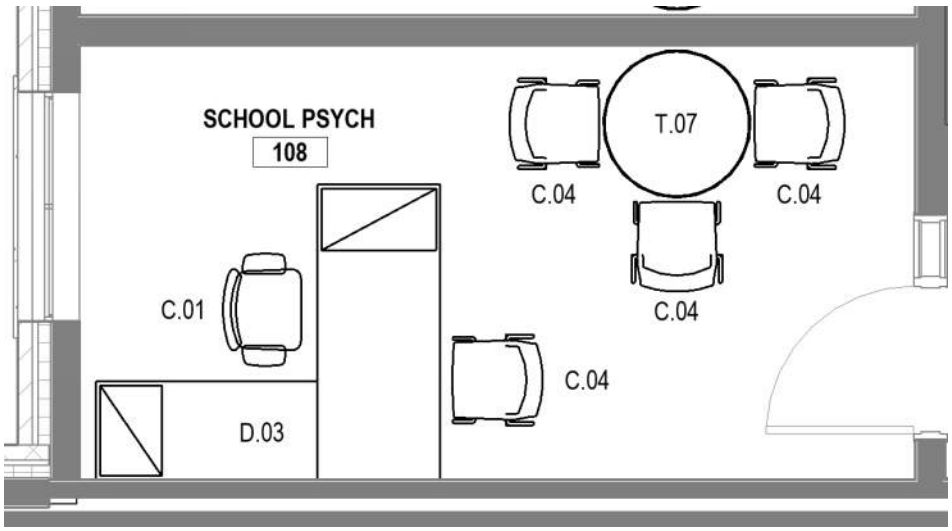
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.003



Room Function Number 02.036

Room Name	SCHOOL PSYCH
Room Number	326
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	326	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for school psychologist capable of supporting typical office tasks, storage of confidential files, confidential phone calls, and in-person meetings with students.
Quantity:	2
Occupant Load:	(1) Staff (1-4) Students / Visitors

Location Criteria:

Users:	School Psychologist & students
Adjacency:	Main office and close to Medical Suite
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access Interactive digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets.
Specialties:	Types & Configurations indicated in the attached room layout sheets.
Furnishings:	Types & Configurations indicated in the attached room layout sheets.
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets.

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	3
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

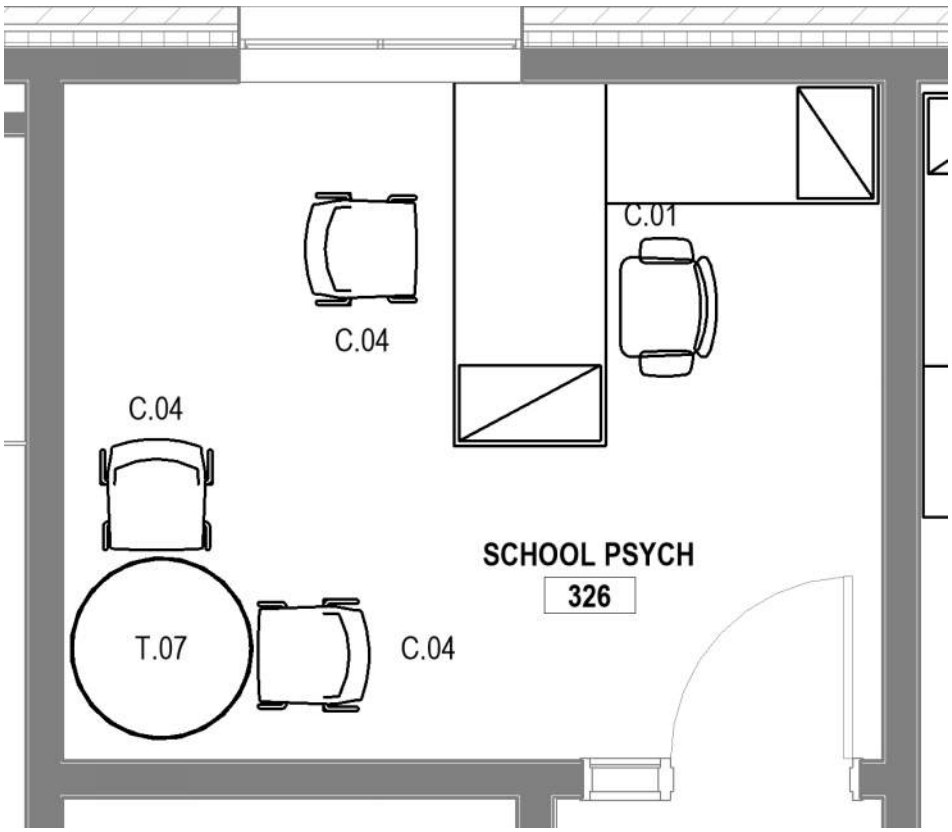
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.036



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.044

Room Name	LANGUAGE BASED 1ST-2ND
Room Number	239
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	239	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Language Learner specialists and pull-out instruction in small groups
Quantity:	2
Occupant Load:	(4-5) Students per group, max 13 students (1) Special Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Centrally located.
Orientation / Views:	Exterior required & views to Extended Learning Area desired

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush wood doors with side light and acoustical seals Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

book nook (4 kids at a time) - enticing: book display/low shelving/books on tape (same nook or different- access to headphones (max 8) and 5-6 tablets) comfortable seating

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	3
C.05b	Steelcase Turnstone - Buoy - Seating - Buoy	2

Room Data Sheet

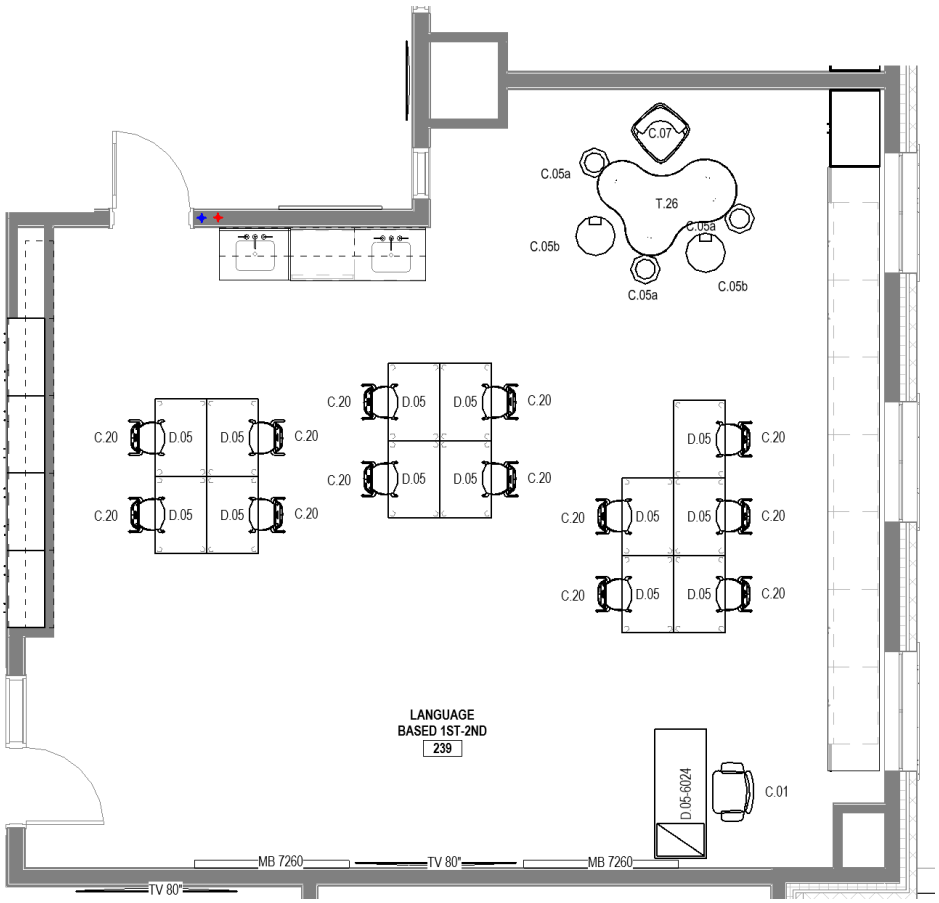
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.044

Item: BIM ID	Name	Quantity
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	13
D.05	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 36 x 24	13
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Function Number 02.057

Room Name	BCBA OFFICE
Room Number	245
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	245	Programmed	320.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for service delivery professionals
Quantity:	1
Occupant Load:	(3-4) Staff

Location Criteria:

Users:	Service professionals
Adjacency:	Centrally located in building
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access Interactive digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	3
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	3
S.14	120000-Furniture-Storage-Lateral File - 30x18-4high	2
T.07	120000-Furniture-Table Round - 36"	1

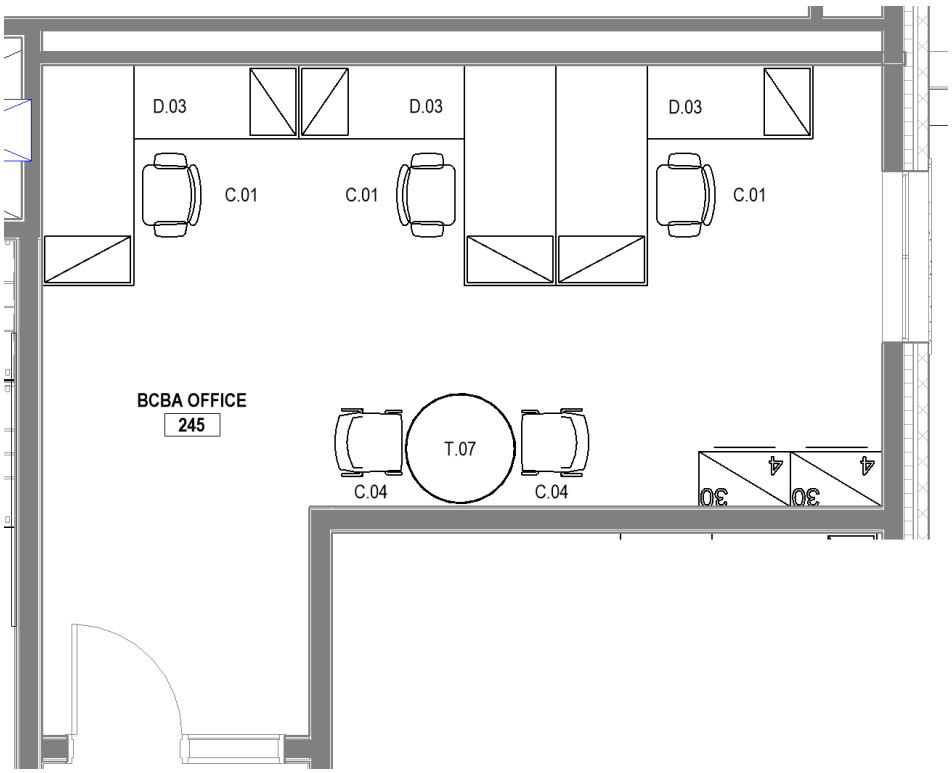
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.057



Room Function Number 02.056

Room Name	SPEECH & LANGUAGE
Room Number	103
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	103	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Intended to be both the home base for a Speech & Language Specialist and a venue to provide pull-out services and testing for students in grades K-5.
Quantity:	4
Occupant Load:	(1-4) Students (1) Speech specialist (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Centrally located in Learning Communities. Direct access from main student corridor
Orientation / Views:	Views to Exterior required.

Technical Criteria:

Floor Finishes:	Carpet tile
Wall Finishes:	Gypsum Wall Board, painted Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Windows:
Doors:	Flush Wood Door with sidelight- Classroom Hardware Set Shade on sidelight
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	4
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

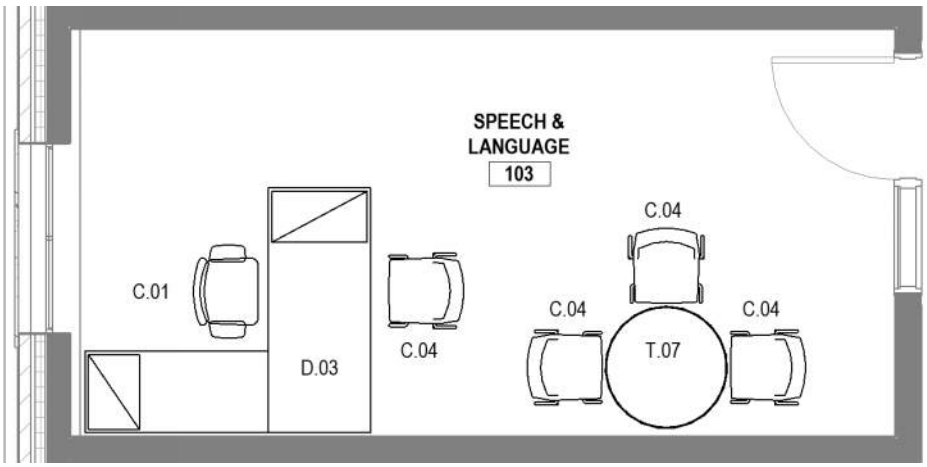
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.056



Room Function Number 02.002

Room Name	SPEECH & LANGUAGE
Room Number	109
Department (Name)	SPECIAL EDUCATION

Categorization		Areas	
Room Number	109	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Intended to be both the home base for a Speech & Language Specialist and a venue to provide pull-out services and testing for students in grades K-5.
Quantity:	4
Occupant Load:	(1-4) Students (1) Speech specialist (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Centrally located in Learning Communities. Direct access from main student corridor
Orientation / Views:	Views to Exterior required.

Technical Criteria:

Floor Finishes:	Carpet tile
Wall Finishes:	Gypsum Wall Board, painted Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Windows:
Doors:	Flush Wood Door with sidelight- Classroom Hardware Set Shade on sidelight
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	4
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

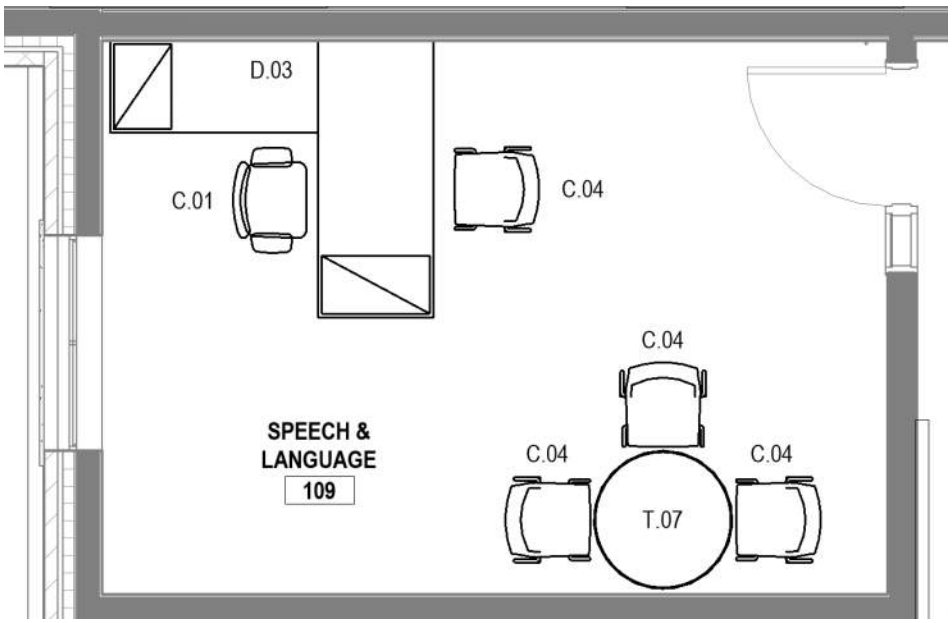
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 02.002



Room Function Number 03.001

Room Name	ART CLASSROOM
Room Number	116
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	116	Programmed	980.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Art Classroom
Quantity:	1
Occupant Load:	(24) Students (1) Art Teacher

Location Criteria:

Users:	Teachers, students
Adjacency:	Located on the ground floor at the corridor's south end to reduce student travel.
Orientation / Views:	Views to exteriors.

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment. Power for (2) pottery wheel stations
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/Sound field system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Closed and open cabinets for materials and student workCountertop surface
Specialties:	Marker Board Tack Board for student display
Equipment:	Types & Configurations indicated in the attached room layout sheets including: Pottery wheelComputers for digital work Visual display

Furniture

Item: BIM ID	Name	Quantity
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	24

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 03.001



Room Function Number 03.004

Room Name	ART STORAGE/KILN
Room Number	116A
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	116A	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage room accessible from classroom
Quantity:	1
Occupant Load:	None

Location Criteria:

Users:	Teachers and students
Adjacency:	Accessible within classroom
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Resilient Flooirng
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	None required
Windows:	None
Doors:	Flush Wood Door
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating.
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in Fixture
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	None

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	(2) Kilns
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

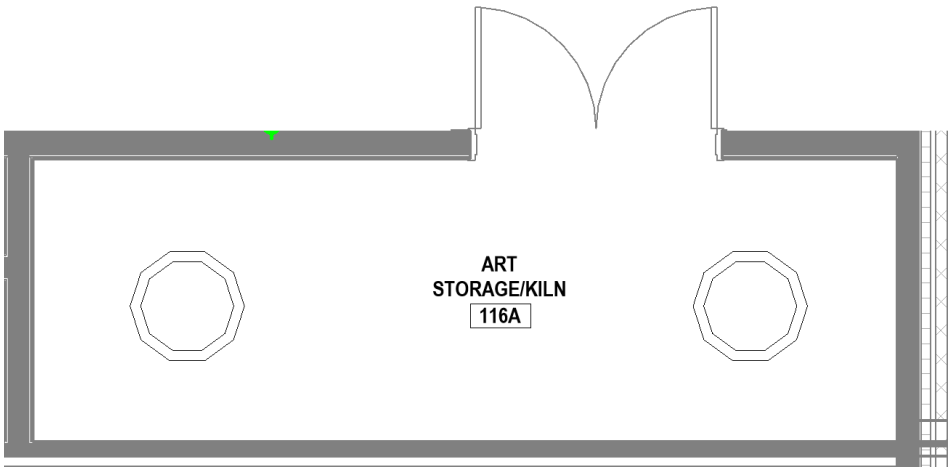
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 03.004



Room Function Number 03.002

Room Name	GENERAL MUSIC/CHORUS
Room Number	106
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	106	Programmed	980.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Music Classroom to serve as home base for music teacher
Quantity:	1
Occupant Load:	(20-30) students (1) teacher

Location Criteria:

Users:	Teachers, students
Adjacency:	Located on 1st floor for easy access to stage for larger performances.
Orientation / Views:	Views to Exterior.

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Acoustical wall panels (2) Projectable Magnetic writable surface at teaching wall location. 2’ AFF to 7’ AFF for teacher and student use. Tack surface
Ceiling Finishes:	Acoustical ceiling system, 50% barrel Acoustical diffusers, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance. Additional acoustical measures required. Sound absorptive materials based on recommendations from acoustical engineer
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Set Doors to have acoustical seals
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including.
Specialties:	Types & Configurations indicated in the attached room layout sheets. Choral risers to be shared between music room and the stage. To be stored on Stage when not in use.
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

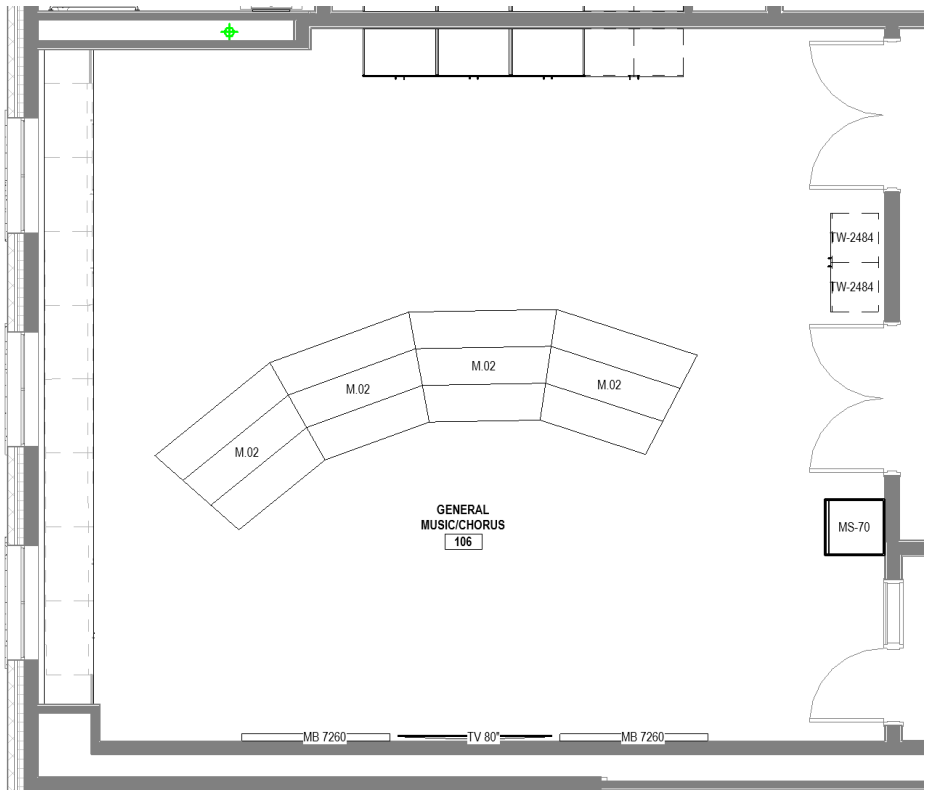
Notes from Michael Ferrara - Band Director/Music Teacher

Beginner Band: 48 students
- 5 Flutes
- 9 Clarinets

- 4 Saxophones
- 13 Trumpets
- 7 Trombones
- 9 Percussion
- Advanced Band: 28 students
- 4 Flutes
- 5 Clarinets
- 6 Saxophones
- 4 Trumpets
- 1 Trombone
- 8 Percussion
- For percussion:
- Xylophones, glock, cymbals, snare drums, bass drums. a station for auxillary (maracas, tambourine, etc.).
- We do use a drum set for several performances (jazz band).
- While we will utilize an electric keyboard on a stand, there is no need for significant space to accommodate an upright/baby grand piano.

Furniture

Item: BIM ID	Name	Quantity
M.02	Signature - Signature	4



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 03.003

Room Name	MUSIC STORAGE
Room Number	106A
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	106A	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage space for Music Department to store instruments and stage building supplies
Quantity:	1
Occupant Load:	none

Location Criteria:

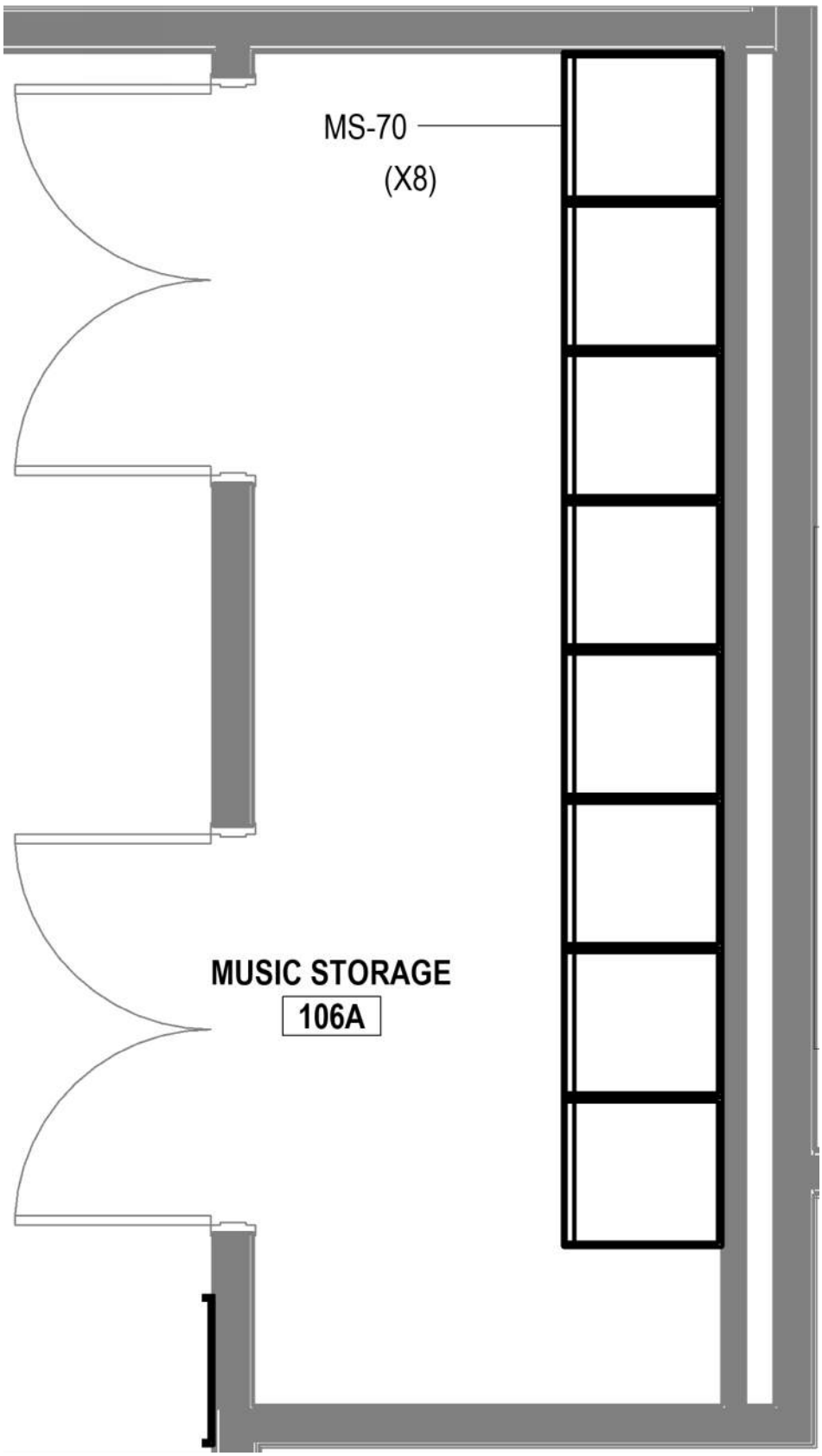
Users:	Teachers, students
Adjacency:	Adjacent to the Music classroom & Stage
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system
Acoustical:	None
Windows:	None
Doors:	Flush Wood Door - Double
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed lay-in fixtures
Electrical:	Typical perimeter power requirements
Technology:	Public Address system

Fixtures & Furnishings:

Casework:	Tall storage cabinets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets


MS-70
(X8)
MUSIC STORAGE
106A

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 03.006

Room Name	INSTRUMENTAL MUSIC
Room Number	163
Department (Name)	ART & MUSIC

Categorization		**Areas**	
Room Number	163	Programmed	700.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Music Classroom to serve as home base for music teacher
Quantity:	1
Occupant Load:	(20-30) students (1) teacher

Location Criteria:

Users:	Teachers, students
Adjacency:	Close to stage to allow for more easier access to stage for larger performances. Adjacent to Music storage and the Cafeteria
Orientation / Views:	Views and access to Exterior.

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Acoustical wall panels (2) Projectable Magnetic writable surface at teaching wall location. 2’ AFF to 7’ AFF for teacher and student use. Tack surface
Ceiling Finishes:	Acoustical ceiling system, 50% barrel Acoustical diffusers, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance. Additional acoustical measures required. Sound absorptive materials based on recommendations from acoustical engineer
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Set Doors to have acoustical seals
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station to coordinate with interactive projector (data & power)

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including.
Specialties:	Types & Configurations indicated in the attached room layout sheets. Choral risers to be shared between music room and the stage. To be stored on Stage when not in use.
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

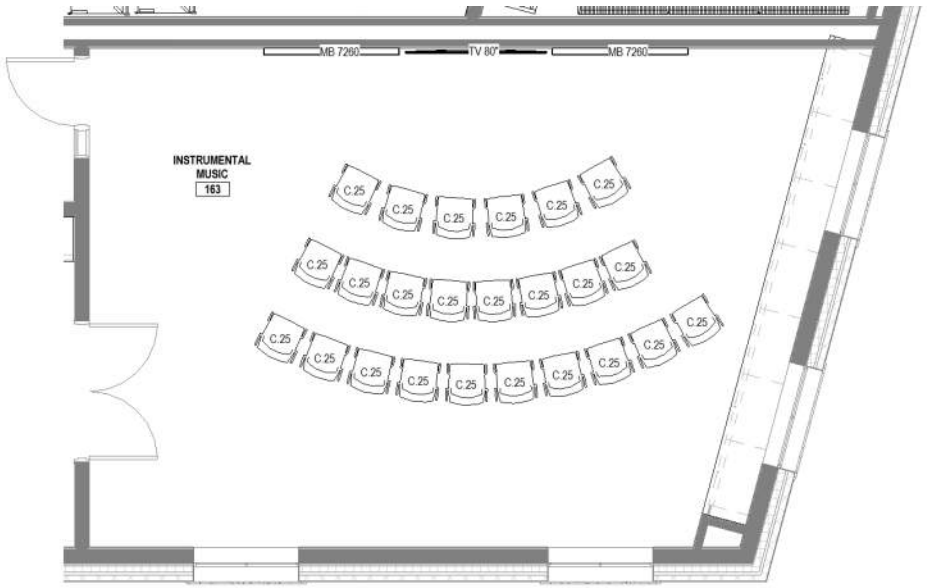
Notes from Michael Ferrara - Band Director/Music Teacher

Beginner Band: 48 students
- 5 Flutes

- 9 Clarinets
- 4 Saxophones
- 13 Trumpets
- 7 Trombones
- 9 Percussion
- Advanced Band: 28 students
- 4 Flutes
- 5 Clarinets
- 6 Saxophones
- 4 Trumpets
- 1 Trombone
- 8 Percussion
- For percussion:
- Xylophones, glock, cymbals, snare drums, bass drums. a station for auxiliary (maracas, tambourine, etc.).
- We do use a drum set for several performances (jazz band).
- While we will utilize an electric keyboard on a stand, there is no need for significant space to accommodate an upright/baby grand piano.

Furniture

Item: BIM ID	Name	Quantity
C.23	120000-Furniture-Chair-Haworth-Very1 - Student Chair-Music	24



Room Function Number 03.007

Room Name	INSTRUMENTAL STORAGE
Room Number	163A
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	163A	Programmed	240.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage space for Music Department to store instruments and stage building supplies
Quantity:	1
Occupant Load:	0

Location Criteria:

Users:	Teachers, students
Adjacency:	Adjacent to the Music classroom & Stage
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system
Acoustical:	None
Windows:	None
Doors:	Flush Wood Doors - Double
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed lay-in fixtures
Electrical:	Typical perimeter power requirements.
Technology:	Public Address system.

Fixtures & Furnishings:

Casework:	Deep Music equipment storage cabinets, sink
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
S.07a	Wenger Cabinet 28 - Narrow Acoustic Cabinet #28	1
S.07b	Wenger Cabinet 42 - Standard Cabinet #42 - Combo	1
S.07c	Wenger Cabinet 42 - Acoustic Cabinet #42 - Guitar	1

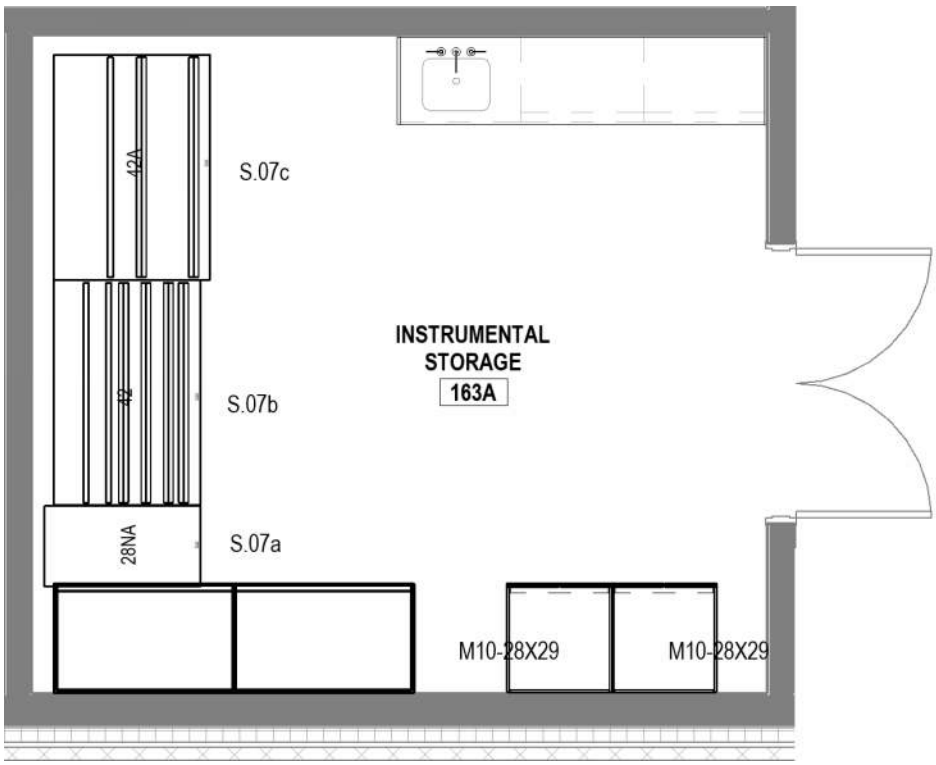
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 03.007



Room Data Sheet

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Wilmington Wildwood EC Center

Room Function Number 03.005

Room Name	FLEX CLASSROOM
Room Number	171
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	171	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	1
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Linoleum
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Room Data Sheet

SD - Submission

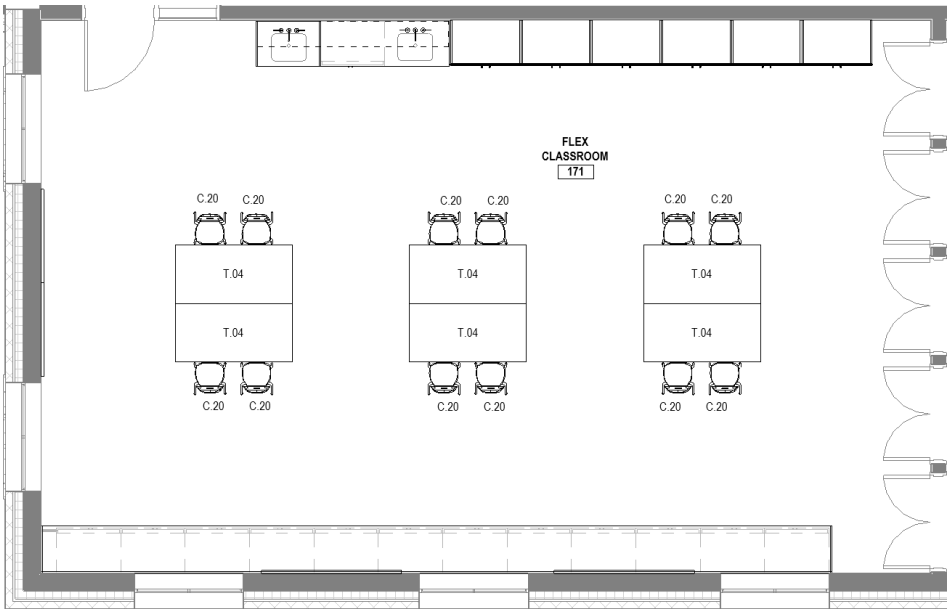
Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 03.005

Furniture

Item: BIM ID	Name	Quantity
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	12
T.04	120000-Furniture-Table Rectangular - 60X30 FLIP TOP - Inset Leg	6



Room Function Number 03.010

Room Name	FLEX STORAGE
Room Number	171A
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	171A	Programmed	100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage space within FLEX classroom
Quantity:	1
Occupant Load:	0

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and CARES
Adjacency:	Within Flex Classroom
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Linoleum
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	None

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	None
Shelving / Storage:	Floor to ceiling adjustable shelving. 24"in deep.

Additional Requirements:

None

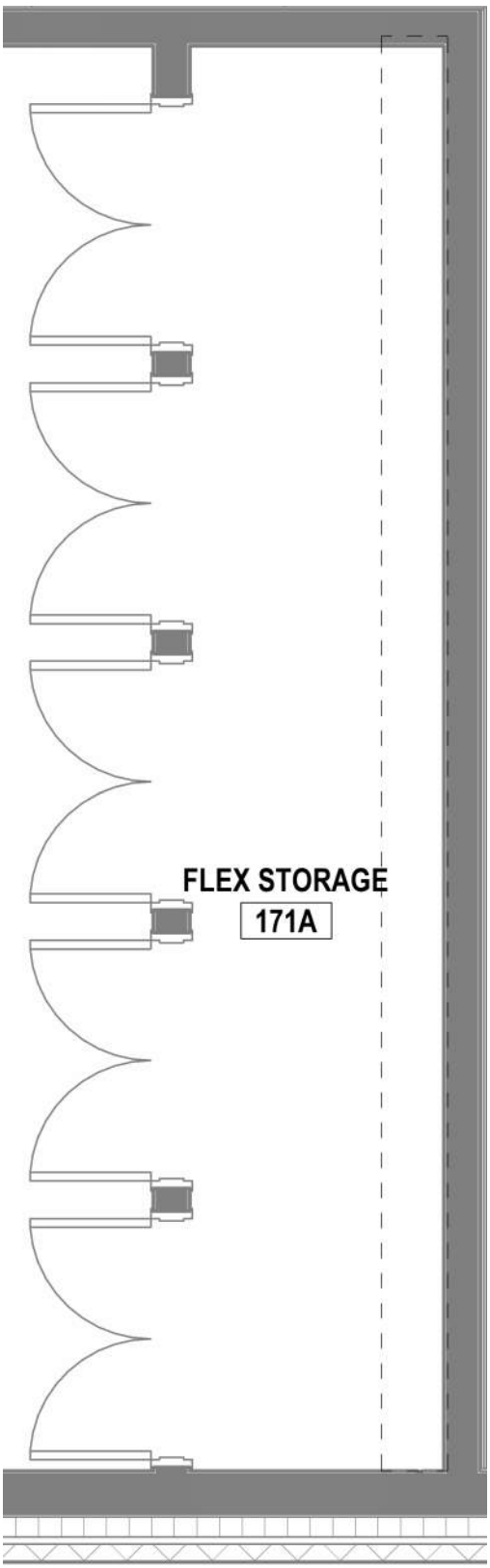
Room Data Sheet

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Wilmington Wildwood EC Center

Room Function Number 03.010



Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 03.008

Room Name	FLEX CLASSROOM
Room Number	257
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	257	Programmed	975.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	1
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Linoleum
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Room Data Sheet

SD - Submission

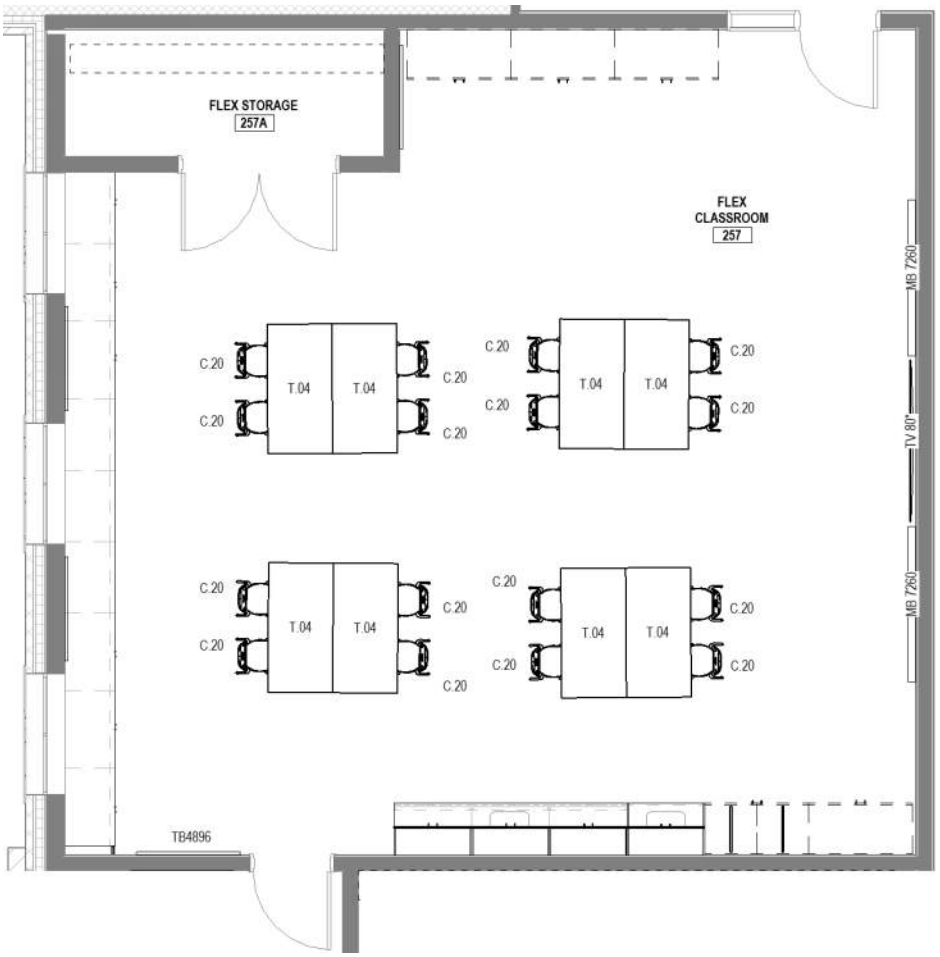
Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 03.008

Furniture

Item: BIM ID	Name	Quantity
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	16
T.04	120000-Furniture-Table Rectangular - 60X30 FLIP TOP - Inset Leg	8



Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 03.009

Room Name	FLEX STORAGE
Room Number	257A
Department (Name)	ART & MUSIC

Categorization		Areas	
Room Number	257A	Programmed	60.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage space within FLEX classroom
Quantity:	1
Occupant Load:	0

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and CARES
Adjacency:	Within Flex Classroom
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Linoleum
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	None

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	None
Shelving / Storage:	Floor to ceiling adjustable shelving. 24"in deep.

Additional Requirements:

None

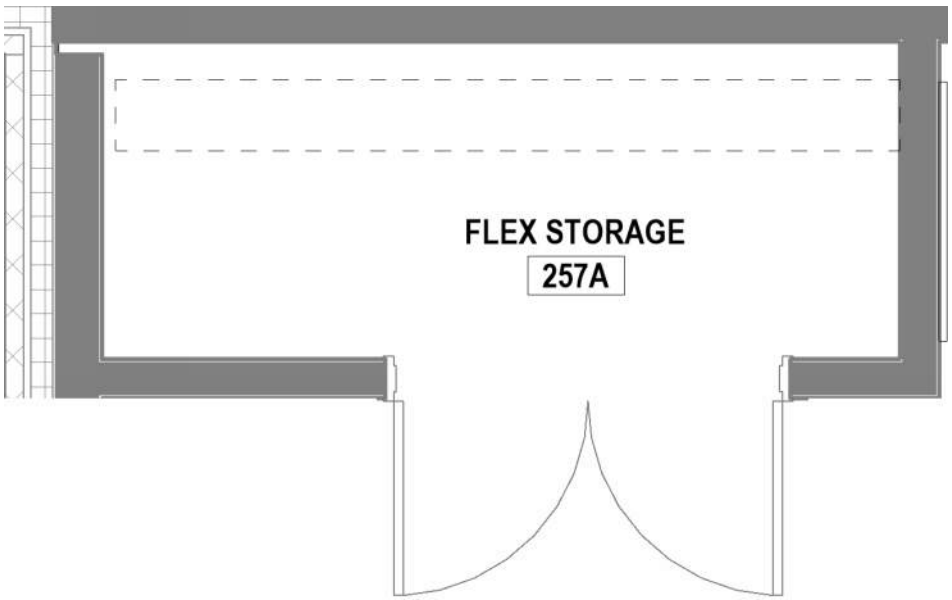
Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 03.009



Room Function Number 05.001

Room Name	GYMNASIUM
Room Number	194
Department (Name)	HEALTH & PHYSICAL EDUCATION

Categorization		Areas	
Room Number	194	Programmed	12,000.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for physical education instruction
Program Area:	12,000 **sq. ft.**
Quantity:	1
Occupant Load:	Typical instruction: (48-50) Students (2) Teachers Community gatherings: 515 - chairs. 600 - Seated Bleacher capacity

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals General public
Adjacency:	Gym storeroom. Health instructor’s office. In the public zone for community access after hours
Orientation / Views:	N/A

Technical Criteria:

Floor Finishes:	Resilient wood sports flooring, full HS basketball court, (4) pickle ball courts, (6) practice basketball courts
Wall Finishes:	Concrete block, painted Acoustical Concrete Block, painted at upper portion of wall (2) Projectable Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Type NCA Acoustic deck, painted
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance. Additional acoustical measures required
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Vision glazing wood door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning & heat
Plumbing / FP:	Fully Sprinklered. (2) Water Fountains
Lighting:	High bay lighting
Electrical:	Typical perimeter power requirements. Power for motorized interior window shades and divider curtain. Power and data for projectors.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access AV system for large audience presentations (2) Interactive projections systems for instruction (2) Scoreboards

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	(6) Standard high retractable basketball hoops (1) motorized room divider curtain. Perimeter wall pads (9) retractable eye hook rope connections for universal use. (2) hooks for adaptive swings
Furnishings:	n/a

Room Data Sheet

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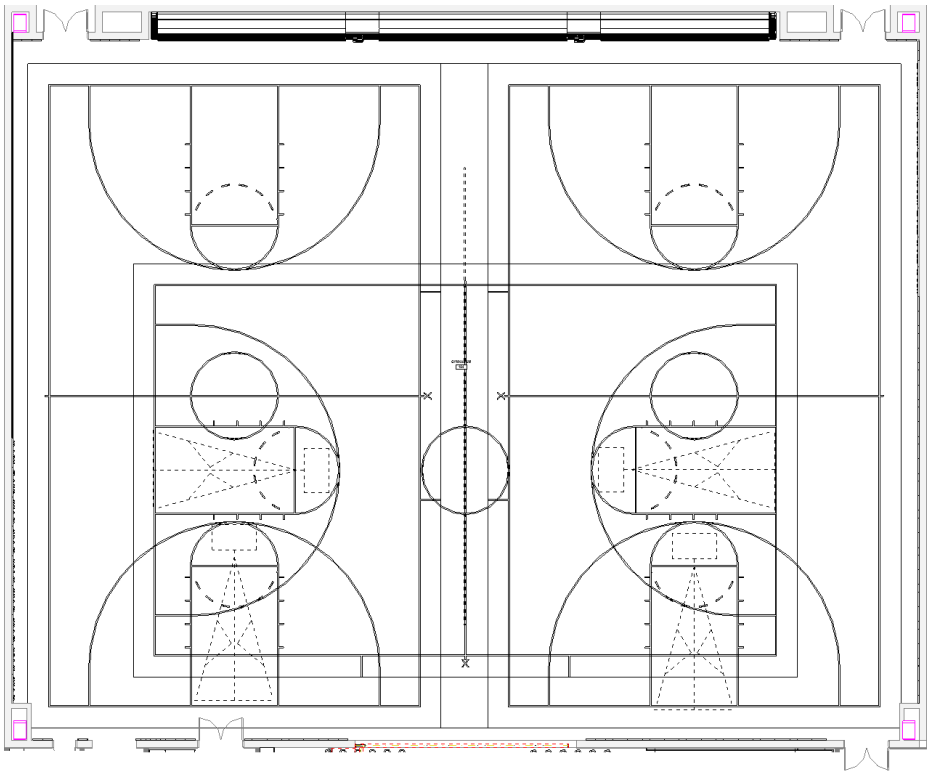
Wilmington Wildwood EC Center

Room Function Number 05.001

Equipment: Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

Bleachers are to be motorized and retractable



Room Function Number 05.003

Room Name	STORAGE
Room Number	194A
Department (Name)	HEALTH & PHYSICAL EDUCATION

Categorization		Areas	
Room Number	194A	Programmed	180.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage for gymnasium
Quantity:	1
Occupant Load:	None

Location Criteria:

Users:	PE instructors, Specialist
Adjacency:	Within gymnasium
Orientation / Views:	None Required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	None required
Windows:	None
Doors:	Flush Wood Door
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
S.04	120000-Furniture-Storage-Pantry Shelving (1) - 48" Wide x 24"	8

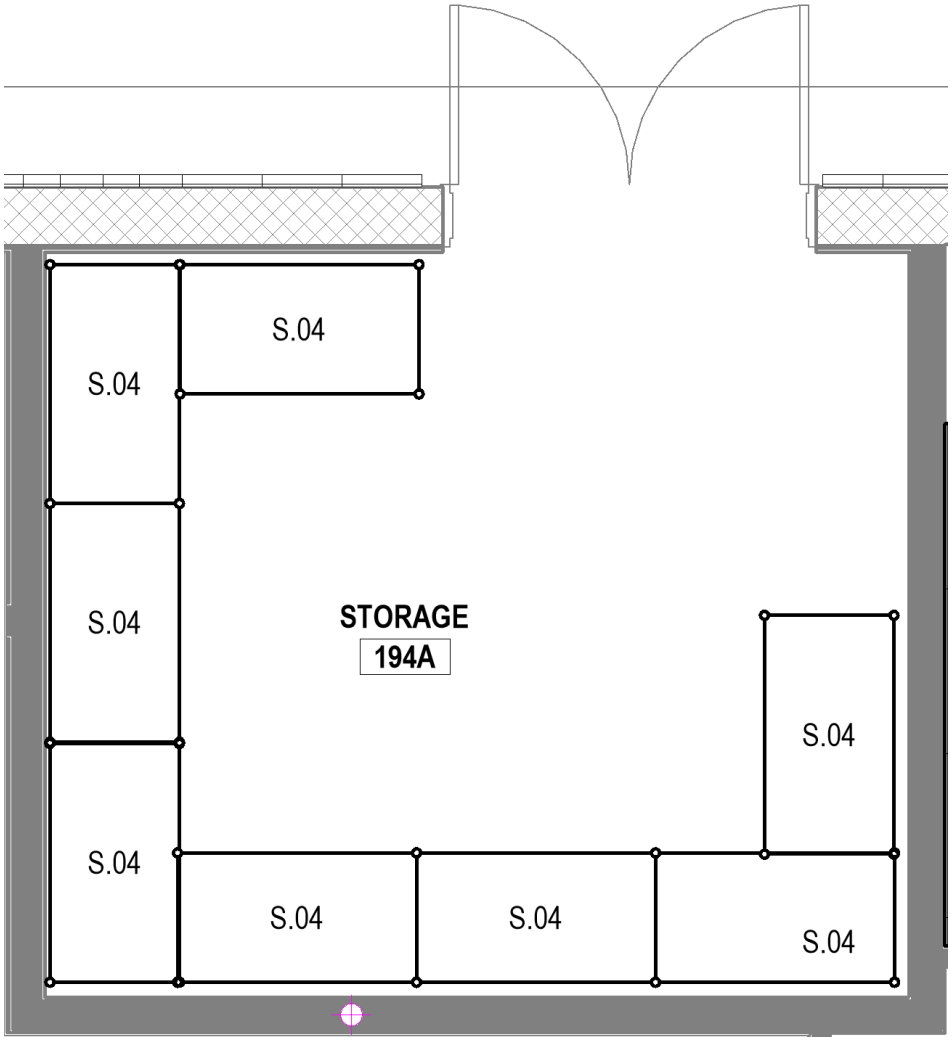
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 05.003



Room Function Number 05.002

Room Name	PE OFFICE
Room Number	195
Department (Name)	HEALTH & PHYSICAL EDUCATION

Categorization		Areas	
Room Number	195	Programmed	120.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for PE instructors
Quantity:	1
Occupant Load:	3

Technical Criteria:

Floor Finishes:	Carpet tile
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush Wood Door - Classroom Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system
	Clock System
	Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	3
S.13	120000-Furniture-Storage-Lateral File - 36x18-3high	1

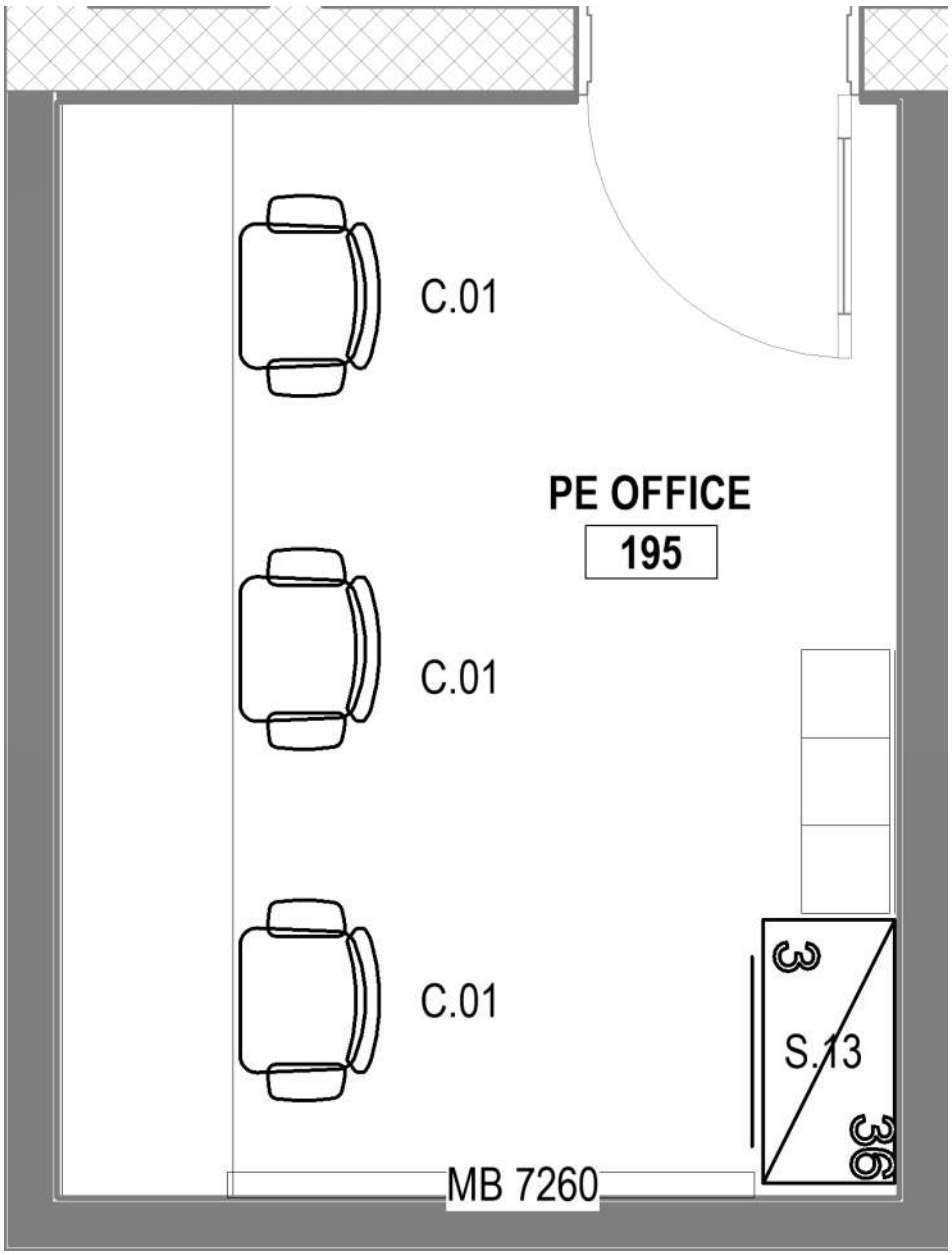
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 05.002



Room Function Number 10.001

Room Name	LIBRARY
Room Number	252
Department (Name)	MEDIA CENTER

Categorization		Areas	
Room Number	252	Programmed	3,859.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Technology rich learning commons for the school with a focus on literacy across disciplines. The learning commons is a comfortable space for reading, access to many books, space for creative projects, flex space for instruction, showcase area for students to gather as a small community. This hub of learning should be a location where the school community can celebrate learning on display
Quantity:	1
Occupant Load:	2 Classes or Groups (approximately 24 students per group) (2) Staff

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, faculty & staff, visitors
Adjacency:	2nd floor Centrally located to the main entry
Orientation / Views:	Exterior Views and into Cafeteria

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels.
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum clouds, exposed glulam beams
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Curtain wall to exterior, room darkening shades.
Doors:	Double doors with glazing
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed cans and Pendent Lighting
Electrical:	Typical perimeter power requirements. Power for motorized window shades. Power and data for digital displays
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	2
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	20
C.10	SmithSystem_AM_Seating_Education_Flowform_LearnLounge_SingleSeat - Single	2

Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 10.001

Item: BIM ID	Name	Quantity
C.11c	SmithSystem_AM_Seating_Education_Flowform_LearnLounge_DoubleSeat - Double	1
C.13c	120000-Furniture-ChiarLoungeModular-Curved - 120000-Furniture-ChiarLoungeModular-Curved Yellow	4
C.14b	SmithSystem_AM_Seating_Education_Flowform_TaperedCylinderStool - Stool	4
C.15b	Blu Dot - Bumper - Ottoman - Small	3
C.16	120000-Furniture-Chair_Bean Bag - 120000-Furniture-Chair_Bean Bag	4
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	44
C.21	SmithSystem_AM_Seating_Education_Flowform_SoftRocker - Soft Rocker	6
M.03a	SmithSystem_AM_SpaceDivision_Screen_Flowform_LearnLounge_FlexScreen_Leaves - Straight	1
M.03b	SmithSystem_AM_SpaceDivision_Screen_Flowform_LearnLounge_FlexScreen_Leaves - Curved	2
M.03c	SmithSystem_AM_SpaceDivision_Screen_Flowform_LearnLounge_FlexScreen_Leaves - Surround	1
S.30	120000-Furniture-Accesory-Book Cart - 24" x 60" Existing	1
T.03	120000-Furniture-Table Round1 - 36" - low	2
T.14a	SmithSystem_AM_Table_Education_Orbit_OffsetTriangle - Offset Triangle Table with Casters	4
T.14b	SmithSystem_AM_Table_Education_Flowform_LearnLounge_OffsetRectangle - NoPower	1
T.15b	SmithSystem_AM_Seating_Education_Flowform_SoftSeating_Ottoman_WithSurface - WithPower	3
T.23	SmithSystem_AM_Desking_HeightAdjustable_Numbers_SingleStudent_Petal - Petal	20
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	4

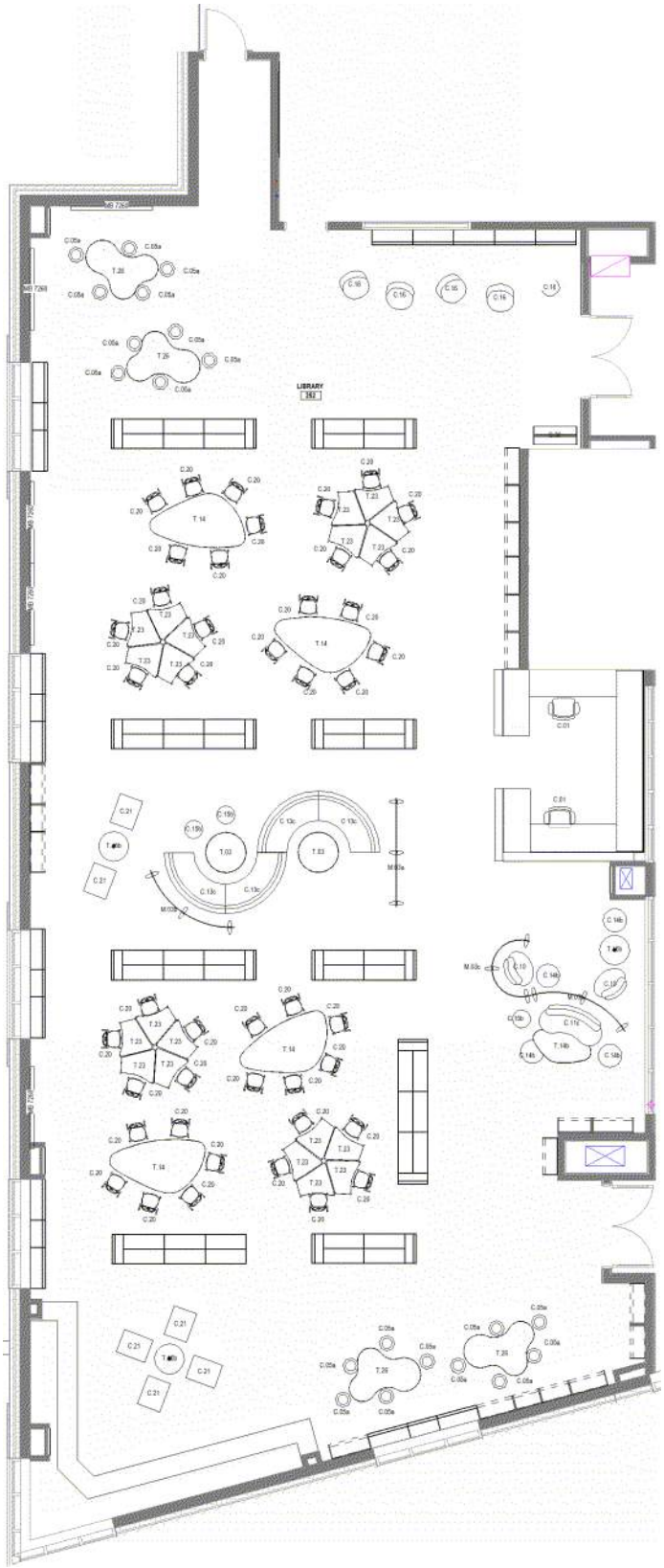
Room Data Sheet

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Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 10.001



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Room Function Number 10.002

Room Name	LIBRARIAN WORKROOM
Room Number	252A
Department (Name)	MEDIA CENTER

Categorization		Areas	
Room Number	252A	Programmed	209.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Shared workspace for librarians and STE teachers
Quantity:	1
Occupant Load:	Office/workspace to have 4 workstations

Location Criteria:

Users:	Librarians, teachers, specialists, paraprofessionals, faculty & staff
Adjacency:	located within library
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels,
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum clouds, exposed glulam beams
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Window to library
Doors:	door with glazing
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered. Small sink
Lighting:	Recessed cans and Pendent Lighting
Electrical:	Typical perimeter power requirements. Power for motorized window shades and divider curtain. Power and data for digital displays
Technology:	Additional power required to support specific room equipment Public Address system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	4
S.30	120000-Furniture-Accesory-Book Cart - 24" x 60" Existing	1

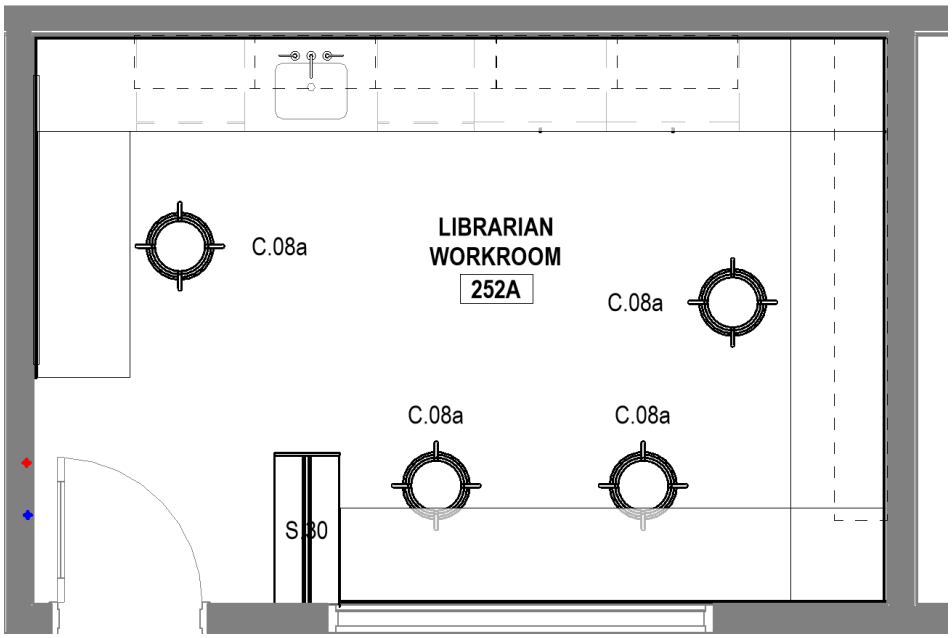
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 10.002



Room Function Number 07.005

Room Name	CAFETERIA
Room Number	168
Department (Name)	DINING & FOOD SERVICE

Categorization		**Areas**	
Room Number	168	Programmed	4,612.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Student dining, large group instruction & meetings and seating area during community events and performances.
Quantity:	1
Occupant Load:	2 seatings of 377 students (Including seating in Quiet Cafe)

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, faculty & staff, visitors, and members of the public during after hours and special events.
Adjacency:	In the public realm and adjacent to Kitchen, Lobby Space, Quite and Gym
Orientation / Views:	Exterior Views and access required

Technical Criteria:

Floor Finishes:	Terrazzo
Wall Finishes:	Gypsum Wall Board, Tile wainscot, painted above, Acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, motorized room darkening shades
Doors:	Flush wood doors. Motorized coiling grille at servery.
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (2) Sinks for lunch/drink disposal and hand washing
Lighting:	Pendent lighting, feature light fixtures, dimmable
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access (2) TV displays at kitchen servery AV system to support projection equipment & performance functions

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets. (3) Built in trash receptacle stations
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

n/a

Furniture

Room Data Sheet

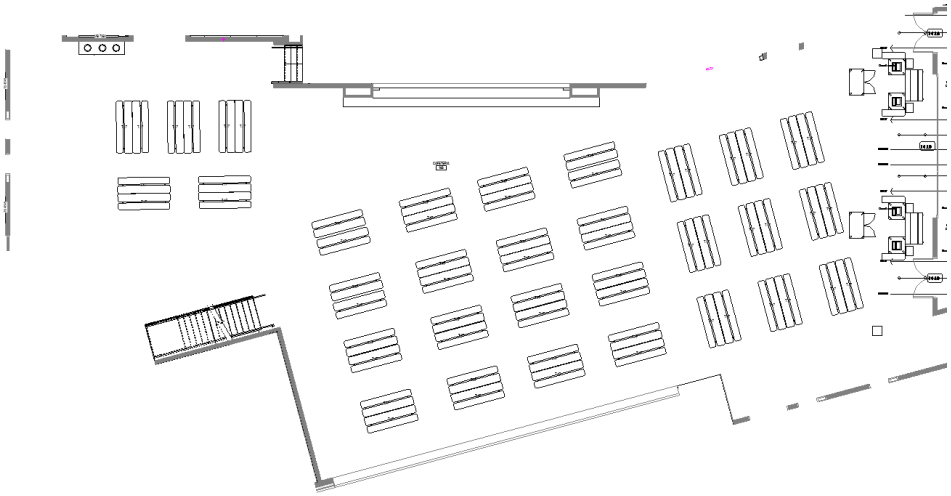
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.005

Item: BIM ID	Name	Quantity
	120000-Furniture-Table-Cafeteria Round - 120000-Furniture-Table-Cafeteria Round	2
T.17	Table-Fold-KI-Uniframe-Bench-Convertible - INVALID TYPE - Load Family with Type Catalog	64



Room Function Number 07.006

Room Name	CAFETERIA
Room Number	168A
Department (Name)	DINING & FOOD SERVICE

Categorization		Areas	
Room Number	168A	Programmed	0.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Student dining for small groups in a quiet setting, small group instruction & meetings
Quantity:	1
Occupant Load:	(10-15) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, faculty & staff, visitors
Adjacency:	Cafeteria, Kitchen, Servery
Orientation / Views:	Exterior Views and access not required

Technical Criteria:

Floor Finishes:	Terrazzo
Wall Finishes:	Gypsum Wall Board, tiled wainscot, painted above.
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance.
Windows:	None
Doors:	None
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Pendant lighting
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Motorized folding wall partition
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

All furnishings to be flexible and moveable.

Furniture

Item: BIM ID	Name	Quantity
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	10
C.13a	120000-Furniture-Chair-Bench 2 - 120000-Furniture-Chair-Bench yellow	2
C.13c	120000-Furniture-ChiarLoungeModular-Curved - 120000-Furniture-ChiarLoungeModular-Curved Yellow	1
T.14a	SmithSystem_AM_Table_Education_Orbit_OffsetTriangle - Offset Triangle Table with Casters	1
T.14b	SmithSystem_AM_Table_Education_Flowform_LearnLounge_OffsetRectangle - NoPower	2

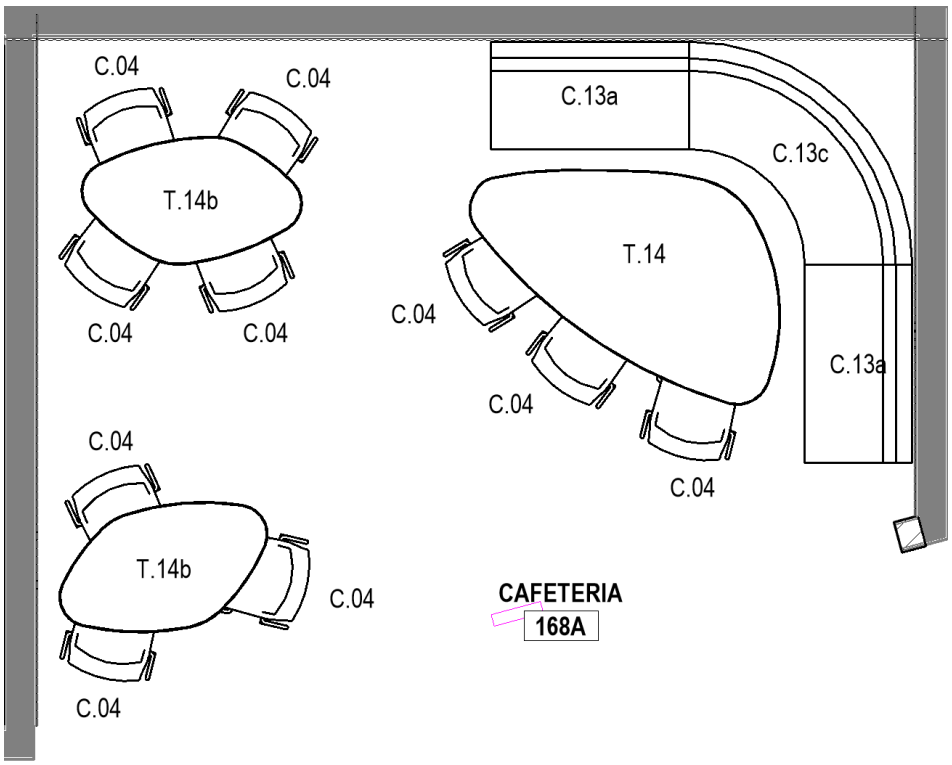
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.006



Room Function Number 07.010

Room Name	STAGE
Room Number	169
Department (Name)	DINING & FOOD SERVICE

Categorization		Areas	
Room Number	169	Programmed	1,000.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Raised performance area, open to Cafeteria and Gym
Quantity:	1
Occupant Load:	Stage capacity for 75 students minimum. 50 students with instruments during performances. Chorus Performances: 140 chorus students. However, group is typically split and is 75 students at a time.

Location Criteria:

Users:	Teachers, students, CARES, specialists, paraprofessionals, faculty & staff, visitors
Adjacency:	Cafeteria and Gymnasium
Orientation / Views:	Exterior Views and access not required

Technical Criteria:

Floor Finishes:	Specialty Wood Stage Floor with 2 risers along the entire front of the stage
Wall Finishes:	Gypsum Wall Board, painted (Black)
Ceiling Finishes:	Painted structure above (Black)
Acoustical:	Acoustically open to cafeteria, acoustically designed based on recommendations from acoustical consultant
Windows:	None
Doors:	Open to Cafeteria, open to Gym with movable acoustical partition/door
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Theatrical lighting batten with dimming system
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment Public Address system Wireless network access Large format motorized projection screen at platform proscenium AV system to support projection equipment & performance functions Two rear screen projection systems, one for each side of the stage

Fixtures & Furnishings:

Casework:	Proscenium millwork panelized frame around opening
Specialties:	Cyclorama, back "leg" curtains, proscenium front curtains
Furnishings:	3-tier risers.
Equipment:	Projection Screen. Additional equipment to be determined.
Shelving / Storage:	none

Additional Requirements:

Seating capacity (351 in cafeteria, with 295 clear view of stage, 1000+ in gymnasium with bleachers and folding chairs).

Furniture

Item: BIM ID	Name	Quantity
C.23	120000-Furniture-Chair-Haworth-Very1 - Student Chair-Music	50
Z	1200000 - ME - Generic Model - 1200000 - ME - Generic Model	1

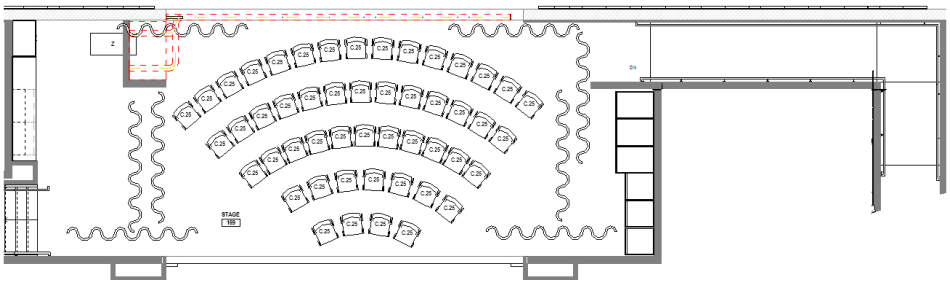
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.010



Room Function Number 07.008

Room Name	CHAIR STORAGE
Room Number	153
Department (Name)	DINING & FOOD SERVICE

Categorization		Areas	
Room Number	153	Programmed	452.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage for dining/gym & performance furniture
Quantity:	1
Occupant Load:	0

Location Criteria:

Users:	Faculty & Staff
Adjacency:	Cafeteria & Gymnasium
Orientation / Views:	n/a

Technical Criteria:

Floor Finishes:	Quartz Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	none
Windows:	none
Doors:	(1) Set of Double flush wood doors
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed lighting
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	None
Shelving / Storage:	Perimeter floor to ceiling shelving

Additional Requirements:

Number of chair dollies assume a max of 40 chairs per dolly, and additional dollies to hold all chairs in cafeteria.

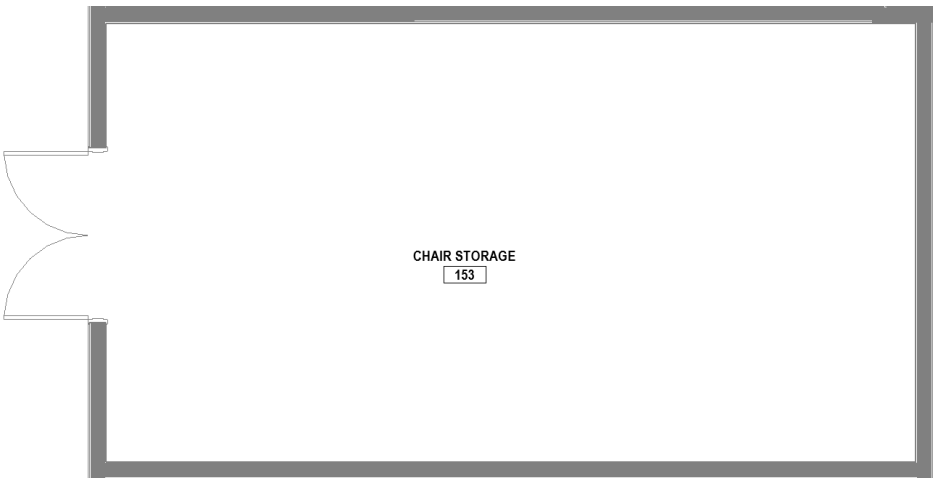
Room Data Sheet

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Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.008



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.007

Room Name	KITCHEN
Room Number	162
Department (Name)	DINING & FOOD SERVICE

Categorization		**Areas**	
Room Number	162	Programmed	2,255.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Food preparation & serving
Quantity:	1
Occupant Load:	(10-11) Kitchen Staff

Location Criteria:

Users:	Kitchen Staff & Students
Adjacency:	Cafeteria & Custodial Suite
Orientation / Views:	Exterior Views and access not required

Technical Criteria:

Floor Finishes:	Quarry tile
Wall Finishes:	Tile, Gypsum wall board, painted above
Ceiling Finishes:	Non-porous acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush wood doors
	Motorized coiling grille at servery
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
	(1) Dedicated single user toilet room
	Plumbing to coordinate with food service equipment layout
Lighting:	Recessed lighting, decorative pendants at servery
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system
	Wireless network access
	Additional power requirements to coordinate with foodservice equipment Motorized operator at servery OH coiling grille

Fixtures & Furnishings:

Casework:	None
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

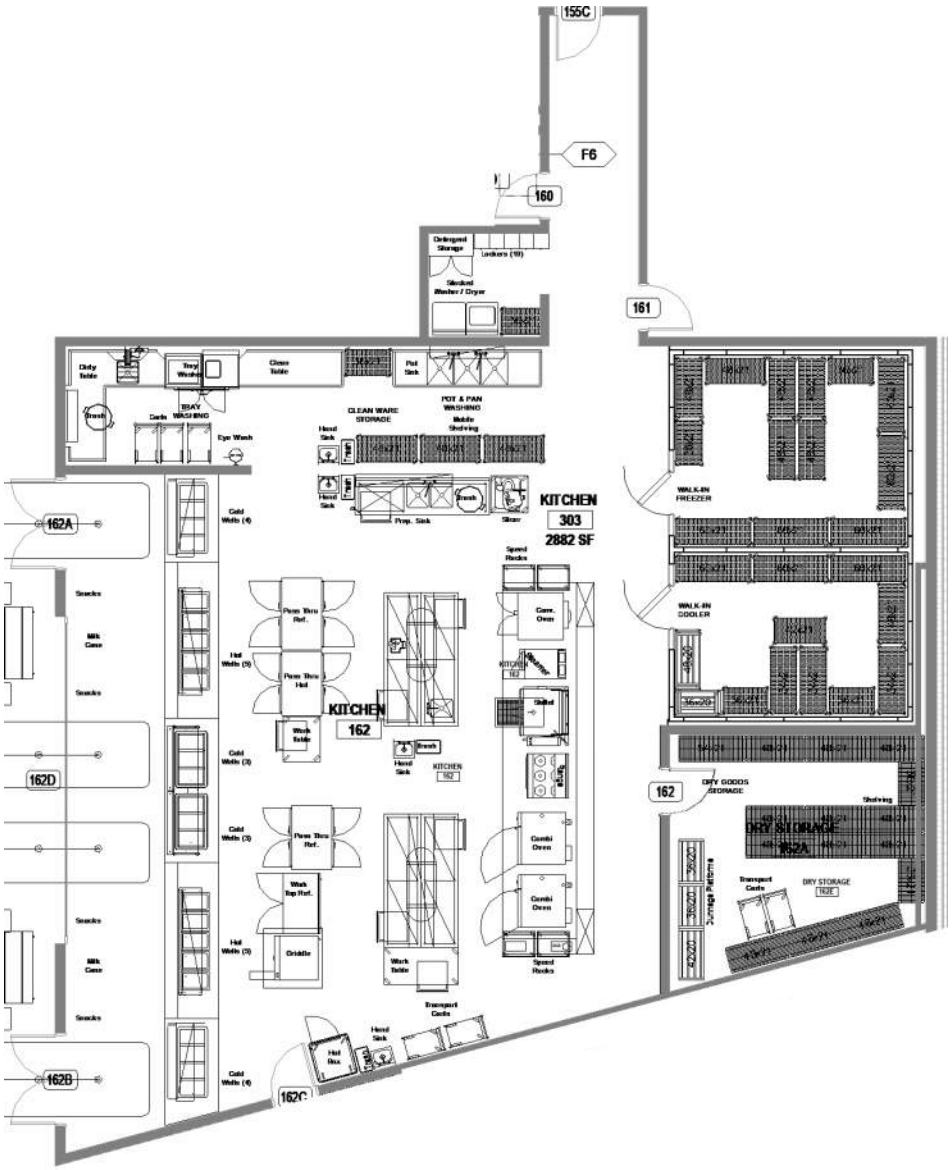
Room Data Sheet

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Wilmington Wildwood EC Center

Room Function Number 07.007



Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 07.011

Room Name	DRY STORAGE
Room Number	162E
Department (Name)	DINING & FOOD SERVICE

Categorization		Areas	
Room Number	162E	Programmed	250.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage of goods for Kitchen
Occupant Load:	None

Location Criteria:

Users:	Within Kitchen area
Adjacency:	Cafeteria & Custodial Suite
Orientation / Views:	N/A

Technical Criteria:

Floor Finishes:	Quarry tile
Wall Finishes:	Tile, Gypsum wall board, painted above
Ceiling Finishes:	Non-porous acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	None
Doors:	Flush doors
HVAC:	\Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed lighting
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system
	Wireless network access

Fixtures & Furnishings:

Casework:	None
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

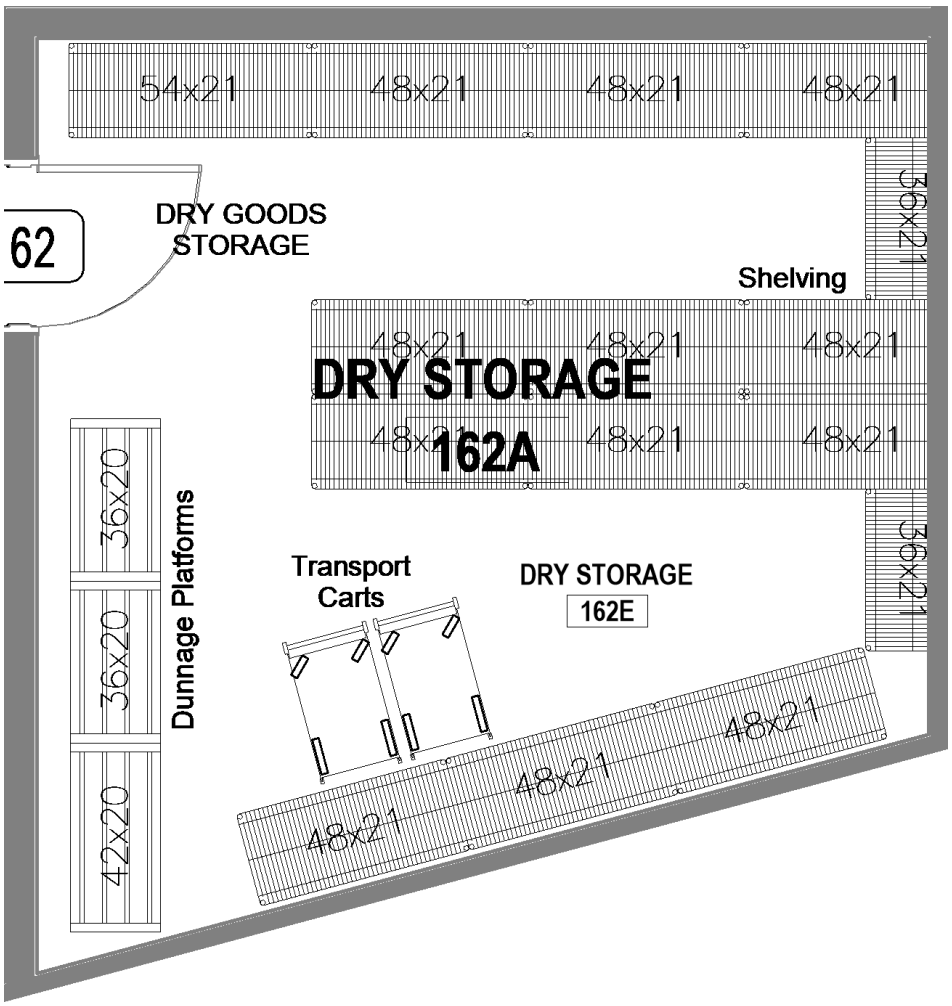
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.011



Room Function Number 07.009

Room Name	OFFICE
Room Number	161
Department (Name)	DINING & FOOD SERVICE

Categorization		Areas	
Room Number	161	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Office for Kitchen staff
Quantity:	1
Occupant Load:	2

Location Criteria:

Users:	Kitchen Staff
Adjacency:	Cafeteria, Kitchen, Shipping & receiving, custodial work and storage areas
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall painted
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	none
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Metal Door w/ glass.
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in lighting
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
S.14	120000-Furniture-Storage-Lateral File - 30x18-4high	2

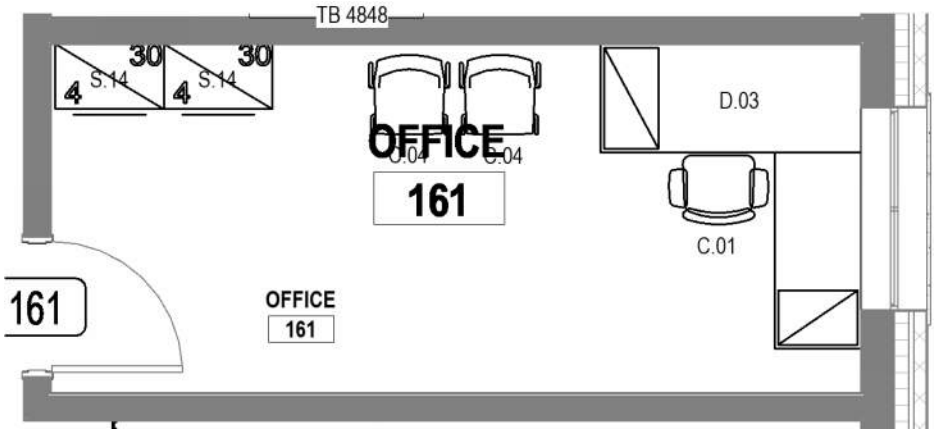
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.009



Room Function Number 07.001

Room Name	STAFF LUNCH
Room Number	251
Department (Name)	DINING & FOOD SERVICE

Categorization		Areas	
Room Number	251	Programmed	289.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Break/Lunch Room for teachers. Collaboration and group planning rooms for teachers.
Quantity:	1
Occupant Load:	(10) Teachers/Faculty

Location Criteria:

Users:	Teachers, specialists, paraprofessionals
Adjacency:	Between learning communities
Orientation / Views:	Interior view to Cafeteria

Technical Criteria:

Floor Finishes:	Linoleum
Wall Finishes:	Gypsum Wall Board, painted Tile backsplash Projectable Magnetic writable surface for collaboration purposes
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffit
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom lockset
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink, at 2'-10" for Adult use
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	n/a
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Full size refrigerator MicrowaveCoffee Maker
Shelving / Storage:	n/a

Furniture

Item: BIM ID	Name	Quantity
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	8
T.04	120000-Furniture-Table Rectangular - 60X30 FLIP TOP - Inset Leg	2

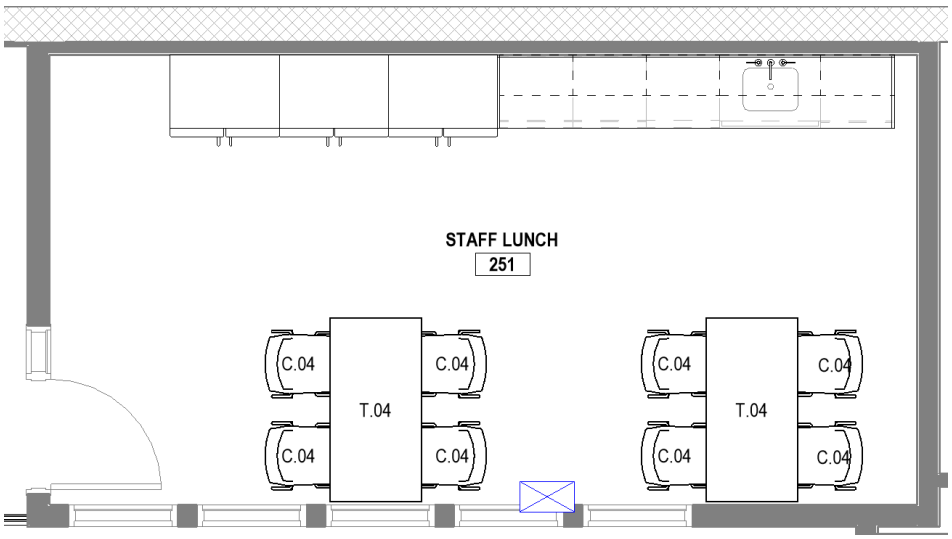
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.001



Room Function Number 07.002

Room Name	QUIET CAFE
Room Number	164
Department (Name)	DINING & FOOD SERVICE

Categorization		Areas	
Room Number	164	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Student dining for small groups in a quiet setting, small group instruction & meetings
Quantity:	3
Occupant Load:	(10-15) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, faculty & staff, visitors
Adjacency:	Cafeteria, Kitchen, Servery
Orientation / Views:	Exterior Views and access not required, interior views to and from cafeteria

Technical Criteria:

Floor Finishes:	Terrazzo
Wall Finishes:	Gypsum Wall Board, tiled wainscot, painted above. Folding wall partitions
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Single wood door with full glass panels, acoustic seals and shades for privacy.
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Pendant lighting
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Motorized folding wall partition
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

All furnishings to be flexible and moveable.

Furniture

Item: BIM ID	Name	Quantity
C.13a	120000-Furniture-Chair-Bench 2 - 120000-Furniture-Chair-Bench yellow	2
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	4
T.01c	120000-Furniture-Table Rectangular- 4 leg - 120000-Furniture-Table Rec- 48 x 24	1
T.07	120000-Furniture-Table Round - 36"	1

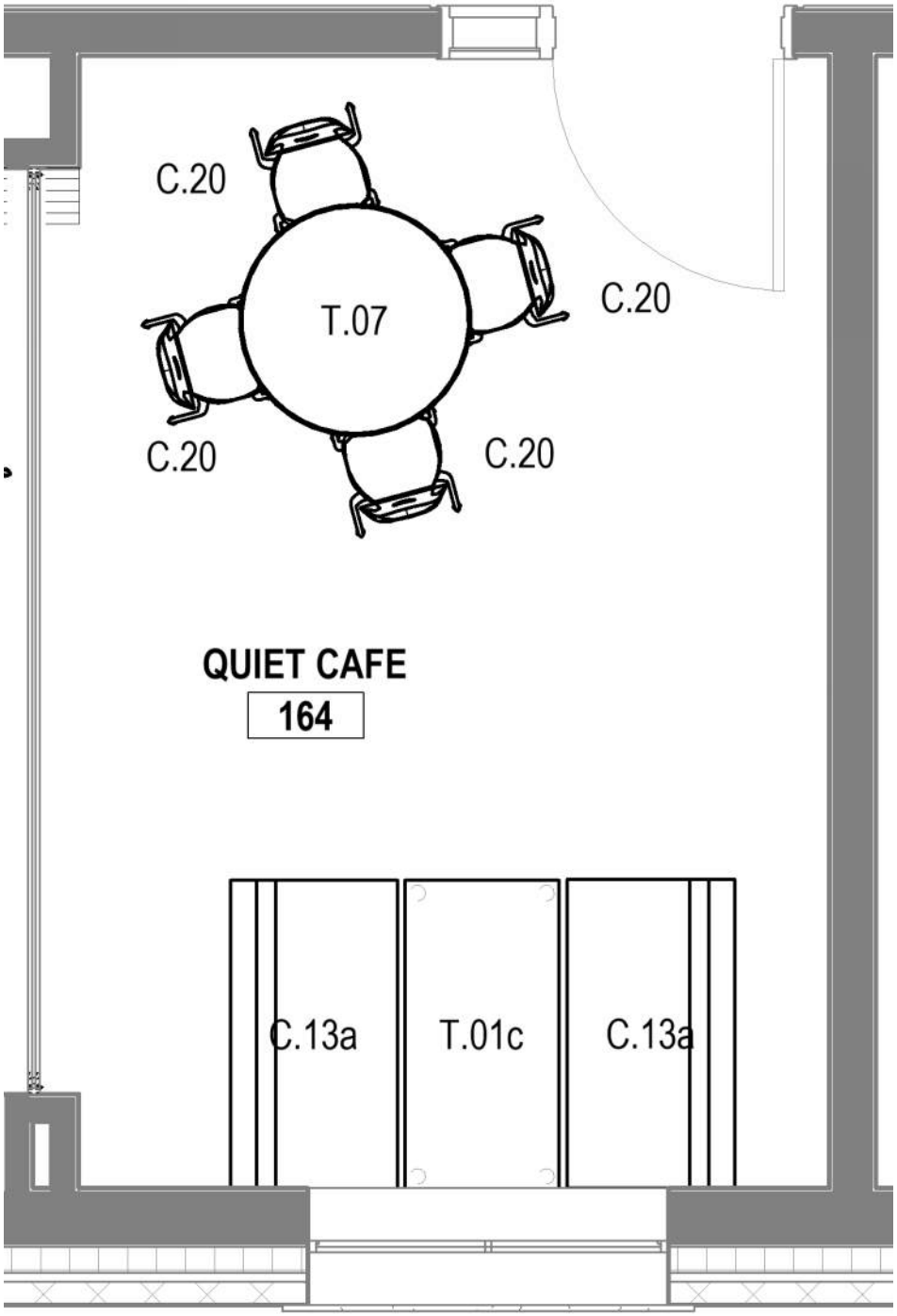
Room Data Sheet

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Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 07.002



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 08.003

Room Name	TOILET
Room Number	190C
Department (Name)	MEDICAL

Categorization		Areas	
Room Number	190C	Programmed	0.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Dedicated toilet for medical suite
Quantity:	1
Occupant Load:	(1) Staff
	(1) Student

Location Criteria:

Users:	Nurses & Students
Adjacency:	Internal to Nurse Suite
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Tiled floor
Wall Finishes:	Wall Tile, Gypsum wall board, tiled wainscot, painted above
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	None
Doors:	Flush wood doors.
	Privacy Hardware
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
	(1) Accessible sink
	(1) Toilet, Accessible
Lighting:	Lay-in light fixtures
Electrical:	Typical perimeter power requirements.
Technology:	Public Address system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

No changing table

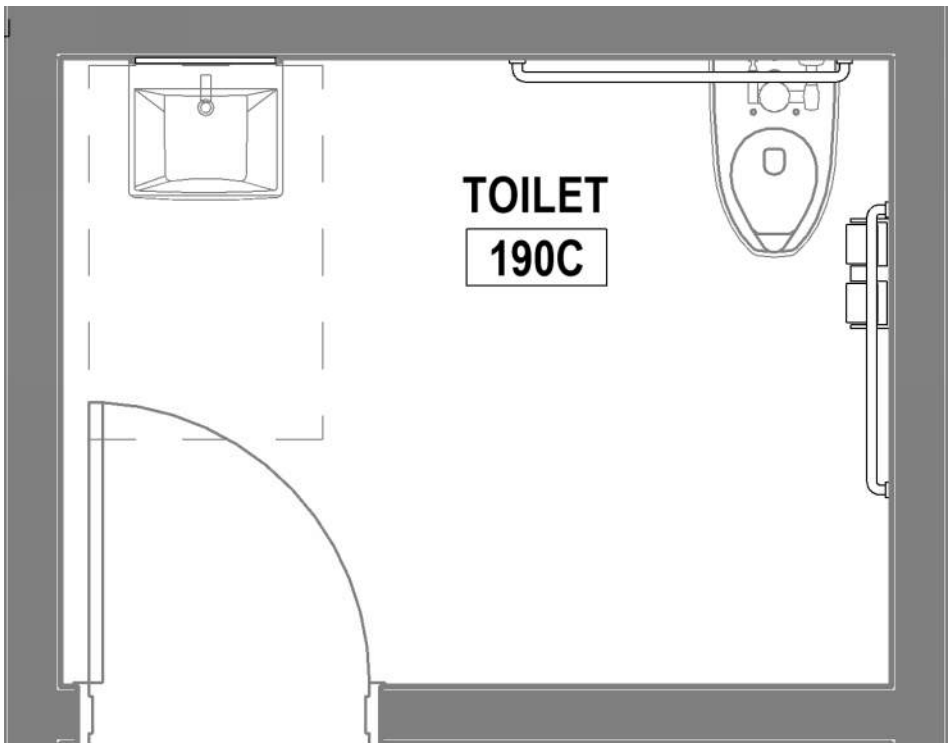
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 08.003



Room Function Number 08.002

Room Name	EXAM
Room Number	190A
Department (Name)	MEDICAL

Categorization		Areas	
Room Number	190A	Programmed	0.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Nurses, locked storage of medications and medical supplies Closed exam room for student resting and administration of medication
Quantity:	2
Occupant Load:	1 student patient, (1) Staff

Location Criteria:

Users:	Nurse & Students
Adjacency:	Within Nurse suite
Orientation / Views:	Exterior views not required

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	None required
Doors:	Flush wood door with sidelight
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: (1) Built in Nurse workstations. Storage cabinets for supplies and student files
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Resting cot, sanitary paper roll dispenser, and built-in storage base
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
A.06A	120000-Furniture-Cot - 72x27	1
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1

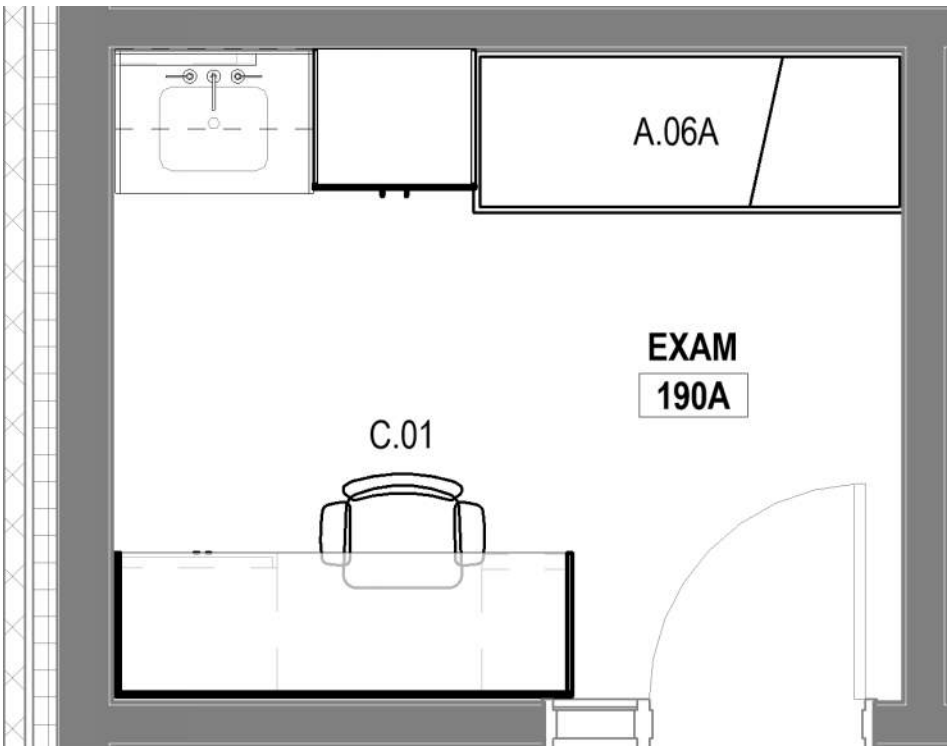
Room Data Sheet

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Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 08.002



Room Function Number 08.004

Room Name	EXAM
Room Number	190B
Department (Name)	MEDICAL

Categorization		Areas	
Room Number	190B	Programmed	0.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Nurses, locked storage of medications and medical supplies Closed exam room for student resting and administration of medication
Quantity:	2
Occupant Load:	1 student patient, (1) Staff

Location Criteria:

Users:	Nurse & Students
Adjacency:	Within Nurse suite
Orientation / Views:	Exterior views not required

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	None required
Doors:	Flush wood door with sidelight
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: (1) Built in Nurse workstations. Storage cabinets for supplies and student files
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Resting cot, sanitary paper roll dispenser, and built-in storage base
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
A.06A	120000-Furniture-Cot - 72x27	1
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1

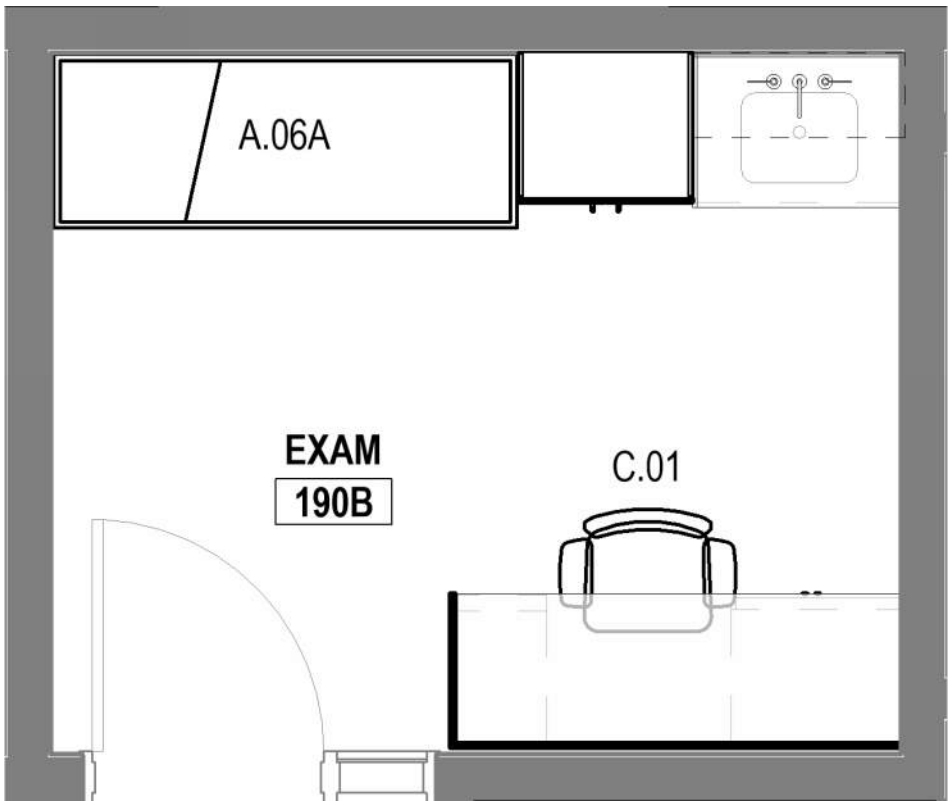
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 08.004



Room Function Number 08.001

Room Name	MEDICAL
Room Number	190
Department (Name)	MEDICAL

Categorization		Areas	
Room Number	190	Programmed	710.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Open Nurse room for students resting and administration of medication. Home base for Nurses, locked storage of medications and medical supplies. Waiting area for students. Seated respite area by windows for students. This room serves the combination of two functions: an open intake, triage, and seated waiting area; and a resting area with three cots, each with curtains for privacy/ light control.
Quantity:	1
Occupant Load:	(2) Staff (3-7) Visitors/Students

Location Criteria:

Users:	Nurse and Students
Adjacency:	Adjacent to the Administrative suite. Direct access from the student corridor. Near Main office and School Psychologist.
Orientation / Views:	Exterior view preferred Direct egress from the building needed.

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance. Need privacy for confidentiality for calls. Private Office w/ door
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush wood doors with side light and shade Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible sink Filtered water line for Ref/ice maker
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment. Public Address system. Clock System. Wireless network access. Printer

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including (1) Double lock narcotics cabinet. Storage cabinets for supplies and student files
Specialties:	Types & Configurations indicated in the attached room layout sheets. (3) Cubical curtains for student privacy. Mobile storage cart for supplies. (1) Full size refrigerator w/ ice making capabilities. Privacy curtains for resting cots Tackboard & Markerboard surfaces
Furnishings:	Types & Configurations indicated in the attached room layout sheets.

Room Data Sheet

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Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 08.001

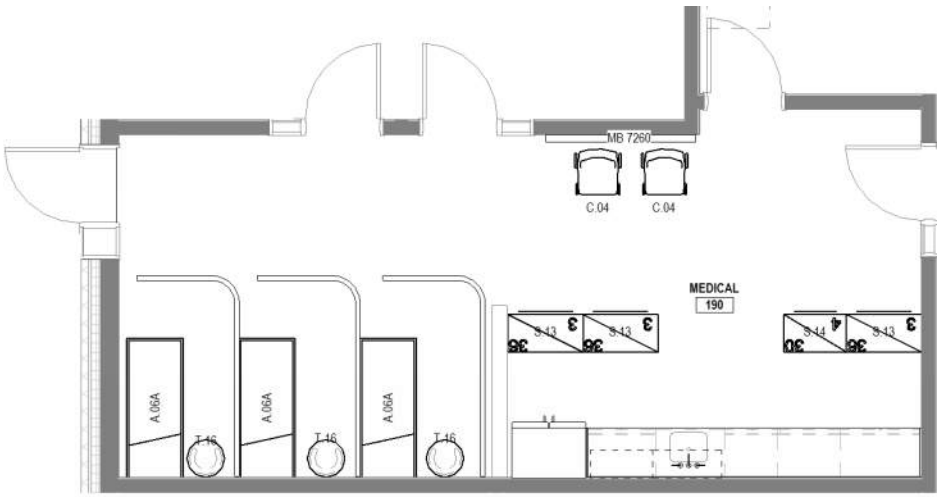
	Storage for diabetics for equipment & testing
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets. The suite must accommodate medical records for 750 students

Additional Requirements:

- Strategy and organization for epinephrine pens to be finalized.
- No waiting space required; square footage allocated for waiting will be reallocated to the exam rooms.

Furniture

Item: BIM ID	Name	Quantity
A.06A	120000-Furniture-Cot - 72x27	3
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
S.13	120000-Furniture-Storage-Lateral File - 36x18-3high	3
S.14	120000-Furniture-Storage-Lateral File - 30x18-4high	1
T.16	120000-Furniture-Table-C Table - 27"H	3



Room Function Number 09.022

Room Name	GENERAL OFFICE/WAITING
Room Number	177
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	177	Programmed	528.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Administrative support staff; serves as check-in for visitors and students
Quantity:	1
Occupant Load:	(3) Staff (3-5) Visitors/Students

Location Criteria:

Users:	Office aids, secretary, guests, administration, faculty, & students.
Adjacency:	Adjacent to building main entrance, living room/lobby space, administrative suite and Conference Room. Direct visual contact with main entry and building approach.
Orientation / Views:	Interior views to main entry vestibule, main corridor, and lobby/living room, Conference Room, and Principal's Secretary area.

Technical Criteria:

Floor Finishes:	Carpet TIle
Wall Finishes:	Gypsum wall board, painted Store front glass wall system to 9'-6" AFF, Glass to be level 3 ballistic resistant glazingg
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Office appropriate acoustical requirements
Windows:	Exterior View
Doors:	Flush wood door with side light to Administration suite Office hardware set Aluminum and glass door as part of storefront system, glass to be level 3 ballistic resistant glazing. Vestibule door hardware to have electronic lock, with release controlled by office administrative staff or electronic key
Plumbing / FP:	Fully Sprinklered
Lighting:	Specialty pendant lighting at desk area, general lighting throughout.
Electrical:	Typical perimeter power requirements and outlets at (3) workstations
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access (3) Flat Panel digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including: Built in Administration Desk w/ accessible transaction surface
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	2
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	5

Room Data Sheet

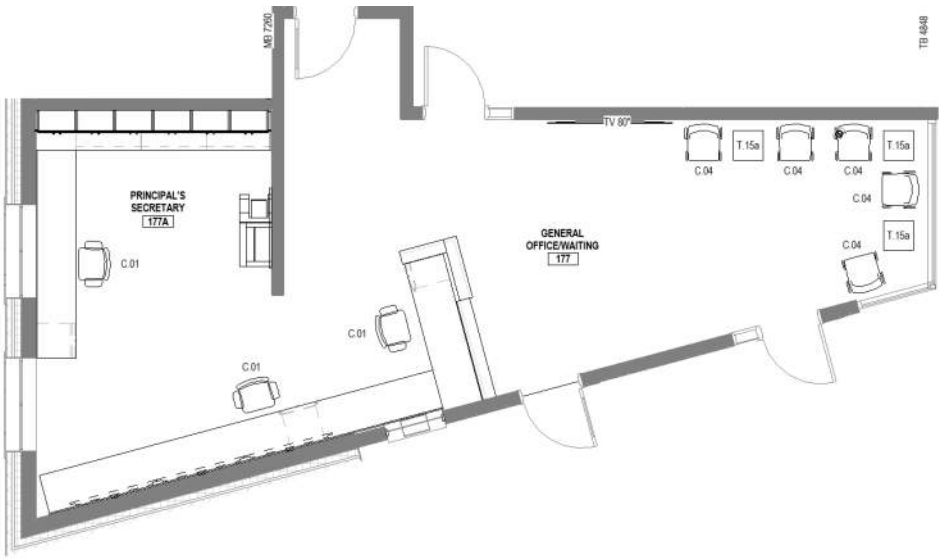
SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.022

Item: BIM ID	Name	Quantity
T.15a	120000-Furniture-Table End Table - Table - Ocasional Table 18" x 18"	3



Room Function Number 09.030

Room Name	MAIL AND TIME ROOM
Room Number	189A
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	189A	Programmed	100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Mailbox for all staff, CARES, Kitchen. A component of administrative suite. Space for large mail processing, copy and layout, packet production, laminating, and supply storage. This is a standing-work space with 34" high counters and islands.
Quantity:	1
Occupant Load:	4-6

Location Criteria:

Users:	Faculty and Staff
Adjacency:	Component of administrative suite, near general office staff for ease of communication and distribution of mail.
Orientation / Views:	Exterior views not required. Open to Teacher work room

Technical Criteria:

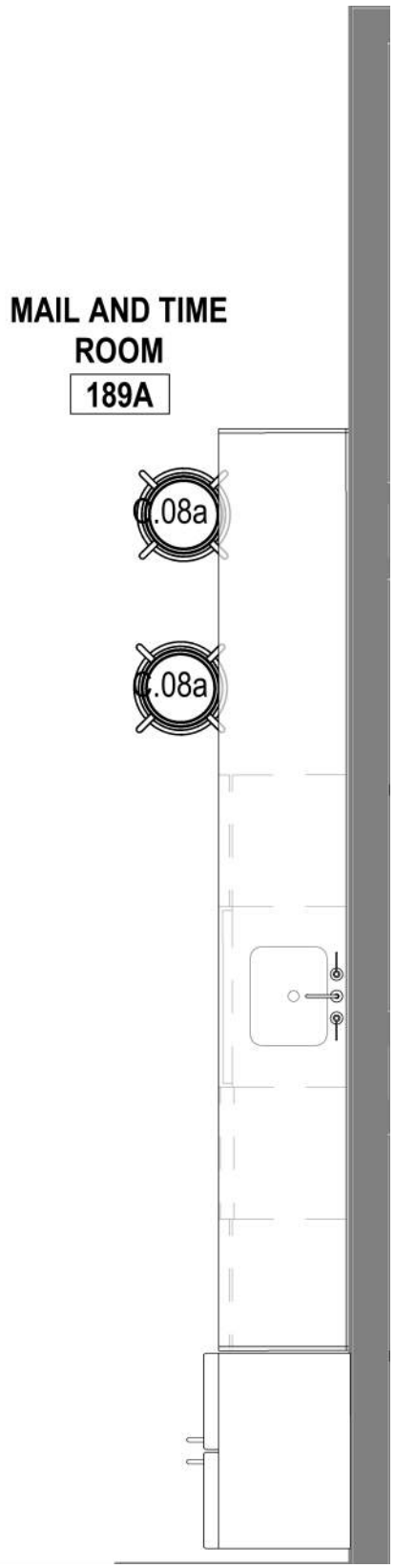
Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Not required
Doors:	Flush Wood Door
HVAC:	Overhead supply with air conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay in LED light fixtures
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Binding machine. Laminator, recycling/shredder, fax machine, locked storage

Furniture

Item: BIM ID	Name	Quantity
C.08a	120000-Furniture-Stool - 30"	2


MAIL AND TIME
ROOM
189A
.08a
.08a

Room Function Number 09.026

Room Name	TEACHER WORK ROOM
Room Number	189
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	189	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Mailbox for all staff, CARES, Kitchen. A component of administrative suite. Space for large mail processing, copy and layout, packet production, laminating, and supply storage. This is a standing-work space with 34" high counters and islands.
Quantity:	1
Occupant Load:	4-6

Location Criteria:

Users:	Faculty and Staff
Adjacency:	Component of administrative suite, near general office staff for ease of communication and distribution of mail.
Orientation / Views:	Exterior views not required. Open to Teacher work room

Technical Criteria:

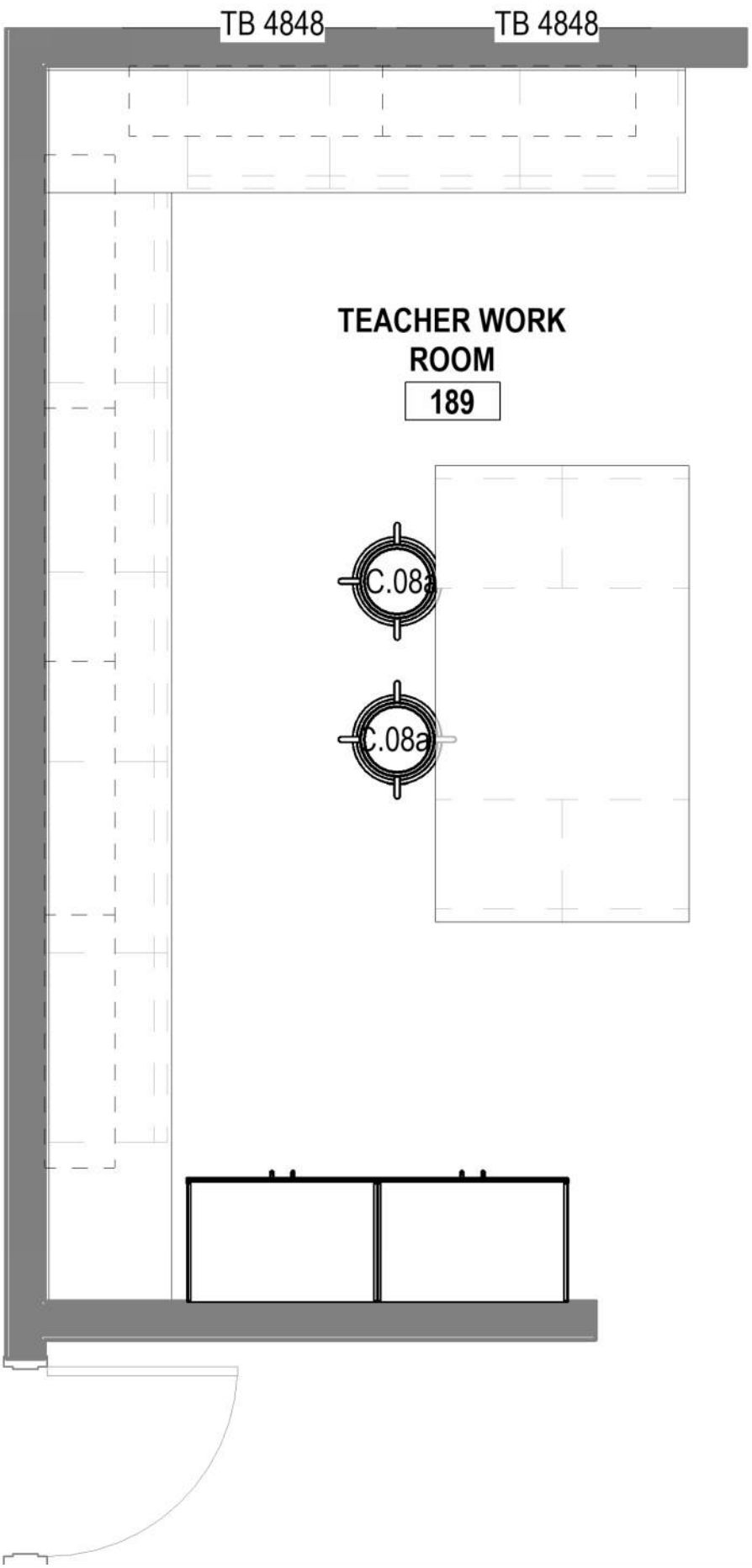
Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Not required
Doors:	Flush Wood Door
HVAC:	Overhead supply with air conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay in LED light fixtures
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Binding machine. Laminator, recycling/shredder, fax machine, locked storage

Furniture

Item: BIM ID	Name	Quantity
C.08a	120000-Furniture-Stool - 30"	2


TB 4848
TB 4848
TEACHER WORK ROOM
189
C.08a
C.08a

Room Function Number 09.024

Room Name	COPY
Room Number	179
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	179	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Collaboration and group planning rooms for teachers. Provide a space for duplication in the academic space
Quantity:	1
Occupant Load:	(1) Staff

Location Criteria:

Users:	Teachers, specialists, paraprofessionals, Administrators
Adjacency:	Within Administrative suite. Located within General Office Area
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Carpet tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance
Windows:	Not required
Doors:	(1) Flush Wood Door with sidelights. Office hardware set
HVAC:	Overhead supply with air conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in LED lighting
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	None
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	File Cabinets
Equipment:	None
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

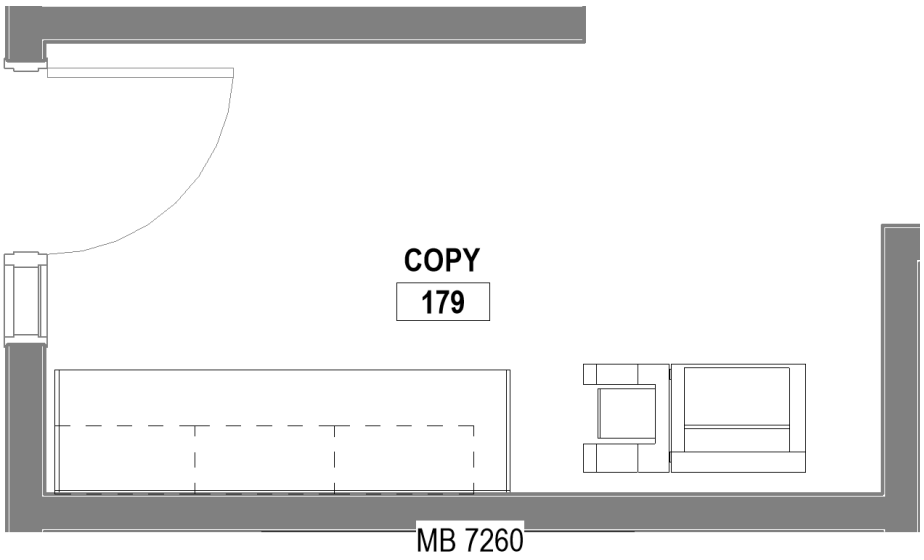
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.024



Room Function Number 09.029

Room Name	RECORDS
Room Number	186
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	186	Programmed	110.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	File storage for student records
Quantity:	1
Occupant Load:	(1) Staff

Location Criteria:

Users:	Staff
Adjacency:	Within Administrative Suite
Orientation / Views:	Not required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Office appropriate acoustical requirements
Windows:	None
Doors:	Flush wood door
	Office hardware set
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in lighting
Technology:	Typical perimeter power requirements

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
S.13	120000-Furniture-Storage-Lateral File - 36x18-3high	4
S.14	120000-Furniture-Storage-Lateral File - 30x18-4high	4

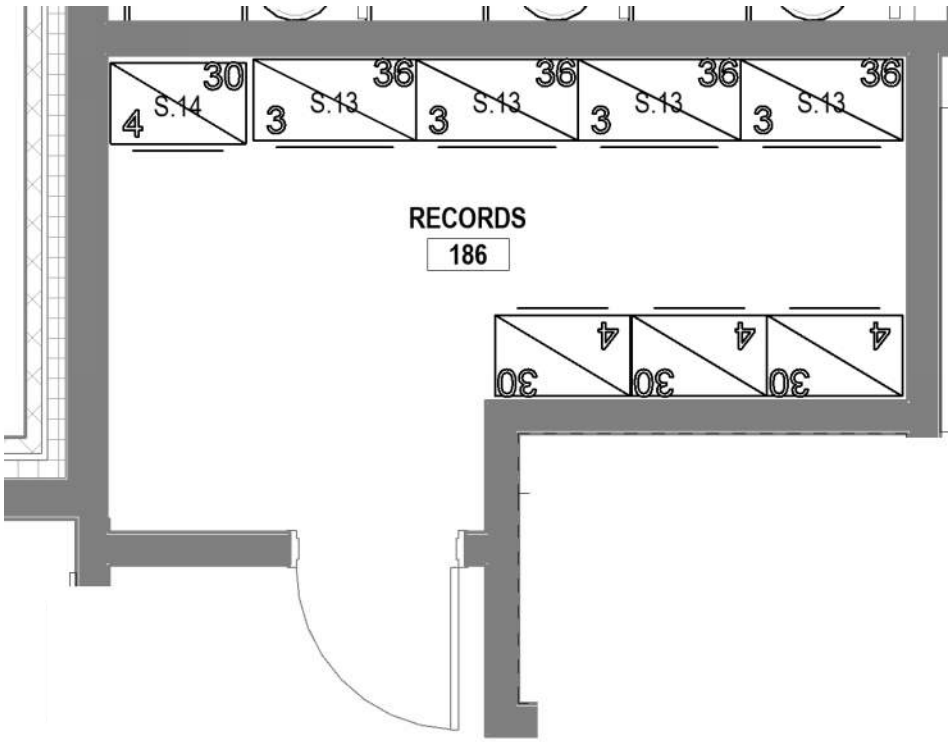
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.012



Room Function Number 09.021

Room Name	PRINCIPAL
Room Number	181
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	181	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Principal
Quantity:	1
Occupant Load:	(1) Staff
	(2-6) Visitors / Students

Location Criteria:

Users:	Principal, students, visitors
Adjacency:	Within Administrative suite. Visually connected to main entry and approach. Near conference room.
	Adjacent to Principal's Secretary and General Office/Waiting Area
Orientation / Views:	Exterior views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted.
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance for office space.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light
	Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment Public Address system
	Clock System
	Wireless network access
	(1) Flat Panel digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	6
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

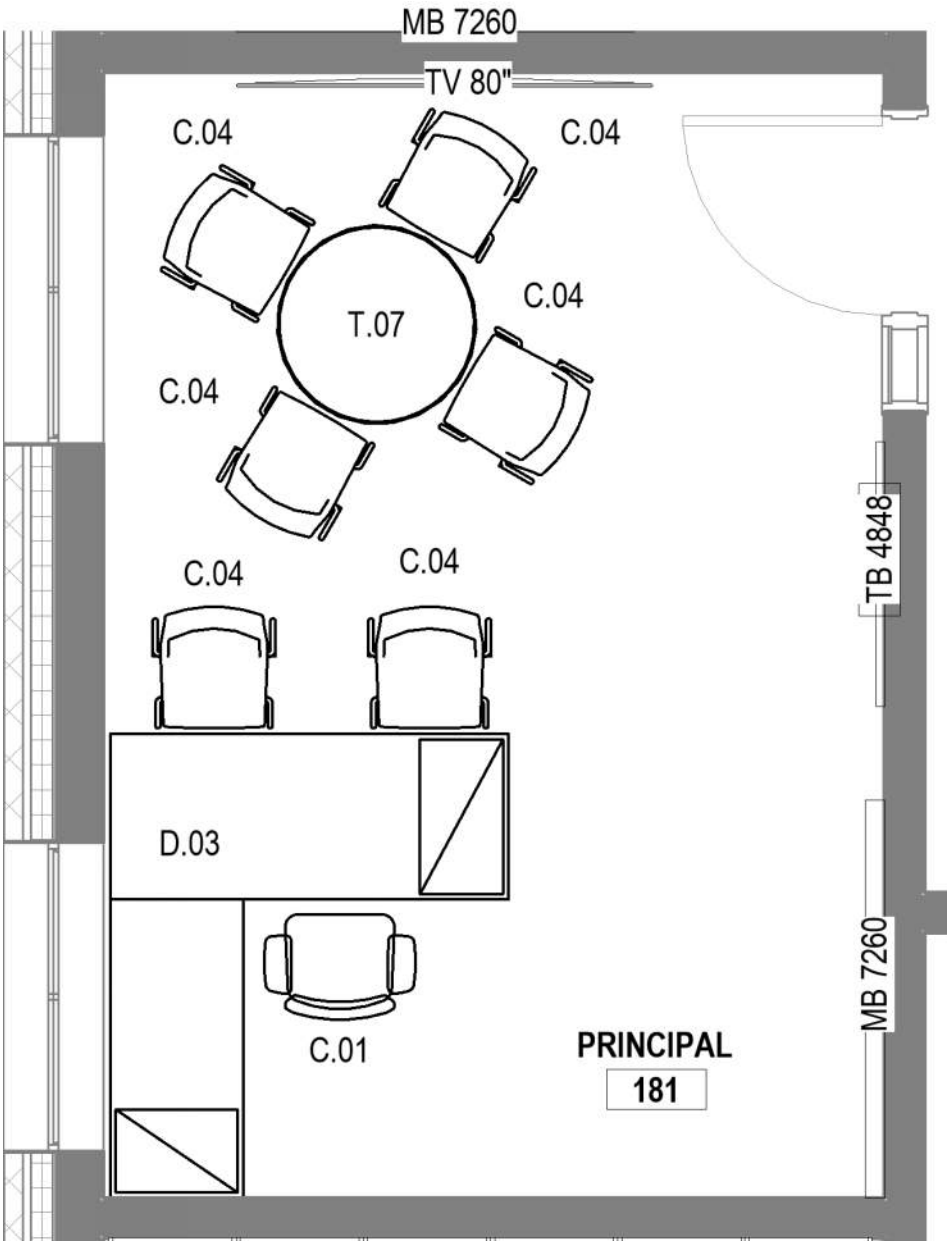
Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 09.021



Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 09.027

Room Name	PRINCIPAL'S SECRETARY
Room Number	177A
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	177A	Programmed	125.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Principal's Administrative Assistant. Serves as check-in for visitors
Quantity:	1
Occupant Load:	1

Location Criteria:

Users:	Home base for Principal's Administrative Assistant. Serves as check-in for visitors
Adjacency:	Within Administrative suite. Visually connected to main entry and approach. Adjacent to General Office/ Waiting Area.
Orientation / Views:	Exterior views & views to entry vestibule and lobby.

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted. Walls adjacent to vestibule to have Level 3 ballistic resistant fiberglass panels within.
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance for office space.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	N/A
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1

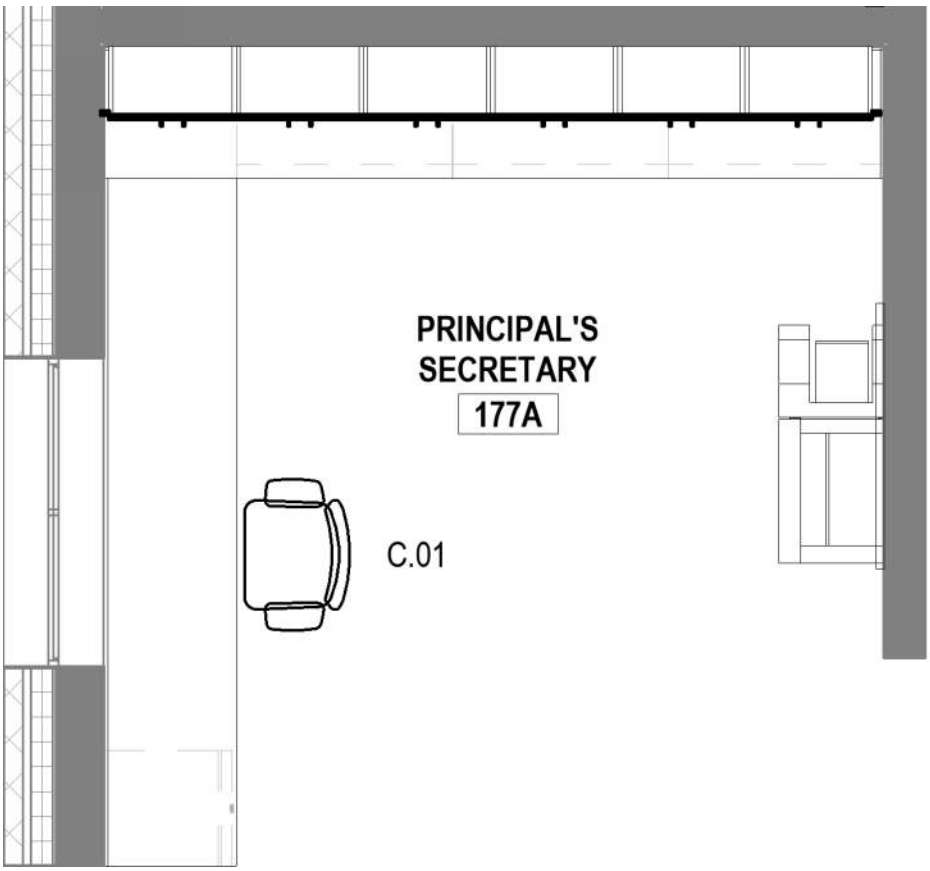
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.027



Room Function Number 09.028

Room Name	ASSISTANT PRINCIPAL
Room Number	223
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	223	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Principal
Quantity:	2
Occupant Load:	(1) Staff
	(2-4) Visitors / Students

Location Criteria:

Users:	Assistant Principal, students, visitors
Adjacency:	Centrally located on level 2.
Orientation / Views:	Exterior views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted.
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance for office space.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light
	Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment Public Address system
	Clock System
	Wireless network access
	(1) Flat Panel digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	4
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

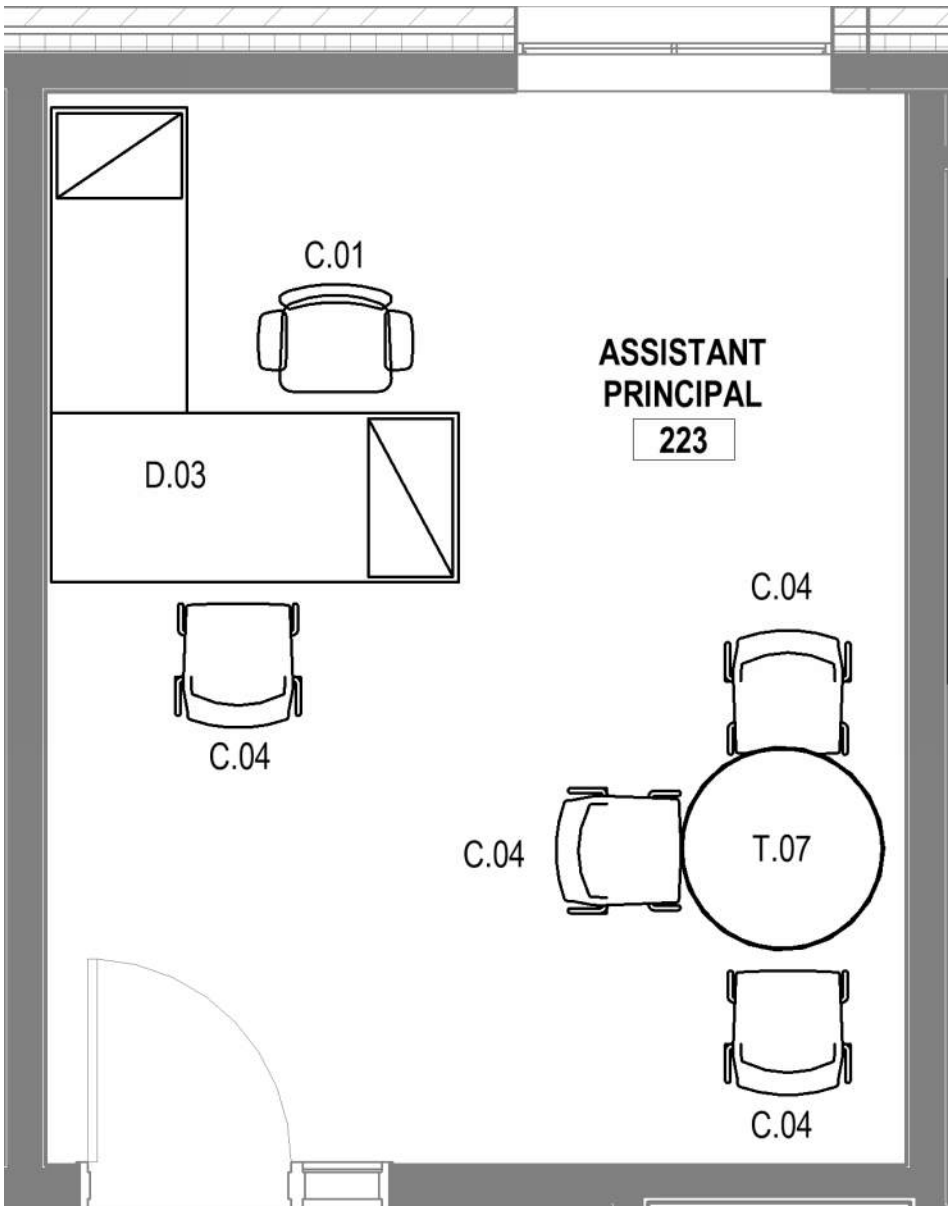
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.028



Room Function Number 09.009

Room Name	ASSISTANT PRINCIPAL
Room Number	305
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	305	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Assistant Principal
Quantity:	2
Occupant Load:	(1) Staff (2-4) Visitors / Students

Location Criteria:

Users:	Assistant Principal, students, visitors
Adjacency:	Centrally located on level 3.
Orientation / Views:	Exterior views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted.
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance for office space.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access (1) Flat Panel digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	6
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

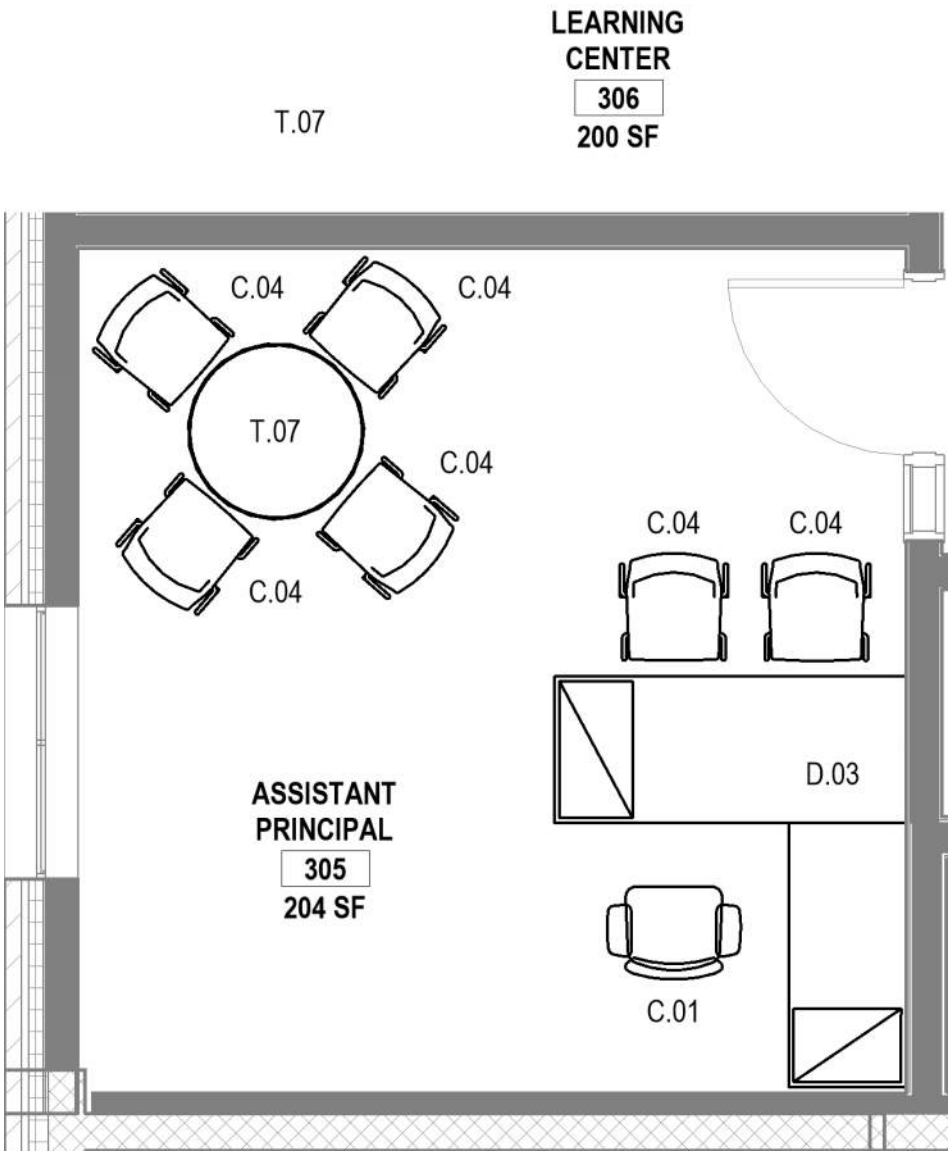
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.009



Room Function Number 09.020

Room Name	OFFICE
Room Number	182
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	182	Programmed	120.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Administrative support staff; serves as check-in for visitors and students
Quantity:	2
Occupant Load:	(1) Staff (1-2) Visitors/Students

Location Criteria:

Users:	Office aids, secretary, guests, administration, faculty, & students.
Adjacency:	Adjacent to building main entrance, living room/lobby space, administrative suite and Conference Room
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Office appropriate acoustical requirements
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood door with side light to Administration suite Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating/cooling
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1

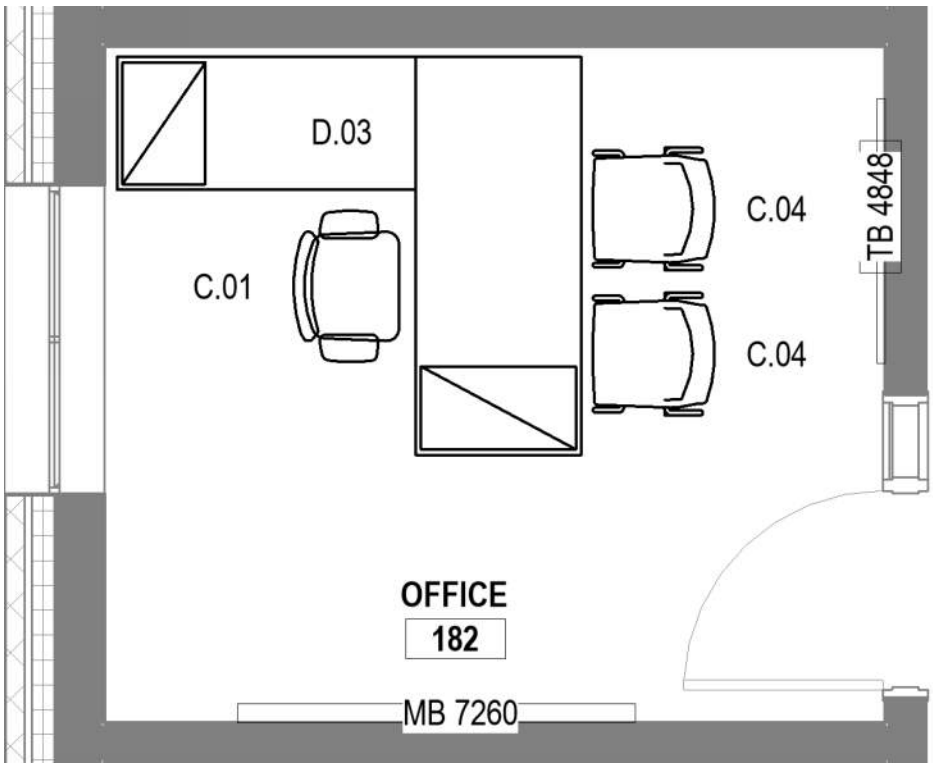
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.020



Room Function Number 09.019

Room Name	OFFICE
Room Number	183
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	183	Programmed	120.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Administrative support staff; serves as check-in for visitors and students
Quantity:	2
Occupant Load:	(1) Staff (1-2) Visitors/Students

Location Criteria:

Users:	Office aids, secretary, guests, administration, faculty, & students.
Adjacency:	Adjacent to building main entrance, living room/lobby space, administrative suite and Conference Room
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Office appropriate acoustical requirements
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood door with side light to Administration suite Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating/cooling
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

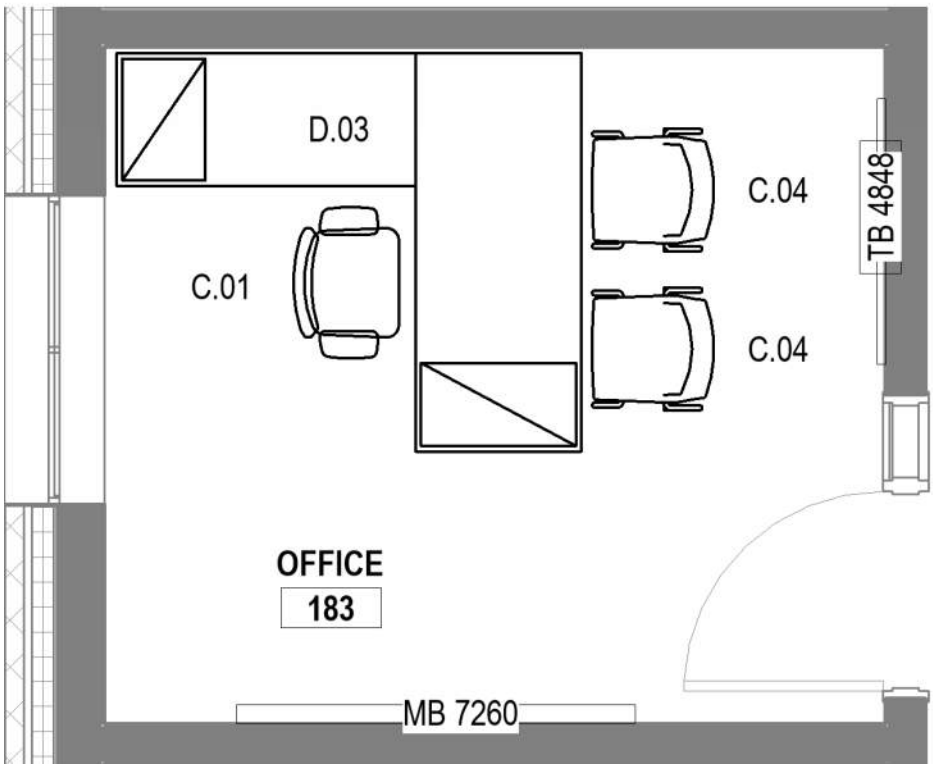
Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1

D.03



Room Function Number 09.023

Room Name	CONFERENCE ROOM
Room Number	180
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	180	Programmed	300.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Administrative Conference Room
Quantity:	2
Occupant Load:	(12) Users

Location Criteria:

Users:	Principals, students, visitors
Adjacency:	Within Administrative suite. Adjacent to Principal's Secretary and General Office/Waiting Area
Orientation / Views:	Exterior views not required

Technical Criteria:

Floor Finishes:	Carpet tile
Wall Finishes:	Gypsum wall board
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	none
Doors:	Flush wood door w/ vision panel and shades for privacy and acoustical seals
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access (2-3) Flat Panel digital display

Fixtures & Furnishings:

Casework:	none
Specialties:	Markerboard
Furnishings:	Types & Configurations indicated in the attached room layout sheets.
Equipment:	Types & Configurations indicated in the attached room layout sheets including: Flat Panel Display
Shelving / Storage:	none

Furniture

Item: BIM ID	Name	Quantity
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	12
T.04	120000-Furniture-Table Rectangular - 60X30 FLIP TOP - Inset Leg	5

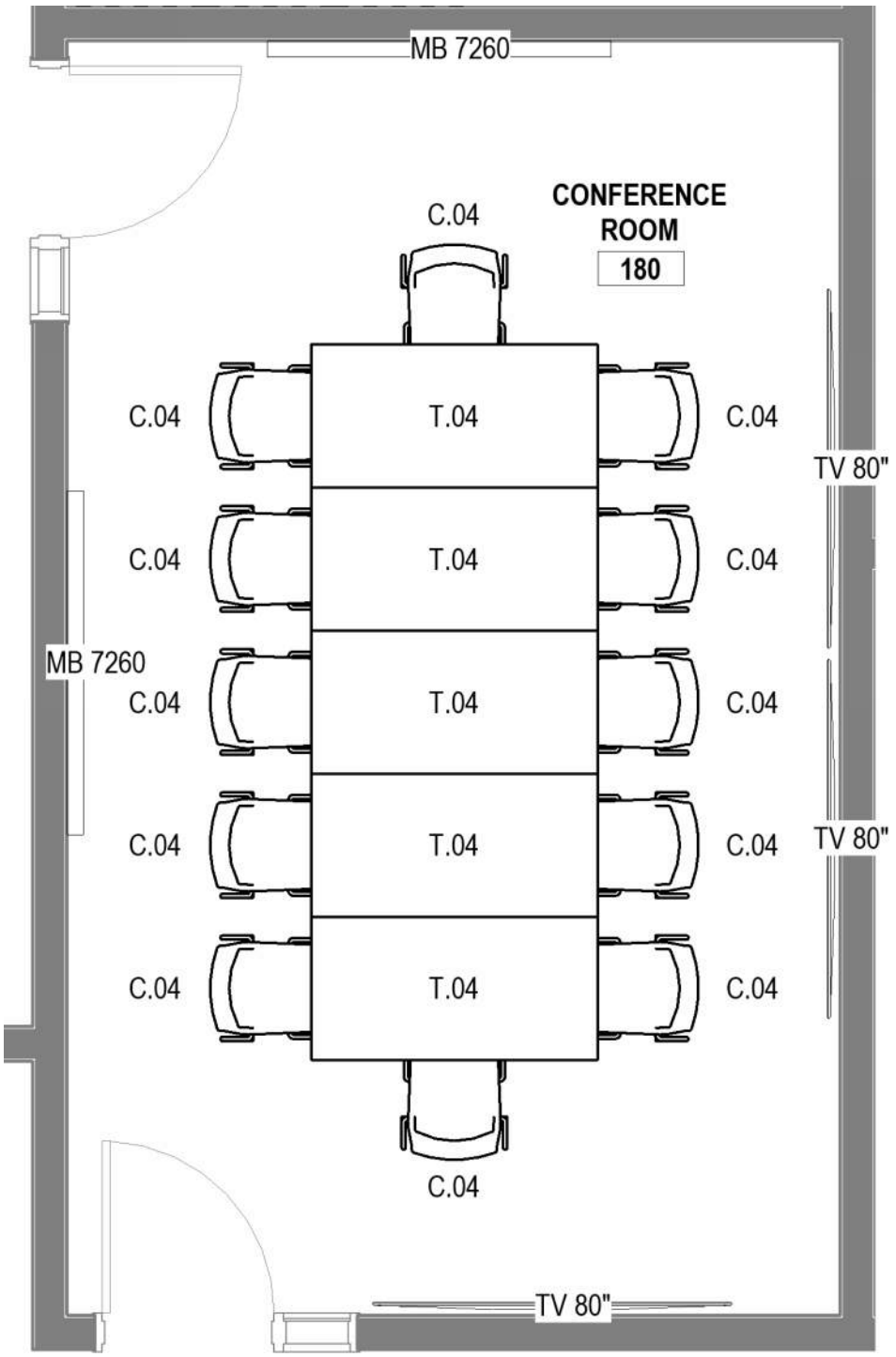
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.023



Room Function Number 09.025

Room Name	CONFERENCE ROOM
Room Number	188
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	188	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Administrative Conference Room
Quantity:	2
Occupant Load:	(8) Users

Location Criteria:

Users:	Principals, students, visitors
Adjacency:	Within Administrative suite. Adjacent to Principal's Secretary and General Office/Waiting Area
Orientation / Views:	Exterior views not required

Technical Criteria:

Floor Finishes:	Carpet tile
Wall Finishes:	Gypsum wall board
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	none
Doors:	Flush wood door w/ vision panel and shades for privacy and acoustical seals
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access (1) Flat Panel digital display

Fixtures & Furnishings:

Casework:	none
Specialties:	Markerboard
Furnishings:	Types & Configurations indicated in the attached room layout sheets.
Equipment:	Types & Configurations indicated in the attached room layout sheets including: Flat Panel Display
Shelving / Storage:	none

Furniture

Item: BIM ID	Name	Quantity
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	8
T.04	120000-Furniture-Table Rectangular - 60X30 FLIP TOP - Inset Leg	3

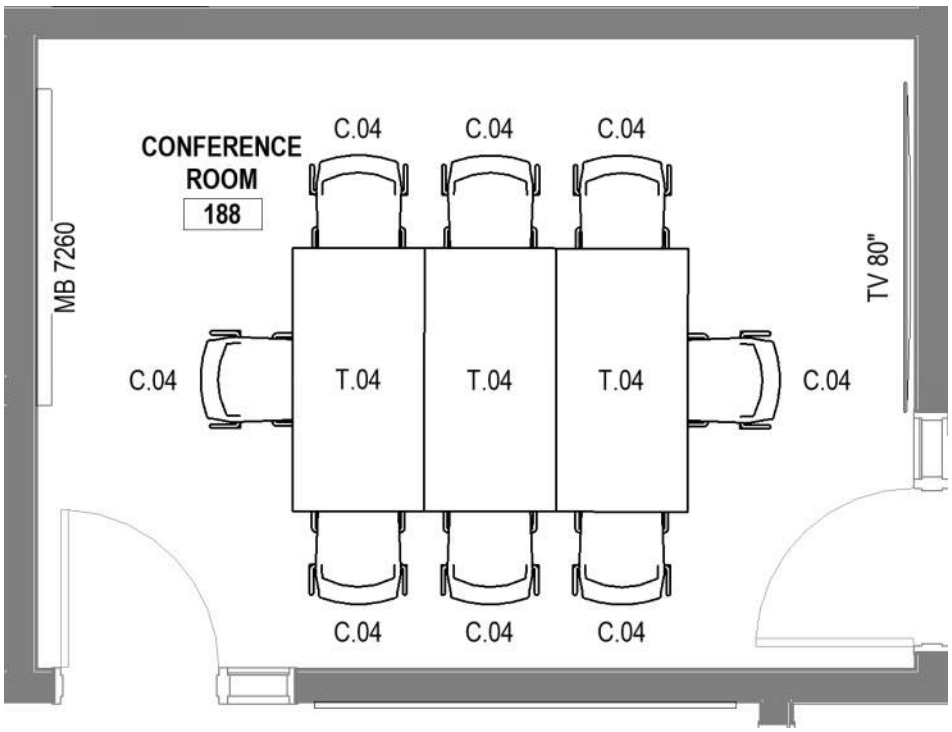
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.025



Room Function Number 09.001

Room Name	ADJUSTMENT
Room Number	104
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	104	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Adjustment Counselor capable of supporting typical office tasks, storage of confidential files, confidential phone calls, and in-person meetings with students
Quantity:	3
Occupant Load:	(1) Staff (2-3) Students

Location Criteria:

Users:	Adjustment Counselor and Students
Adjacency:	Near Classrooms / Student facing spacing
Orientation / Views:	Exterior Views required

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access Interactive digital display

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	4
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

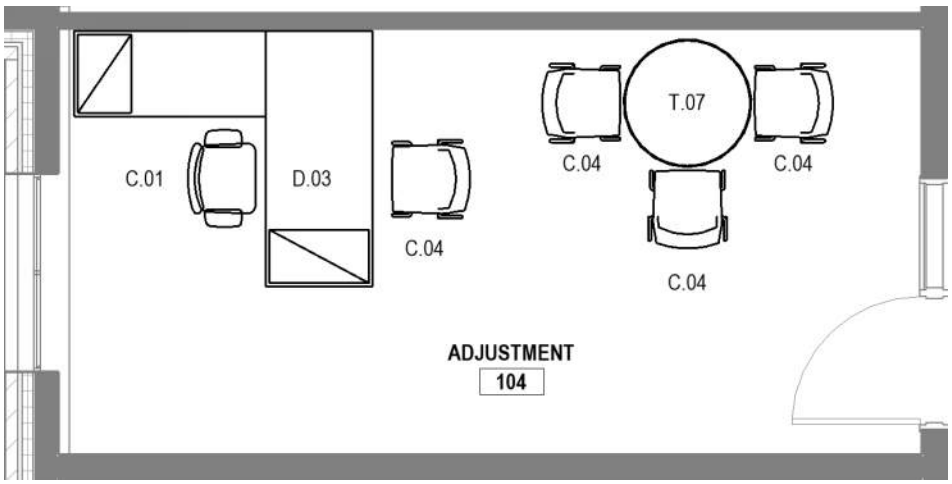
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.001



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.002

Room Name	READ
Room Number	209
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	209	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Reading Tudors and paraprofessionals, Weekly 1-on-1 assessments
Quantity:	6
Occupant Load:	(1) Teacher (3-6) students

Location Criteria:

Users:	Home base for Reading Specialists and paraprofessionals
Adjacency:	Central to learning commons. Direct access off corrido
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating/cooling
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	• Deep shelving to accommodate large binders.• Adjustable shelving for various materials (game boxes, thicker items).•Deep drawers for additional storage.
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Open storage for books is preferred. Reduced need for confidential paper files. One lockable storage unit for essential student files may be necessary.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	3
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
T.07	120000-Furniture-Table Round - 36"	1

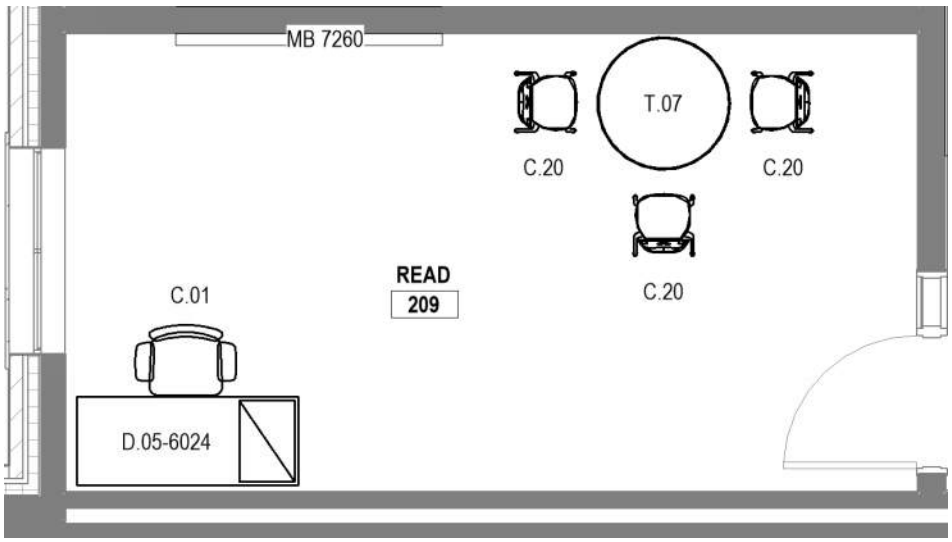
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.002



Room Function Number 09.004

Room Name	MATH
Room Number	222
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	222	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Math Tudors and paraprofessionals
Quantity:	4
Occupant Load:	(1) Teacher (1-2) students

Location Criteria:

Users:	Home base for Math Coaches, and paraprofessionals
Adjacency:	Central to learning commons. Direct access off corrido
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating/cooling
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	• Deep shelving to accommodate large binders.• Adjustable shelving for various materials (game boxes, thicker items).•Deep drawers for additional storage.
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Technology and projectable surfaces are essential, including interactive displays, whiteboards, tackboards, and bulletin boards.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	4
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

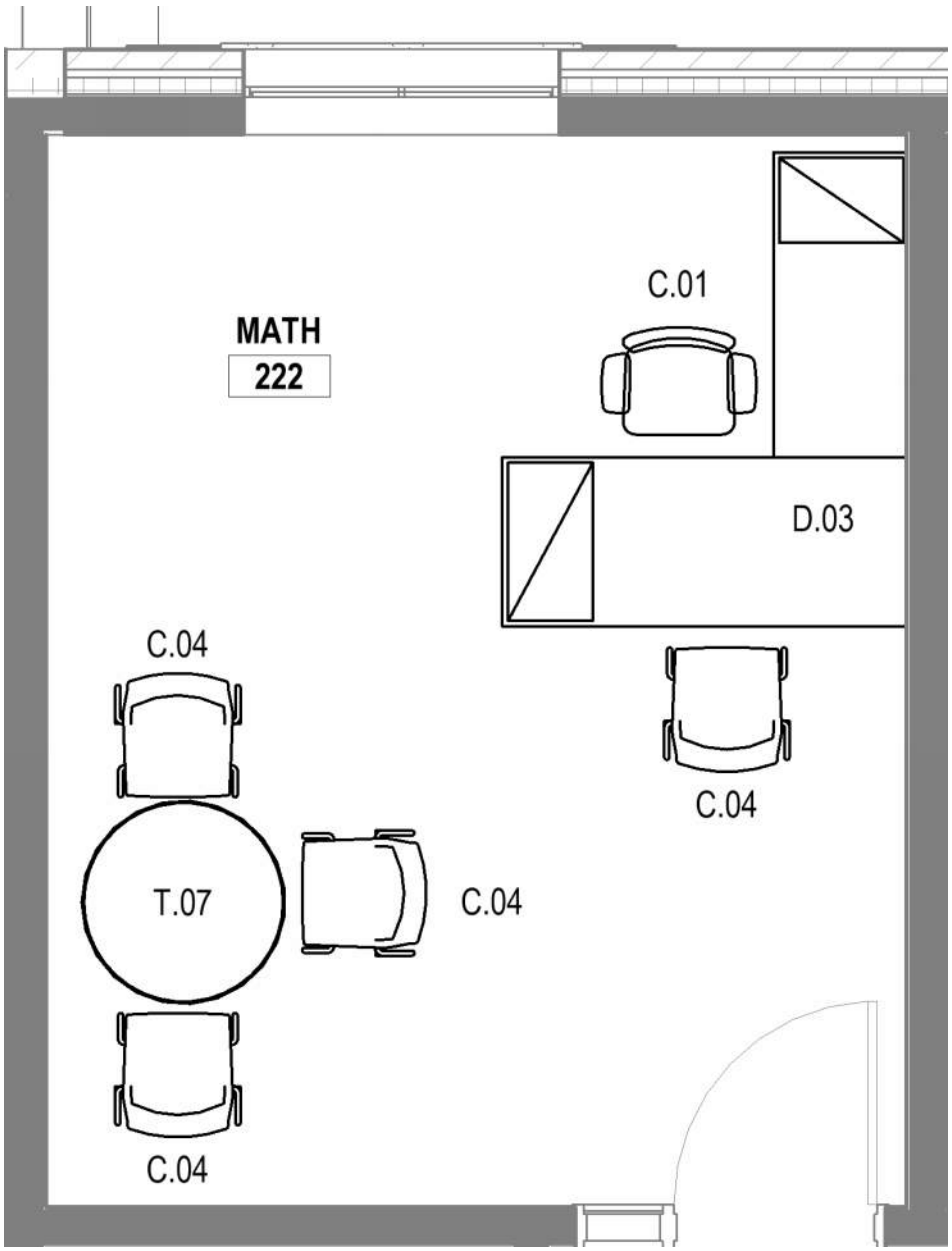
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.004



Room Function Number 09.012

Room Name	GUID. STOR.
Room Number	187
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	187	Programmed	35.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Storage for Student files
Quantity:	1
Occupant Load:	1

Location Criteria:

Users:	Administration
Adjacency:	Within Administrative suite. Located within the Special Education Admin Support space
Orientation / Views:	not required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance
Windows:	none
Doors:	Flush wood door
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

n/a

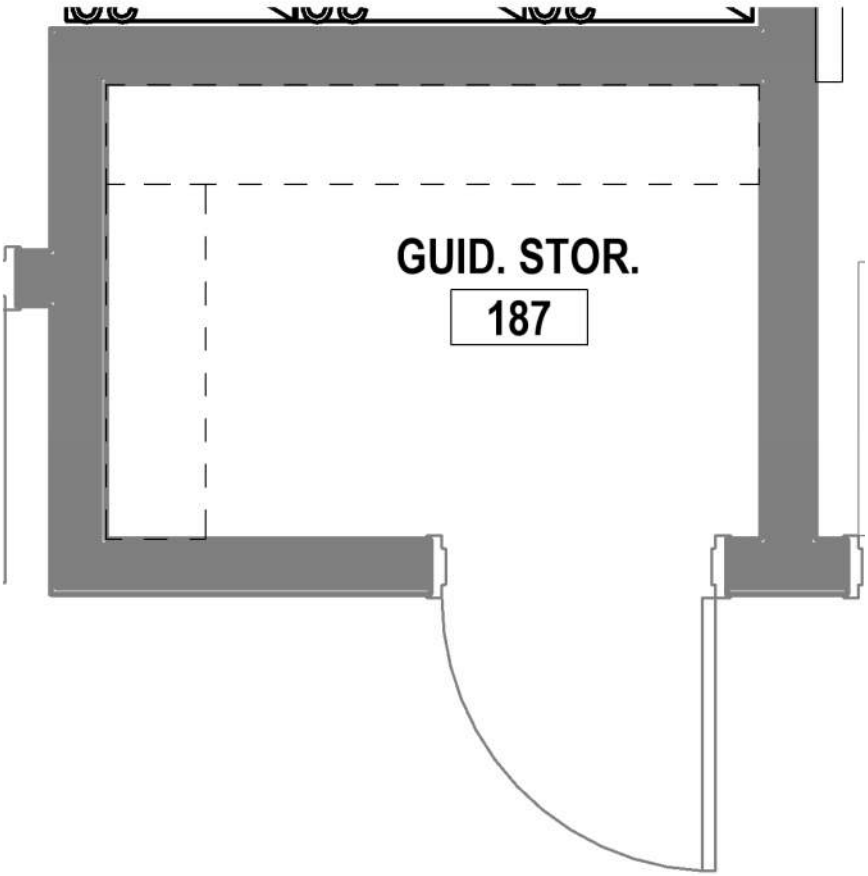
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.029



Room Function Number 09.016

Room Name	IT OFFICE
Room Number	148
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	148	Programmed	120.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for IT staff
Quantity:	2
Occupant Load:	(1) Staff

Location Criteria:

Users:	IT technician
Adjacency:	Centrally located, close to Network/Telecom
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Office appropriate acoustical requirements
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood door with side light to Administration suite Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating/cooling
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
S.04	120000-Furniture-Storage-Pantry Shelving (1) - 48" Wide x 24"	1

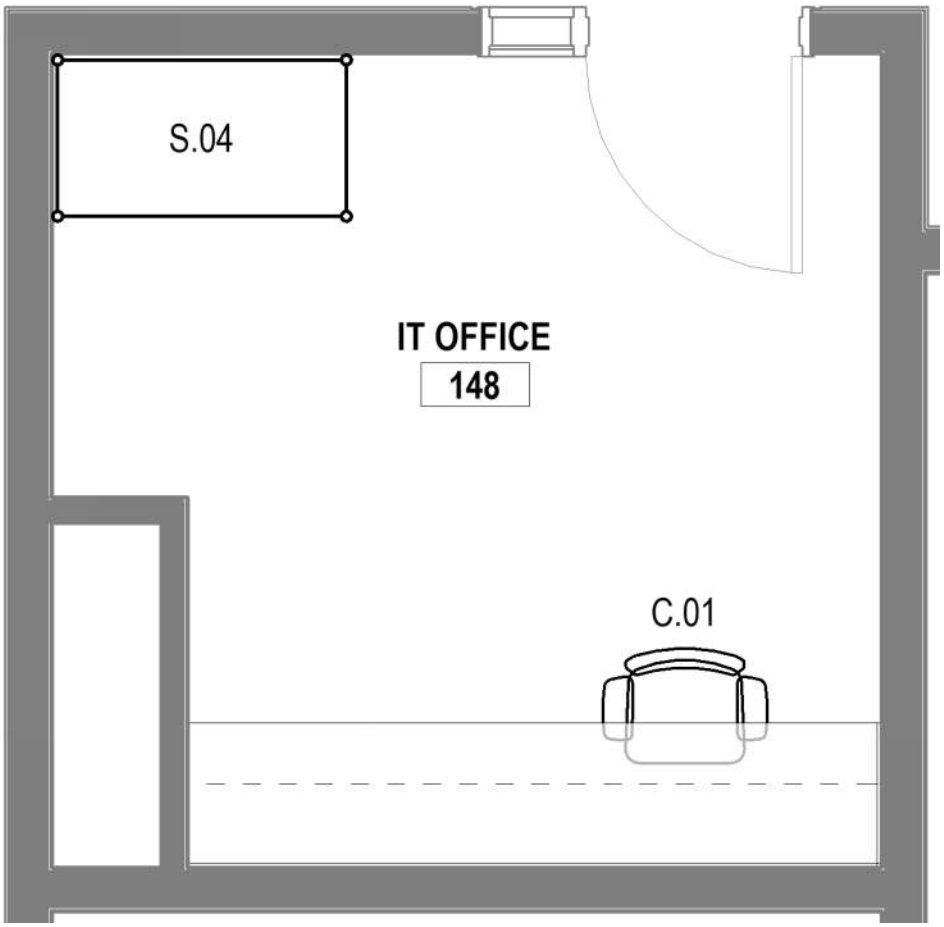
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.016



Room Function Number 09.017

Room Name	LITERACY COORDINATOR
Room Number	185
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	185	Programmed	120.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for Reading Tudors and paraprofessionals, Weekly 1-on-1 assessments
Quantity:	1
Occupant Load:	(1) Teacher (3-6) students

Location Criteria:

Users:	Home base for Math Coaches, and paraprofessionals
Adjacency:	Central to learning commons. Direct access off corrido
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating/cooling
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	• Deep shelving to accommodate large binders.• Adjustable shelving for various materials (game boxes, thicker items).•Deep drawers for additional storage.
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Open storage for books is preferred. Reduced need for confidential paper files. One lockable storage unit for essential student files may be necessary.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1

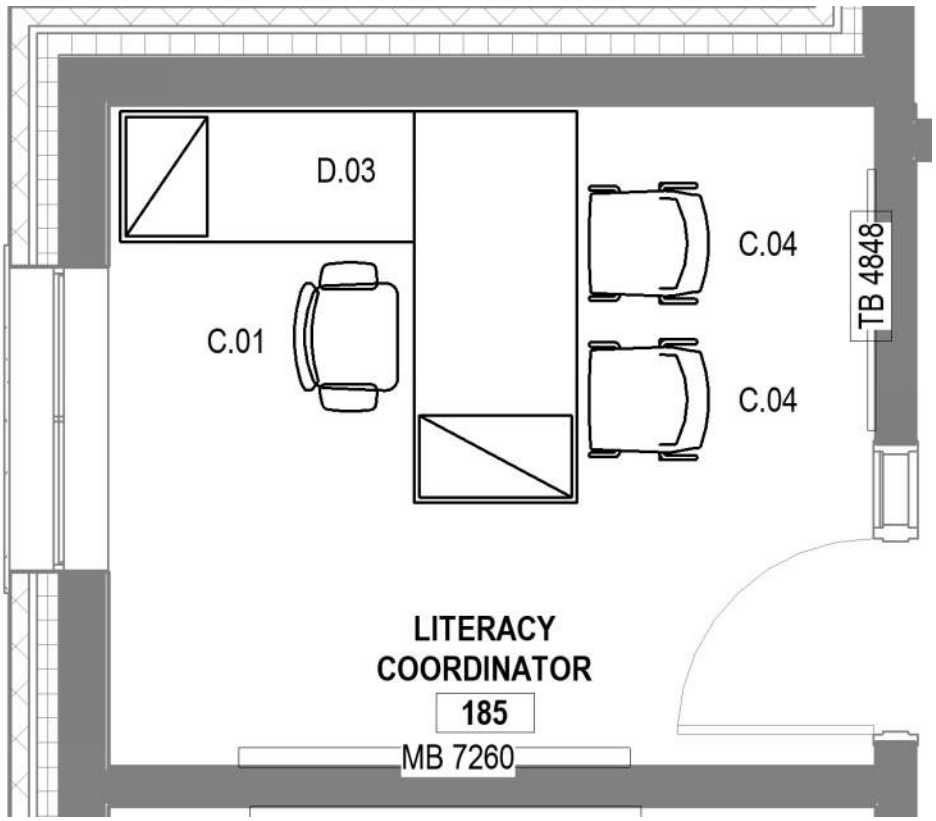
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.017



Room Function Number 09.018

Room Name	STEM COORDINATOR
Room Number	184
Department (Name)	ADMINISTRATION & GUIDANCE

Categorization		Areas	
Room Number	184	Programmed	120.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for STEM coordinator
Quantity:	1
Occupant Load:	(1) Staff (1-2) Visitors/Students

Location Criteria:

Users:	STEM Coordinator, faculty, & students.
Adjacency:	Adjacent to building main entrance, living room/lobby space, administrative suite and Conference Room
Orientation / Views:	Exterior Views

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Office appropriate acoustical requirements
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood door with side light to Administration suite Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating/cooling
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1

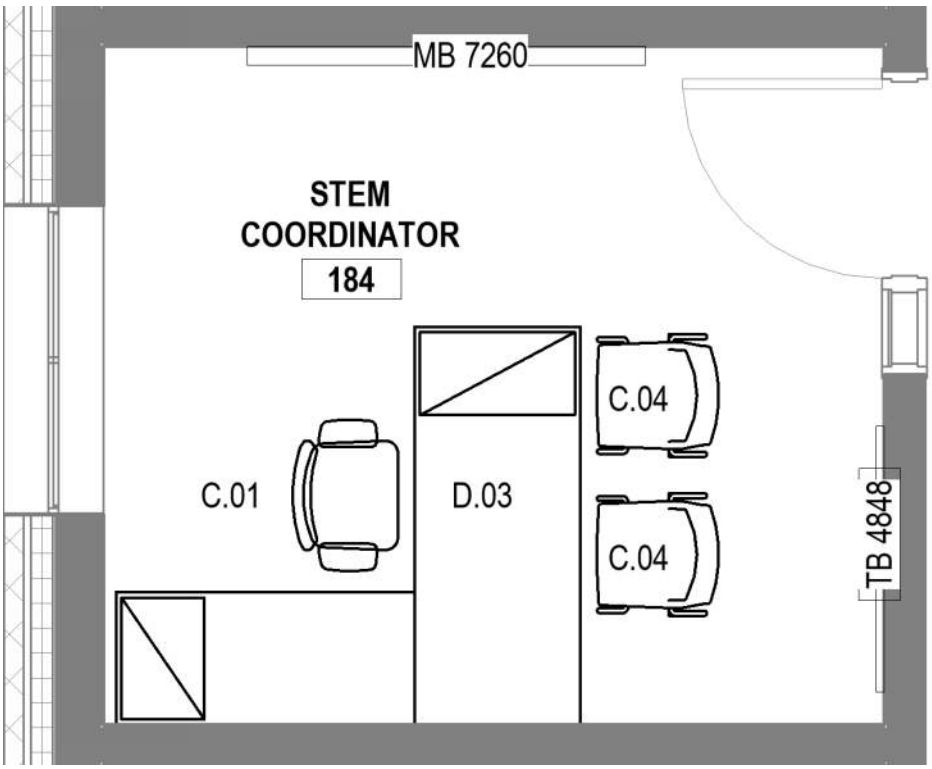
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 09.018



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 11.005

Room Name	CUSTODIAL OFFICE
Room Number	155C
Department (Name)	CUSTODIAL & MAINTENANCE

Categorization		Areas	
Room Number	155C	Programmed	175.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Office for Custodial staff
Quantity:	1
Occupant Load:	5

Location Criteria:

Users:	Custodial Staff
Adjacency:	Shipping & receiving, custodial work and storage areas
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient Flooring
Wall Finishes:	Gypsum wall painted
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance for office space.
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush wood doors with side light
	Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system
	Clock System
	Wireless network access
	Interactive projector/digital display

Fixtures & Furnishings:

Casework:	None
Specialties:	Markerboard and tackboard
Furnishings:	(1) Desk
	(1) Task Chair
	(1) Meeting Table
	(4) Guest Chairs
Equipment:	TBD
Shelving / Storage:	Box/Box/File, Lateral Files

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	4
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
T.07	120000-Furniture-Table Round - 36"	1

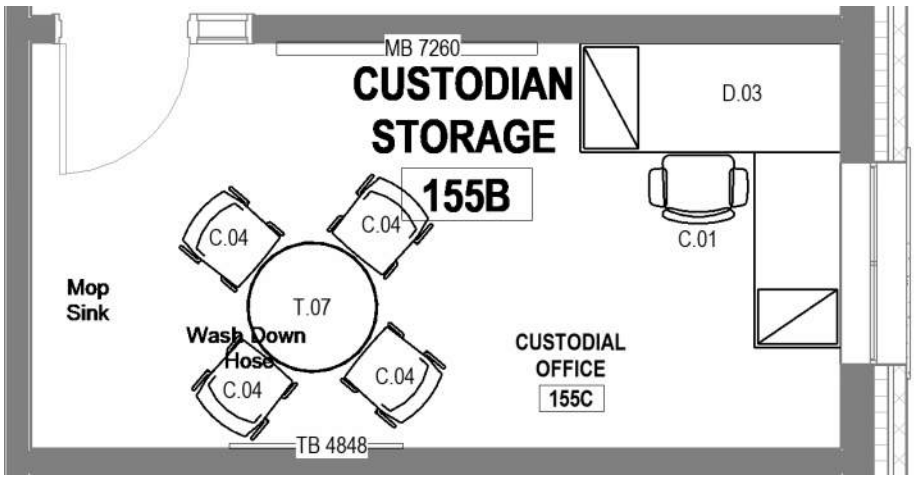
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 11.005



Room Function Number 11.001

Room Name	CUSTODIAN STORAGE
Room Number	248
Department (Name)	CUSTODIAL & MAINTENANCE

Categorization		Areas	
Room Number	248	Programmed	202.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Open area for shipping/receiving of bulk supplies – paper towels, toilet paper, copier paper, cleaning products, etc. including food and dry goods
Quantity:	1
Occupant Load:	1 staff

Location Criteria:

Users:	Custodial Staff
Adjacency:	Shipping & receiving, custodial work and storage areas
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Quartz tile
Wall Finishes:	Gypsum Wall Board, painted, acoustical panels
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	None
Windows:	None
Doors:	Flush Metal Door
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-in lighting
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support room equipment Public Address system Wireless network access

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	Metal shelving to store bulk materials
Equipment:	Final list TBD, to include general building maintenance equipment.
Shelving / Storage:	Metal shelving to store bulk materials

Furniture

Item: BIM ID	Name	Quantity
S.04	120000-Furniture-Storage-Pantry Shelving (1) - 48" Wide x 24"	7

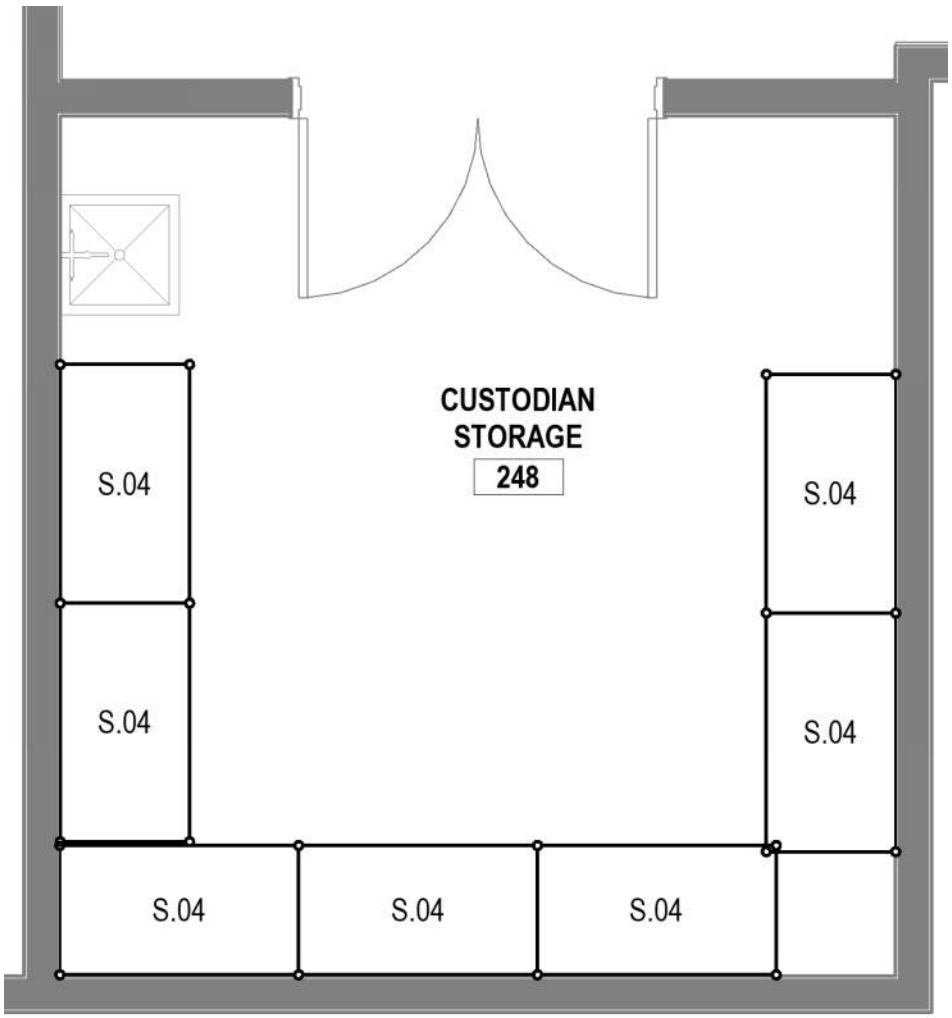
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 11.001



Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 11.002

Room Name	CUSTODIAN STORAGE
Room Number	155B
Department (Name)	CUSTODIAL & MAINTENANCE

Categorization		Areas	
Room Number	155B	Programmed	206.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Open area within the custodial/maintenance zone for storage of items related to building maintenance – tools, wire, cleaning equipment, etc.
Quantity:	1
Occupant Load:	1

Location Criteria:

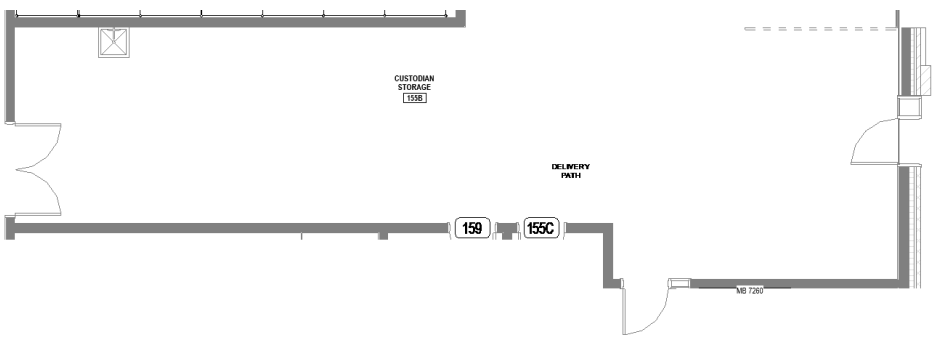
Users:	Custodial Staff
Adjacency:	Shipping & receiving, custodial work and storage areas
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Quartz Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system
Acoustical:	None
Windows:	None required
Doors:	Flush Metal Door w/ glass
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Suspended lighting
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support room equipment Public Address system

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	Metal shelving to store bulk materials
Equipment:	Final list TBD, to include general building maintenance equipment.
Shelving / Storage:	Metal shelving to store bulk materials



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Room Function Number 11.003

Room Name	RECEIVING / GENERAL SUPPLY
Room Number	155
Department (Name)	CUSTODIAL & MAINTENANCE

Categorization		Areas	
Room Number	155	Programmed	1,159.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Open area for shipping/receiving of bulk supplies – paper towels, toilet paper, copier paper, cleaning products, etc. including food and dry goods
Quantity:	1
Occupant Load:	1 staff

Location Criteria:

Users:	Custodial Staff
Adjacency:	Shipping & receiving, custodial work and storage areas
Orientation / Views:	Interior views of Storeroom, Chair. Table Storage, School Store Storage, Custodians Storage, Recycling/Trash Room, Custodians Workshop, Direct egress access to outdoors, interior access stair

Technical Criteria:

Floor Finishes:	Quartz tile
Wall Finishes:	CMU, Gypsum wall board, painted
Ceiling Finishes:	Exposed
Acoustical:	None
Windows:	None required
Doors:	Flush Metal Doors w/ vision panel. (Double)
HVAC:	Heating and Ventilation only
Plumbing / FP:	Fully Sprinklered
Lighting:	Suspended lighting
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support room equipment. Public Address system Wireless network access

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	Metal shelving to store bulk materials
Equipment:	None
Shelving / Storage:	Metal shelving to store bulk materials

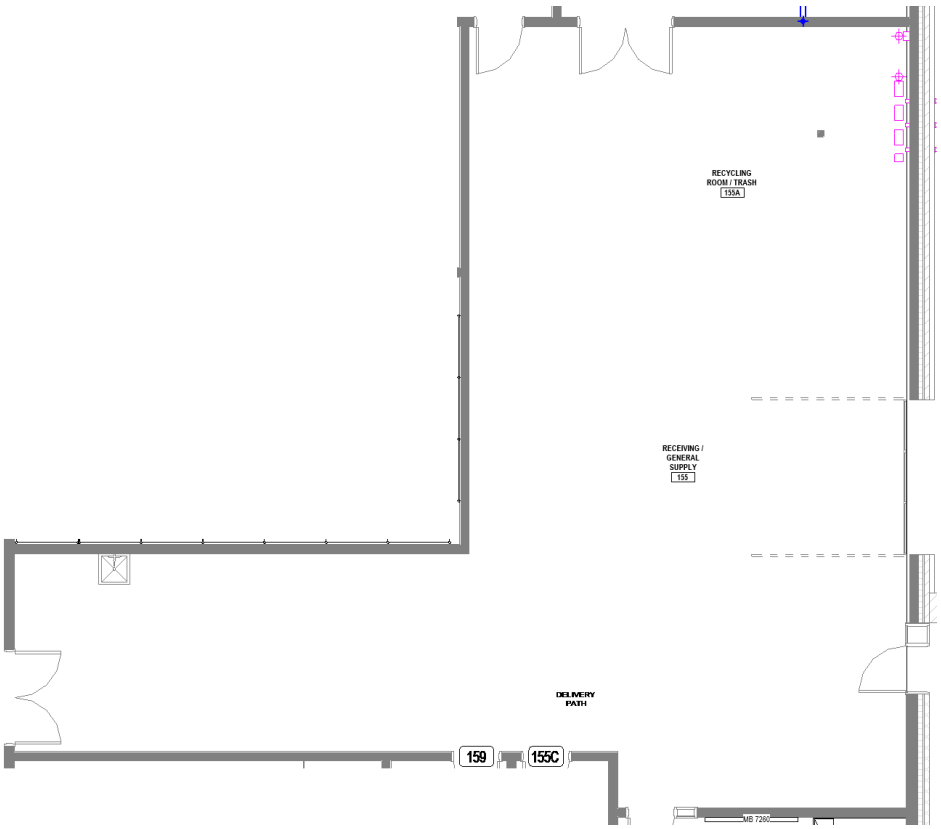
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 11.003



Room Function Number 11.004

Room Name	RECYCLING ROOM / TRASH
Room Number	155A
Department (Name)	CUSTODIAL & MAINTENANCE

Categorization		Areas	
Room Number	155A	Programmed	413.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Dedicated space for recycling bins and trash receptacles
Quantity:	1
Occupant Load:	2

Location Criteria:

Users:	Custodial Staff
Adjacency:	Shipping & receiving, custodial work and storage areas
Orientation / Views:	Interior views of Custodians Workshop, Recieving & General Supply, Storeroom, Chair/Table Storage, Custodians Storage, egress connecting stair

Technical Criteria:

Floor Finishes:	Quartz tile
Wall Finishes:	CMU, Gypsum wall board, painted
Ceiling Finishes:	Exposed
Acoustical:	None
Windows:	None required
Doors:	Flush Metal Doors w/ vision panel. (Double)
HVAC:	Displacement Ventilation with Air Conditioning. Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Suspended lighting
Electrical:	Typical perimeter power requirements. Additional power required to support room equipment
Technology:	Public Address system Wireless network access

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	Final list TBD
Shelving / Storage:	Final list TBD

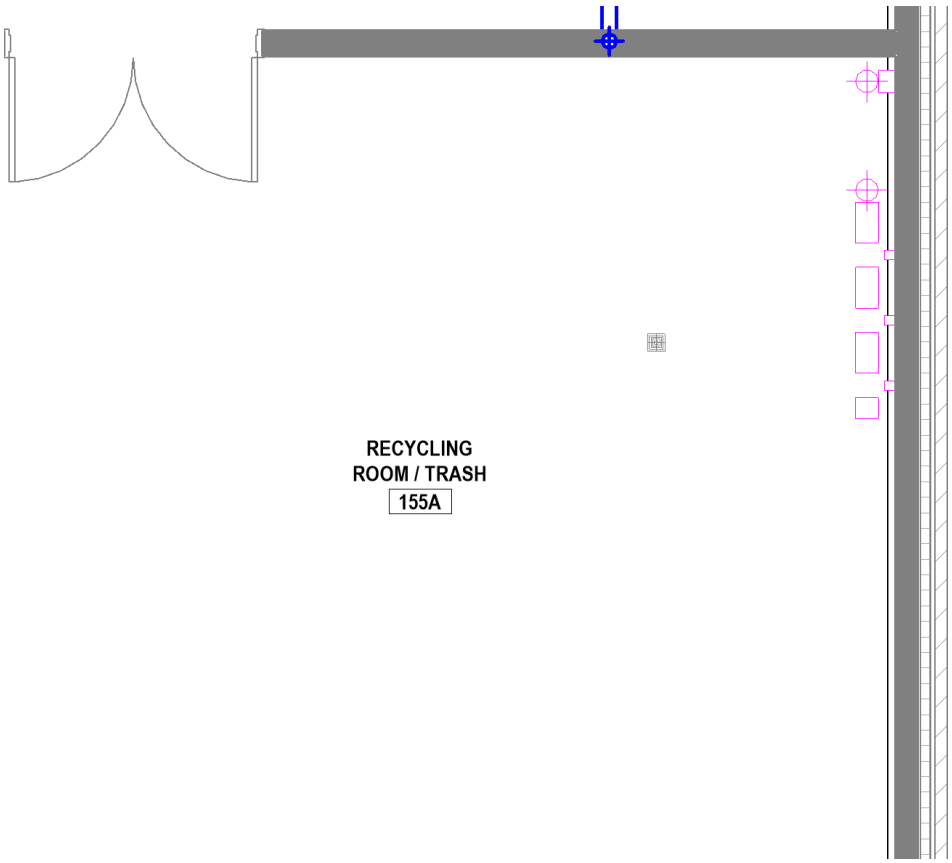
Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 11.004



Room Function Number 11.006

Room Name	NETWORK / TELECOM
Room Number	149
Department (Name)	CUSTODIAL & MAINTENANCE

Categorization		Areas	
Room Number	149	Programmed	200.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Secure room that houses the rack-mounted network servers, telephone equipment, a small work area for IT personnel, and storage for parts/ components.
Quantity:	1
Occupant Load:	1 Staff

Location Criteria:

Users:	IT Staff
Adjacency:	Central to building
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	static dissipative tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Open to structure
Acoustical:	None
Windows:	None
Doors:	cFlush Metal Door
Technology:	Phone Handset, wall-mounted

Fixtures & Furnishings:

Casework:	None
Specialties:	OPEN METAL RACKS TO HOUSE SERVERS, SWITCHES AND SECURITY EQUIPMENT (BY TECH CONSULTANT)
Furnishings:	None
Equipment:	HEAD END NETWORK, COMMUNICATIONS AND TELEPHONE EQUIPMENT, INCLUDING SERVERS, SWITCHES, AND SECURITY PANELS (BY TECH CONSULTANT)

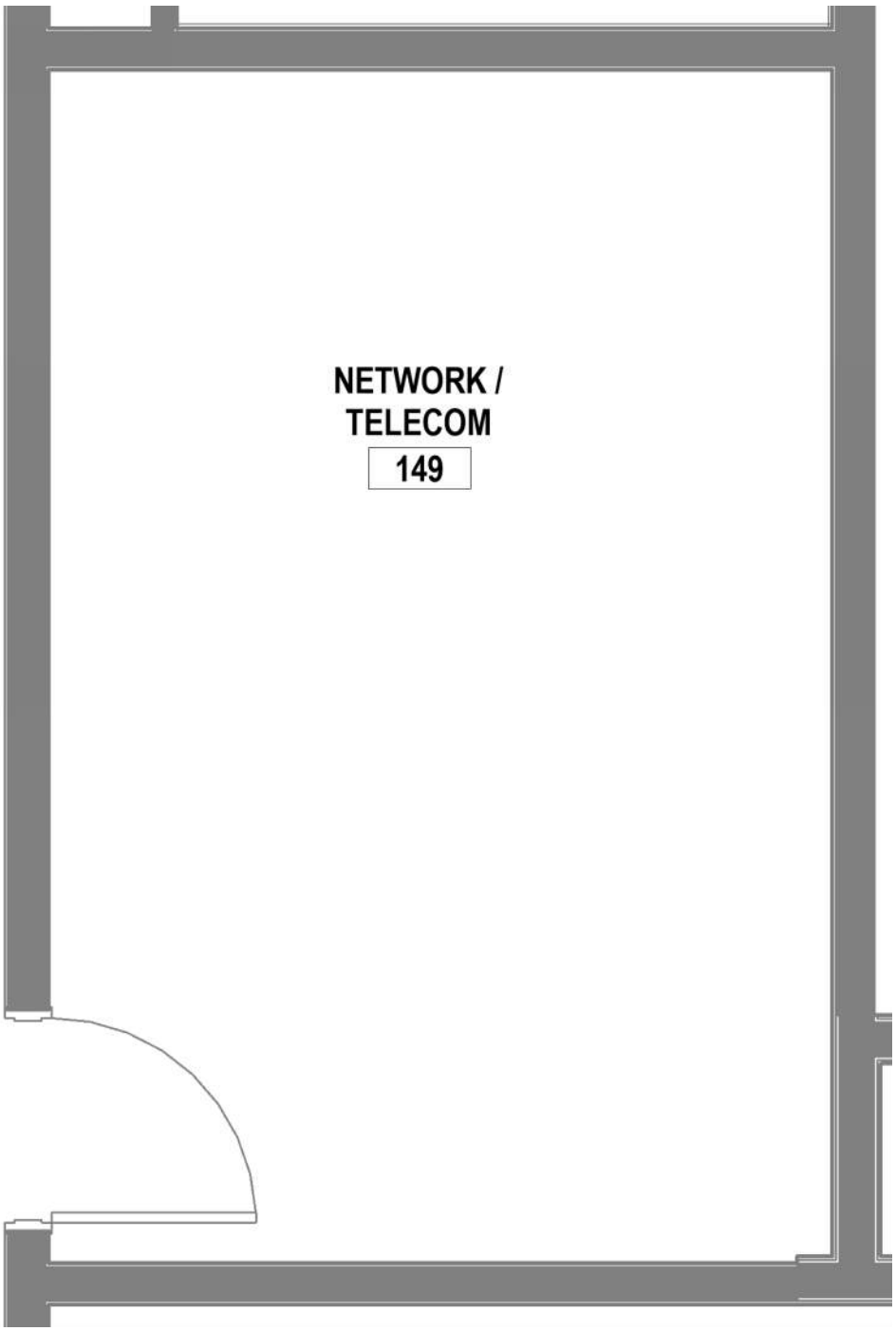
Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 11.006



Room Function Number 12.014

Room Name	PRE-K
Room Number	114
Department (Name)	OTHER - PROGRAM

Categorization		Areas	
Room Number	114	Programmed	1,100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for Pre-K instruction, including a toilet room.
Quantity:	3
Occupant Load:	(15) Students (1) General Education Teacher (1) Para Professional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, ground floor, other Pre-K classrooms and special education spaces, central location. Paired with another Pre-K classroom
Orientation / Views:	Views to Exterior, Connection & Views to Extended Learning Area

Technical Criteria:

Floor Finishes:	Linoleum
Wall Finishes:	Wall Board, painted Magnetic writable surface at teaching wall location, 2’ to 7’ for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Set.
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive projectors (1) Mobile Teachers station

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

Communicating doors between Classrooms

Furniture

Room Data Sheet

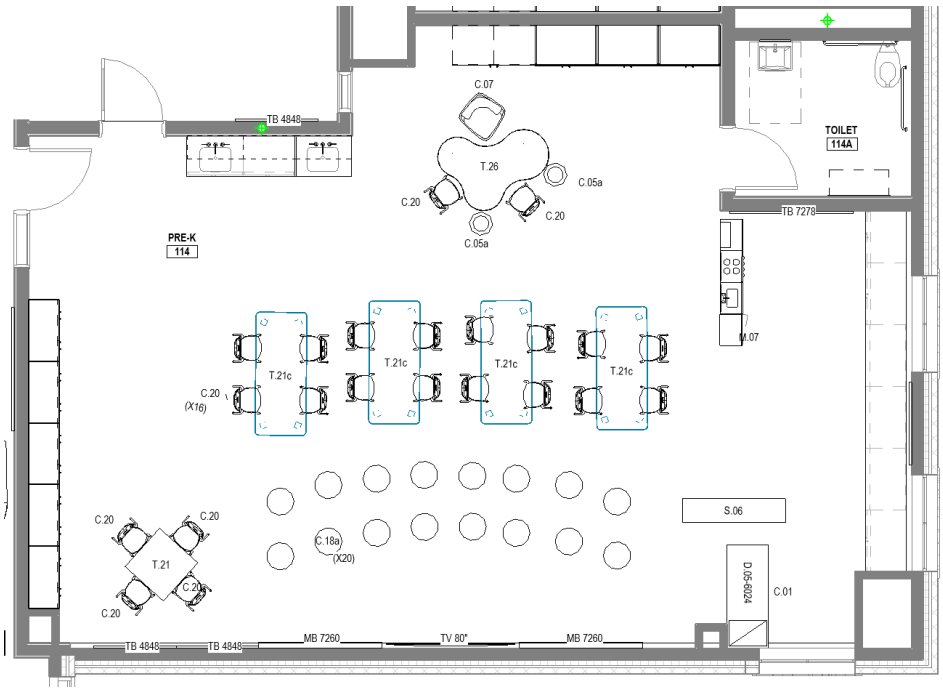
SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 12.014

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.05a	120000-Furniture-Chair-Wobble Stool - VS Hokki - Seat Height - Large	2
C.07	120000-Furniture-Chair-KI-Ruckus - 120000-Furniture-Chair-KI-Ruckus 18"	1
C.18a	Amphi-Jnr-Mats-NorvaNivel - WKPAD	16
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	22
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1
M.07	SSL-CH-Kitchen-Set-1537076 - 1537076	1
S.06	Steelcase Turnstone - Bivi - Storage - Depot - 2 High	1
T.21	120000-Furniture-Table End Table1 - Table - Ocasional Table 30" x 30"	1
T.21c	Elemental Activity Table - RectangleSquare1 - 1.829 m x 0.762 m	4
T.26	120000-Furniture-Table Puzzle-VS1 - Height - lower	1



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 12.012

Room Name	TOILET
Room Number	114A
Department (Name)	OTHER - PROGRAM

Categorization		Areas	
Room Number	114A	Programmed	0.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Toilet room for K- classroom
Program Area:	65 -
Quantity:	3
Occupant Load:	1

Location Criteria:

Users:	Students
Adjacency:	Within Pre-K classroom
Orientation / Views:	none

Technical Criteria:

Floor Finishes:	Tiled flooring
Wall Finishes:	Tile, Painted Gypsum, Gypsum Wall Board
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED Standards
Windows:	None
Doors:	Flush Wood Door
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered. Child Height Wall-hung Toilet, Child height wall-hung sink;
Lighting:	Recessed lay-in fixtures
Electrical:	Typical perimeter power requirements
Technology:	Public Address system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including
Specialties:	Types & Configurations indicated in the attached room layout sheets including
Furnishings:	Types & Configurations indicated in the attached room layout sheets including
Equipment:	Mirror, Soap & paper towel dispensers; H/C grab bars;, wall-mount changing table

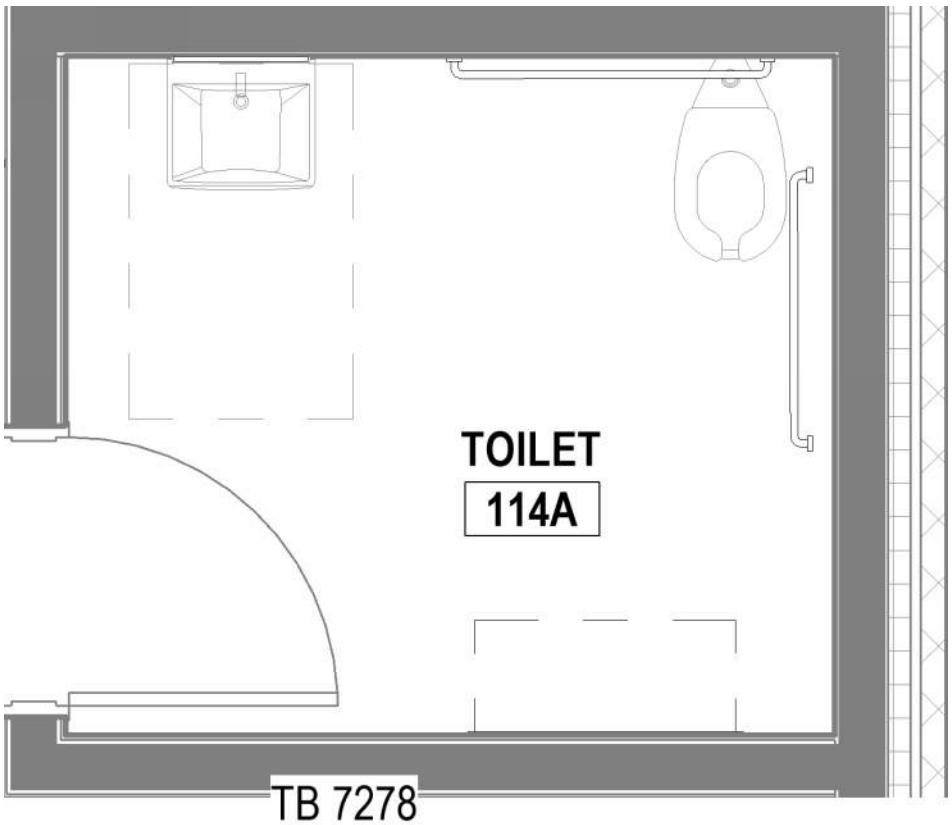
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 12.012



Room Function Number 12.018

Room Name	EXTENDED LEARNING
Room Number	105A
Department (Name)	OTHER - PROGRAM

Categorization		Areas	
Room Number	105A	Programmed	43.00
User Room Number			
Additional Number	105A,105B, 105C, 105D		
Name on Drawing			

Function Criteria:

Description:	Dedicated, communal, multi-use space within each grade level neighborhood intended to serve as environments for breakout spaces, small and large group instruction, assemblies, workshops, indoor sensory pathways, student presentations, dramatic performances, and “messy” creative projects. Features of extended learning areas include, but are not limited to, the following: • Flexibility at a variety of scales, including furniture, technology, and spatial features • Installations of museum-like exhibits and interactive displays tied to units of study and teaching methods; these would be flexible enough to change throughout the building’s lifetime as curriculum and delivery methods change • Natural daylight and views of nature; when possible direct access to outdoor learning environments from extended learning This includes rooms: 105A,105B, 105C, 105D
Quantity:	4
Occupant Load:	4) Teachers/Para professionals (50) Students

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals, administrators, and guest speakers
Adjacency:	Extended learning located immediately outside classrooms to support flexibility of the teaching environment and to allow students and work to “spill out” into the space
Orientation / Views:	Exterior views required

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Tile wainscot on large areas of wall, up to 4'6"
Ceiling Finishes:	Acoustical ceiling panels
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	None
HVAC:	Displacement Ventilation with air conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered. 2 sinks in ELA 105D, one ADA accessible
Lighting:	Linear and recessed lighting zoned per functions of space
Electrical:	Typical perimeter power requirements
Technology:	Additional power required to support specific room equipment. Public Address system Clock System Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets

Room Function Number 12.018

Equipment: Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

(1) Interactive projectors, wall mounted
(1) Teachers connection stations to coordinate with interactive projector (data & power)
(1) Projector, mobile

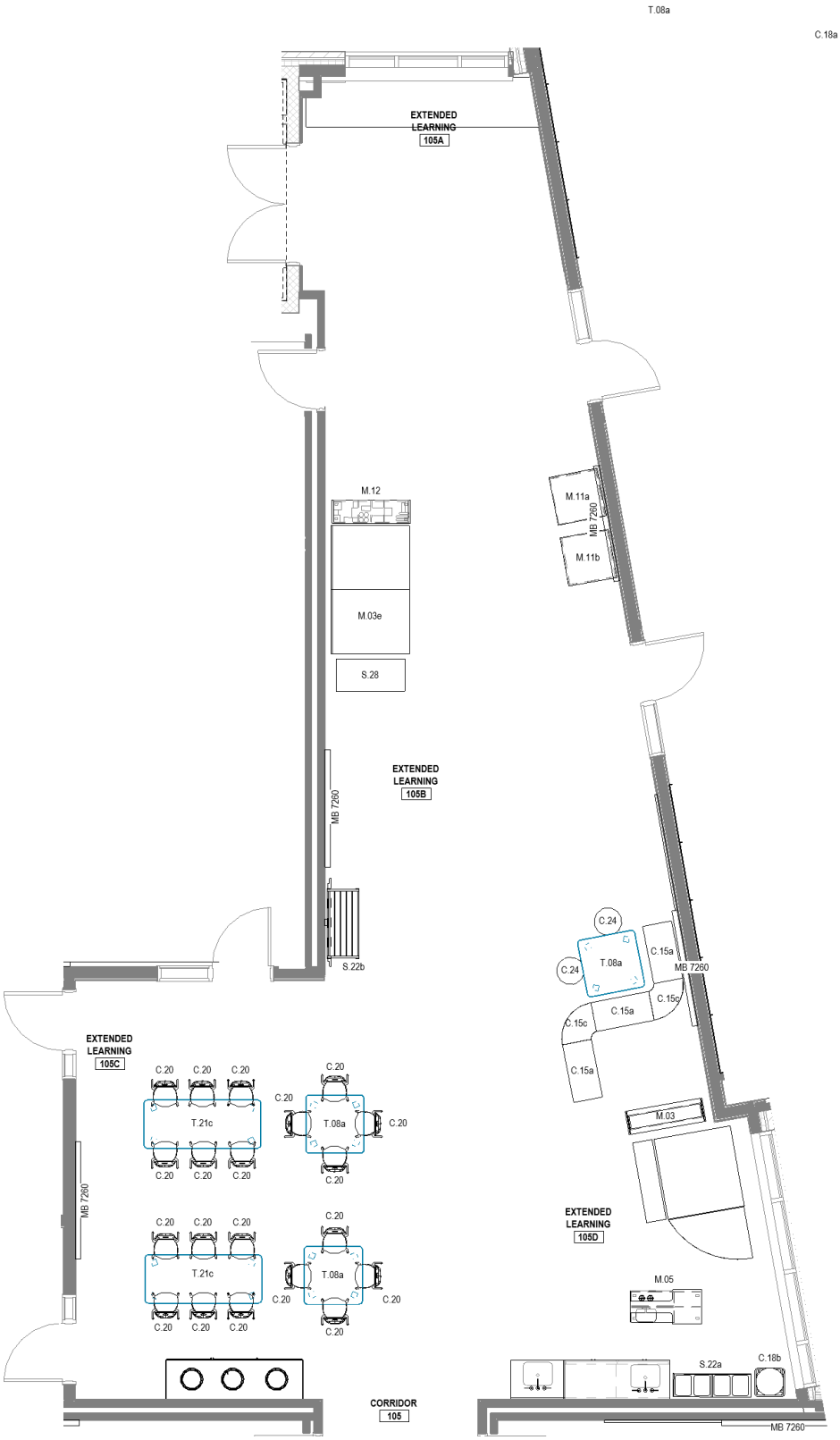
Room Data Sheet

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Wilmington Wildwood EC Center

Room Function Number 12.018



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Room Function Number 12.009

Room Name	TEACH WELLNESS
Room Number	125A
Department (Name)	OTHER - PROGRAM

Categorization		Areas	
Room Number	125A	Programmed	100.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Location for nursing mothers to use a breast pump privately, provide a space to safely store breast milk and clean pumping eqiupment.
Quantity:	3
Occupant Load:	1

Location Criteria:

Users:	Faculty and Staff
Adjacency:	Within Teacher Collaboration and Centrally located for ease of use
Orientation / Views:	n/a

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED prerequisite
Windows:	None
Doors:	Flush wood door, with acoustic seal. Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully sprinklered. Accessible sink
Lighting:	General recessed lighting, on dimmer
Electrical:	Typical perimeter power requirements. Additional power for breast pump. Additional power for undercounted refrigerator.
Technology:	Public Address system. Clock system Wireless network access

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in attached room layout sheets including: Storage cabinets & countertop
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

n/a

Furniture

Item: BIM ID	Name	Quantity
C.10b	Lounge-Seat-KI-Zoetry-Chair-Std - Wood Arm Cap,Left Removable Tablet,No Power,Plastic Glides	1
T.15a	120000-Furniture-Table End Table - Table - Ocasional Table 18" x 18"	1

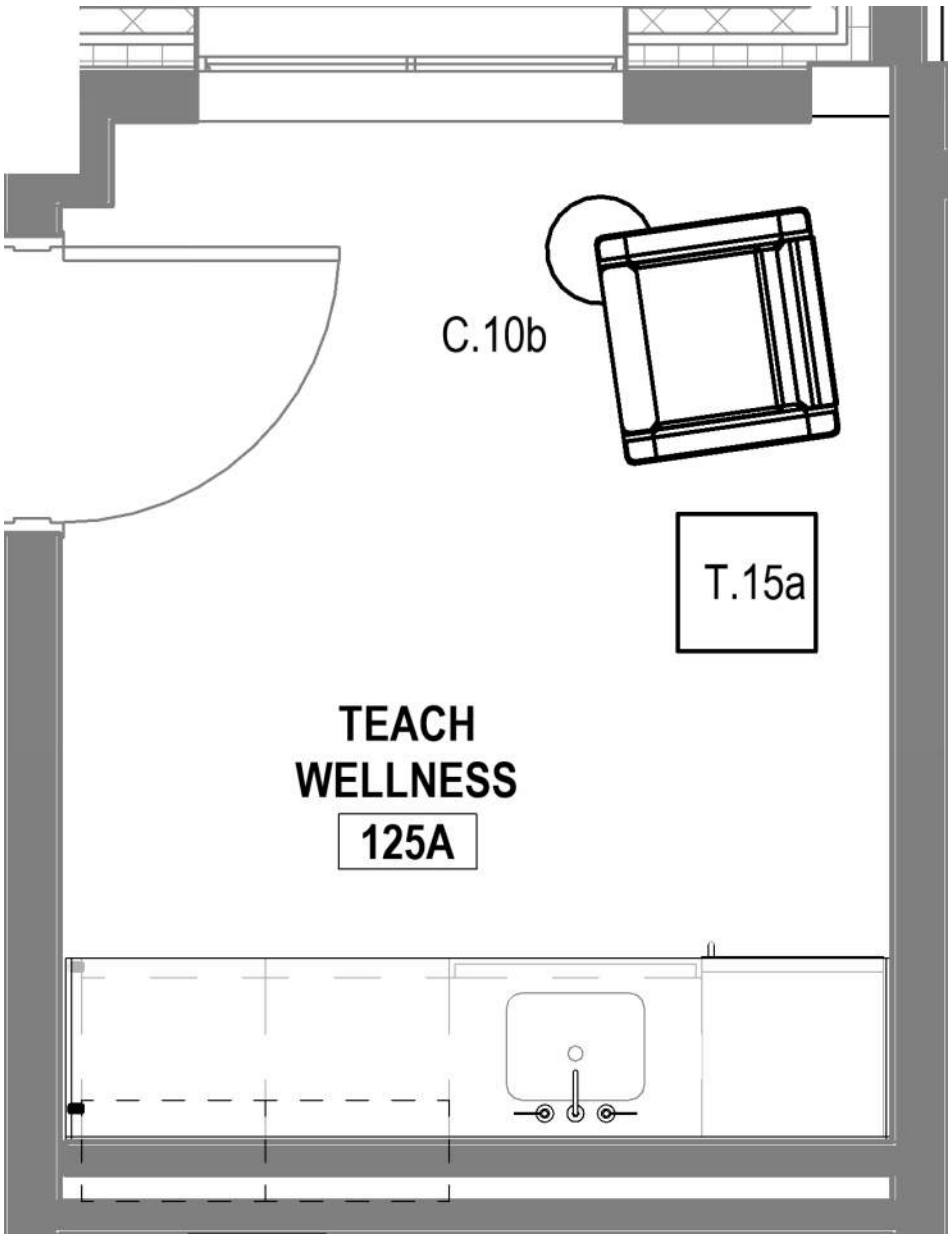
Room Data Sheet

SD - Submission

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Wilmington Wildwood EC Center

Room Function Number 12.009



Room Function Number 12.007

Room Name	CARES OFFICE
Room Number	175
Department (Name)	OTHER - PROGRAM

Categorization		Areas	
Room Number	175	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for CARES program managers. Operational hours: • Morning: 6:30–9:30 AM • Afternoon: 1:00–5:30 PM
Quantity:	2
Occupant Load:	(2) Staff, 3-4 site coordinators

Location Criteria:

Users:	CARES program managers and site coordinators
Adjacency:	Adjacent to main building entrance
Orientation / Views:	Views to observe Cafeteria where main program is

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access Power and data for 2 workstations

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets including: Marker Board for scheduling
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets.• Dedicated casework in program areas like the Art Room, Gym, and Cafeteria.• Storage spaces should be near the cafeteria for convenience.

Additional Requirements:

- Student Spaces:
- Flexible breakout spaces, potentially separated by grade levels.
- Possible use of the art or music room as needed.
- Flex classrooms to accommodate multiple activities.
- Parent Access:
- Designated area for parent drop-off in the morning for AM students.

Room Data Sheet

SD - Submission

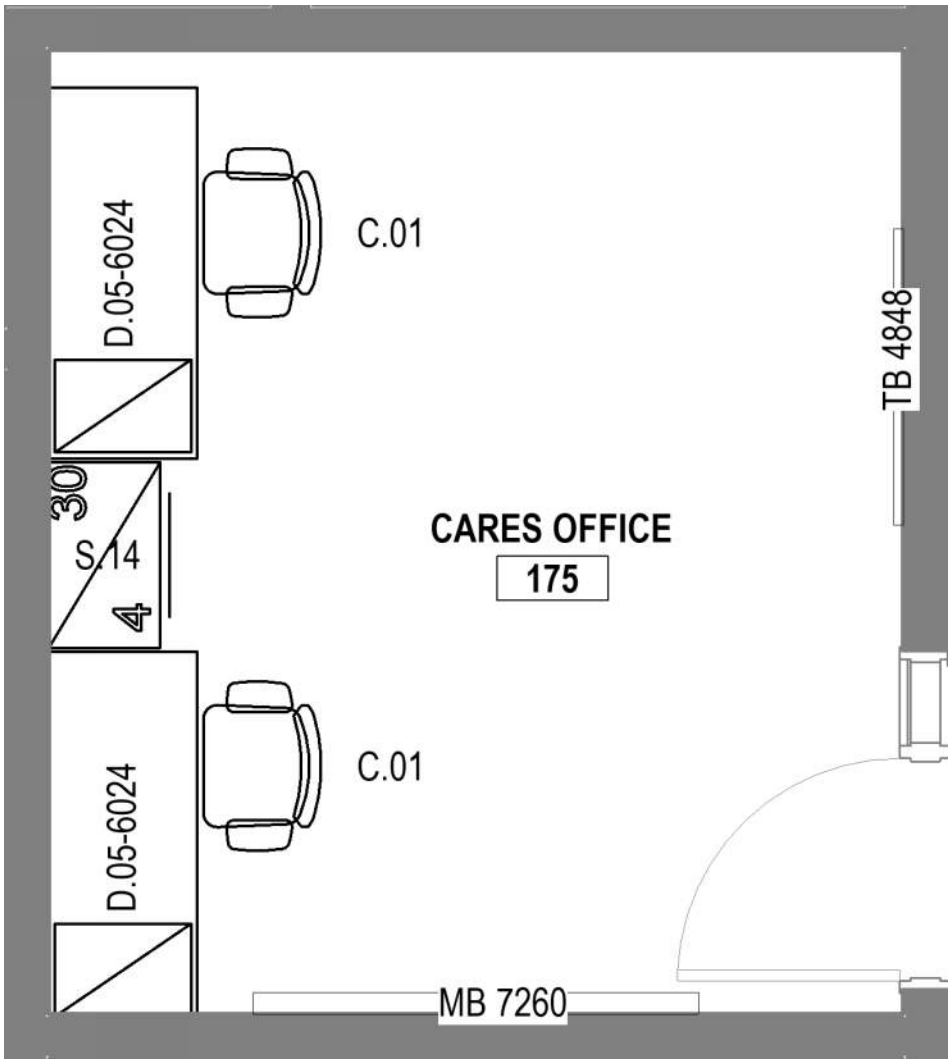
Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 12.007

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	2
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	2
S.14	120000-Furniture-Storage-Lateral File - 30x18-4high	1



Room Function Number 12.008

Room Name	CARES OFFICE
Room Number	176
Department (Name)	OTHER - PROGRAM

Categorization		Areas	
Room Number	176	Programmed	150.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home base for CARES program managers.
Quantity:	2
Occupant Load:	(2) Staff

Location Criteria:

Users:	CARES program managers
Adjacency:	Adjacent to main building entrance
Orientation / Views:	Views to observe Cafeteria where main program is

Technical Criteria:

Floor Finishes:	Carpet Tile
Wall Finishes:	Gypsum wall board, painted
Ceiling Finishes:	Acoustical ceiling system, painted gypsum soffits.
Acoustical:	Meets or exceeds LEED prerequisite for acoustic performance.
Windows:	Aluminum windows with vision glazing, room darkening shades.
Doors:	Flush wood doors with side light Office hardware set
HVAC:	Displacement Ventilation with Air Conditioning
Plumbing / FP:	Fully Sprinklered
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements.
Technology:	Additional power required to support specific room equipment Public Address system Clock System Wireless network access Power and data for 2 workstations

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets including: Marker Board for scheduling
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.04	120000-Furniture-Chair-Haworth-Very - No Arms	2
D.03	120000-Furniture-Desk Admin L Shaped - open leg - 72x30,54x24	1
S.14	120000-Furniture-Storage-Lateral File - 30x18-4high	2

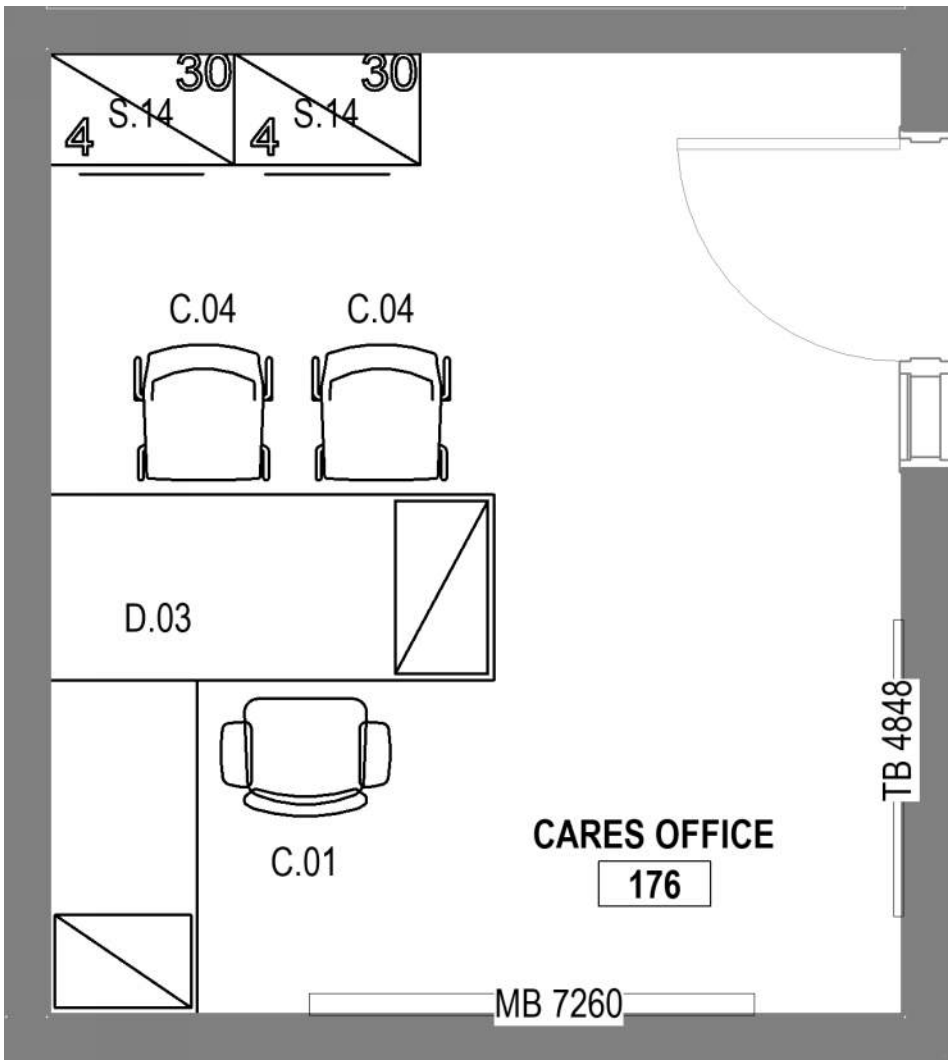
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 12.008



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 12.015

Room Name	HEALTH
Room Number	204
Department (Name)	OTHER - PROGRAM

Categorization		**Areas**	
Room Number	204	Programmed	900.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Home Base for grade level instruction The following zones are to be included within the classroom: Main teaching wall area; student table/desk seating; teacher desk; small group table; reading nook; wet/messy/ cleanup zone in front of sinks.
Quantity:	1
Occupant Load:	(24) Students (1) General Education Teacher (1) Paraprofessional

Location Criteria:

Users:	Teachers, students, specialists, paraprofessionals
Adjacency:	Within grade level team, along with special education spaces, central location. Paired with another grade level classrooms
Orientation / Views:	Views to Exterior

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted Magnetic writable surface at teaching wall location, 2’ AFF to 7’ AFF for teacher and student use
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	Meets or exceeds LEED pre-requisite for acoustic performance
Windows:	Aluminum windows with vision glazing, room darkening shades
Doors:	Flush Wood Door - Classroom Hardware Se
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered (1) Accessible stainless-steel sink at child height (1) Deep stainless-steel sink
Lighting:	Linear pendant direct/indirect
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Clock System Wireless network access (1) Interactive digital display (1) Mobile Teachers station to coordinate with interactive projector (data & power) Voice amplification/ Sound field system. Phone Handset, wall-mounted, located near door

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets
Specialties:	Types & Configurations indicated in the attached room layout sheets
Furnishings:	Types & Configurations indicated in the attached room layout sheets
Equipment:	Types & Configurations indicated in the attached room layout sheets.
Shelving / Storage:	Types & Configurations indicated in the attached room layout sheets

Additional Requirements:

Equipment/Accessories: Soap & paper towel dispensers

Room Data Sheet

SD - Submission

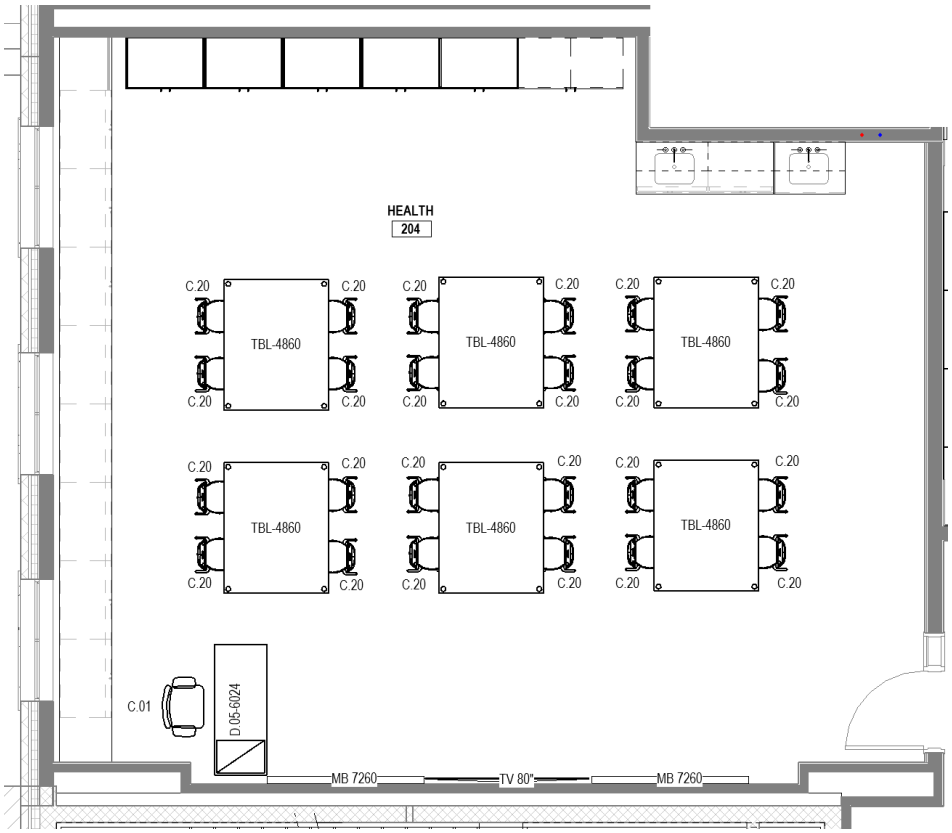
Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 12.015

Furniture

Item: BIM ID	Name	Quantity
C.01	120000-Furniture-Chair-Haworth-Zody - Height Adjustable Arms - C1A	1
C.20	120000-Furniture-Chair-KI-Wave-Medium1 - 120000-Furniture-Chair-KI-Wave-Medium	24
D.05-6024	120000-Furniture-Desk Admin - open leg - 60x24	1



Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 13.002

Room Name	PT STORAGE
Room Number	192A
Department (Name)	NON-PROGRAMMED SPACES

Categorization		Areas	
Room Number	192A	Programmed	250.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Dedicated Storage to Physical Therapy program. Utilize storage room for sensory room/swing
Quantity:	1
Occupant Load:	1

Location Criteria:

Users:	Specialist
Adjacency:	Adjacent to the Adaptive PE Space and accessed from within the APE space
Orientation / Views:	None

Technical Criteria:

Floor Finishes:	Athletic Rubber Flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system, painted gypsum soffits
Acoustical:	None
Windows:	None
Doors:	Flush Wood Door - Storage Hardware Set
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Lay-In Lighting
Electrical:	Typical perimeter power requirements. Additional power required to support specific room equipment
Technology:	Public Address system Wireless network access

Fixtures & Furnishings:

Casework:	None
Specialties:	None
Furnishings:	None
Equipment:	None
Shelving / Storage:	None

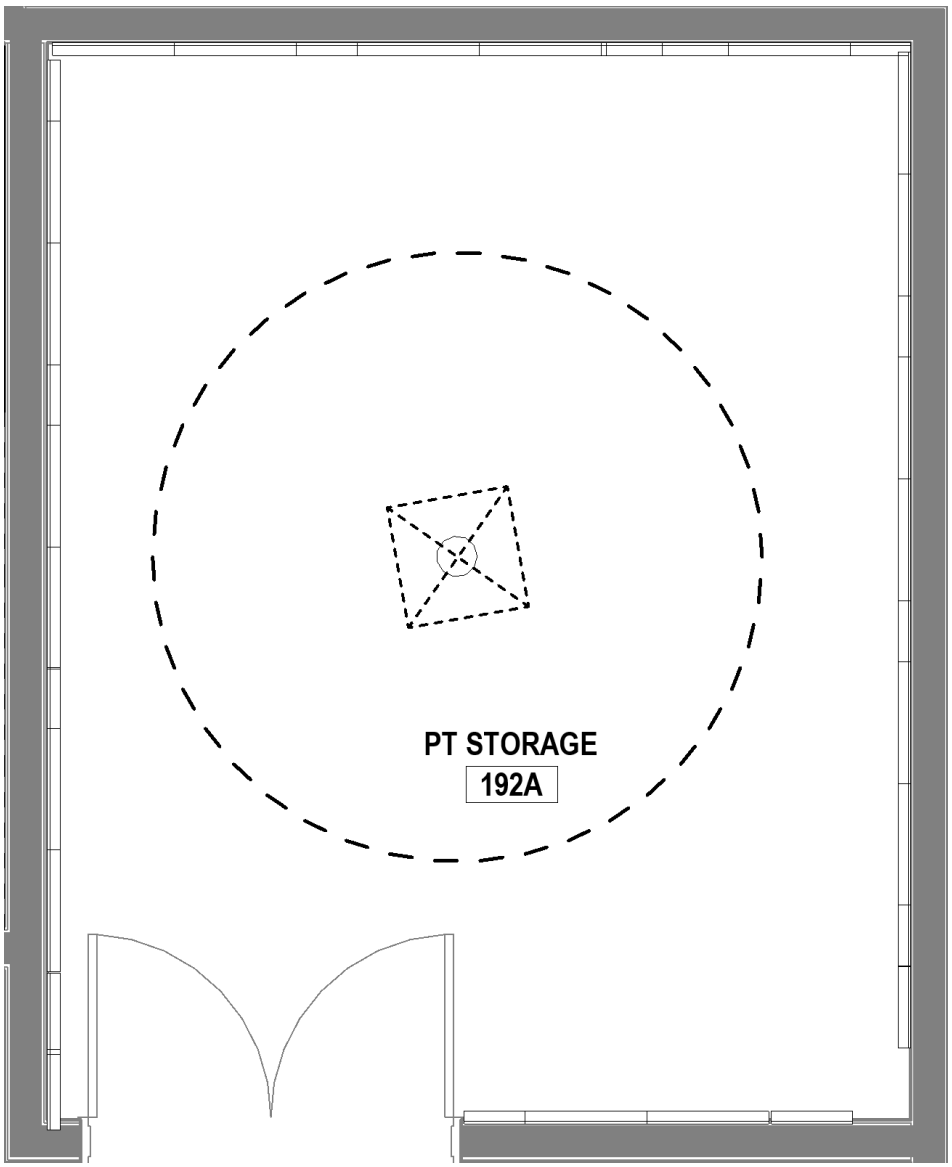
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 13.002



Room Function Number 13.001

Room Name	CARES STORAGE
Room Number	154
Department (Name)	NON-PROGRAMMED SPACES

Categorization		Areas	
Room Number	154	Programmed	500.00
User Room Number			
Additional Number			
Name on Drawing			

Function Criteria:

Description:	Dedicated storage for Extended Day Program
Quantity:	1
Occupant Load:	0

Location Criteria:

Users:	Cares Staff
Adjacency:	Located adjacent to the Gym and Cafeteria and convenient to access for before/after school activity locations
Orientation / Views:	n/a

Technical Criteria:

Floor Finishes:	Resilient flooring
Wall Finishes:	Gypsum Wall Board, painted
Ceiling Finishes:	Acoustic ceiling tile system
Acoustical:	None
Windows:	None
Doors:	Flush Wood Door
HVAC:	Displacement Ventilation with Air Conditioning Radiant panels at perimeter for supplemental heating
Plumbing / FP:	Fully Sprinklered
Lighting:	Recessed lay-in fixtures
Electrical:	Typical perimeter power requirements
Technology:	Public Address system

Fixtures & Furnishings:

Casework:	Types & Configurations indicated in the attached room layout sheets including
Specialties:	Types & Configurations indicated in the attached room layout sheets including
Furnishings:	Types & Configurations indicated in the attached room layout sheets including
Equipment:	Types & Configurations indicated in the attached room layout sheets including
Shelving / Storage:	Tall storage shelving for indoor/outdoor materials and manipulatives such as games, puzzles, books, etc

Additional Requirements:

- Shelving supplies and vacation program equipment.
- Daily-use storage (lockable cabinets and rolling carts).
- Dedicated casework in program areas like the Art Room, Gym, and Cafeteria.
- Storage spaces should be near the cafeteria for convenience.

Furniture

Item: BIM ID	Name	Quantity
S.04	120000-Furniture-Storage-Pantry Shelving (1) - 48" Wide x 24"	17

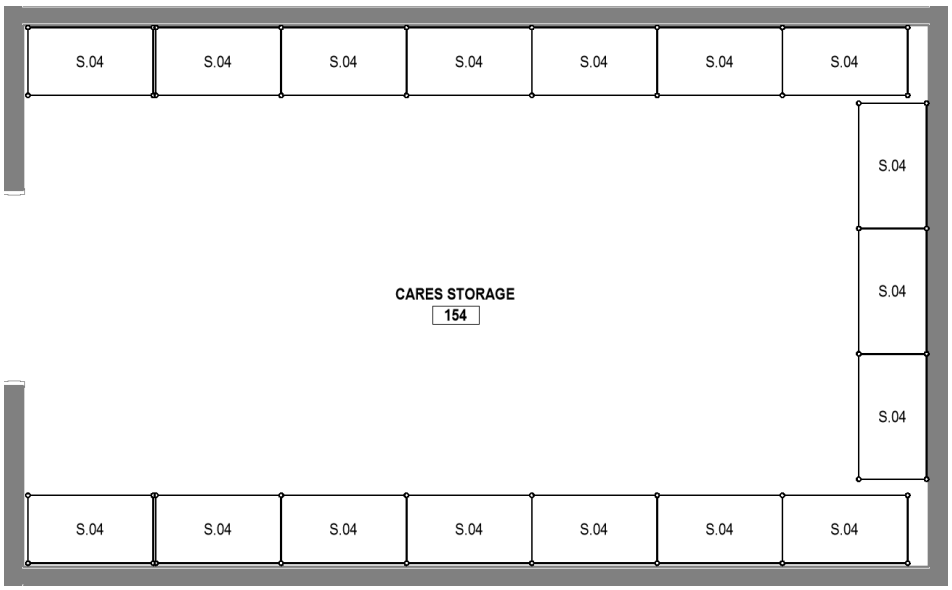
Room Data Sheet

SD - Submission

Dore & Whittier

Wilmington Wildwood EC Center

Room Function Number 13.001



WILDWOOD SCHOOL BUILDING COMMITTEE MEETING

Tuesday, April 29th, 2025 @ 6:00 PM
Remote meeting via Zoom

Dr. Brand called the meeting to order at 6:00 PM.

Mr. Ragsdale called a verbal roll call Glenn Brand, Diane Allan, Kevin Caira, Dennis Kelley, Greg Bendel, Justin Cusce, Michael Camoscio, Paul Ruggiero, Paul Melaragni, Christine Holloran, Christine Murray, Greg Minor, Eric Slagle, Kate Bissell, Stacey Scott, Stephen Turner, Nicholas Golden, Judy O'Connell, Christine Prendergast.

Absent: Marianne Gallezzo and Vivian Varbedian.

DISCUSSION OF ADVERTISEMENT FOR REQUEST FOR SERVICES (RFS) FOR AN OWNER'S PROJECT MANAGER (OPM)

Dr. Brand noted that item #2, and the sole reason for the group being here tonight would be the discussion of the discussion of the RFS for an Owners Project Manager. Mr. Slagle reminded the committee that a vote had been taken and a new OPM would be brought on for module 5 with the MSBA. The town had been working with the MSBA to bring on a new OPM onboard as soon as possible, with a draft RFS being provided to the MSBA. The project would need to be posted with the central register by May 1st, to be published on May 7, 2025, to maintain the MSBAs proposed schedule; and it would be required that the committee authorize the submission to the central register. Once the submission is complete, two weeks later the subcommittee would review the packages received, short listing firms and then schedule interviews. After interviews, another meeting would be scheduled to decide the finalist and appoint that firm as the OPM. After this, the MSBA would approve the final selection.

Ms. Allan asked to confirm that the day of May 7th would be required of the committee to be available. Mr. Slagle confirmed that the committee would only need to vote to approve the advertisement of the RFS for OPM services to be published with the Central Register on May 7th, and the earliest the town could receive packages for review. A final OPM selection package that is needed for submission to the MSBA would be due by June 11th. Ms. O'Connell noted that advertisements would be posted with the Town Clerk, Town Crier, and COMMBUYS on May 28th. Responses are due by May 27th, and packages would be prepared for pickup by May 28th. Ms. Allan confirmed that the firms should be shortlisted by May 28th.

Dr. Brand asked if there was any further business prior to the committee voting to authorize the advertisement of the RFS for OPM Services.

VOTE TO AUTHORIZE THE TOWN MANAGER'S OFFICE TO ADVERTISE THE RFS FOR AN OPM

Mr. Kelley made a motion to authorize the town managers office to advertise the RFS for OPM services, seconded by Ms. Allan, and unanimously voted to approve the town managers office to advertise the RFS for OPM services.

Dr. Brand thanked the committee for their support of electing a new OPM.

DISCUSSION/NEW ITEMS

Ms. O'Connell offered to put together a communication capturing important dates for the OPM selection committee, working with Dr. Brand and Mr. Slagle, to provide a detailed outlook of the processes to the committee.

Mr. Ragsdale noted that the sign-up genius is active for those who are interested in signing up for slots at the fourth of July celebration.

Dr. Brand thanked Mr. Slagle, Ms. O'Connell, and Mr. Kelley for their efforts in working as part of the leadership meetings, in preparations of the upcoming Town Meeting. The group reviewed a script of Dave Kartunen, the group had reviewed and approved his script to detail pillar 5 of the project. This presentation will be shared at Town Meeting with the approval of the town moderator. Dr. Brand noted that he would share this presentation ahead of time.

ADJOURNMENT

Mr. Melaragni made a motion to adjourn, seconded by Mr. Kelley, it was unanimously voted to adjourn. 6:20 pm.

Respectfully Submitted,

_____

Thomas F. Donahue
Recording Secretary

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #33

Tuesday, June 3, 2025 Hybrid Meeting 7:00pm

Wilmington High School
159 Church Street, Wilmington MA
Large Group Instruction Room

and Zoom Webinar
https://wpsk12.zoom.us/j/83577025187?pwd=cAMl4Rs4iYaPdh4DoHQTNSnWq5XMom.1

Committee Members

Diane M. Allen	Gregory B. Bendel	Kate Bissell	Dr. Glenn Brand, Chair
Kevin A. Caira	Michael Camoscio	Justin Cusce	Marriane Gallezzo
Nicholas Golden	John C. Holloway	Christine Holleran	
Dennis Kelley	Paul J. Melaragni	Craig P. Miner	
Christine Murray	Judith L. O'Connell	Christine Prendergast	
David A. Ragsdale	Paul Ruggiero	Stacy Scott	
R. Eric Slagel	Stephen Turner	Vivian Varbedian, Vice Chair	

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 12)	Present	Notes
Diane M. Allen	X	Permanent Building Committee
Gregory B. Bendel	X	Select Board Chair
Kate Bissell	X	Wildwood School, Principal
Dr. Glenn Brand, Chair	X	Wilmington Public Schools
Kevin A. Caira	X	Select Board
Michael Camoscio		
Justin Cusce	X	
Marriane Gallezzo	X	Finance Committee
Nicholas Golden	X	School Committee
John C. Holloway		Permanent Building Committee

Christine Holleran	X	Wildwood School, Teacher
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	
Christine Murray	X	
Judith L. O'Connell	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	X	
David A. Ragsdale	X	School Committee
Paul Ruggiero	X	Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott	X	Woburn Street School, Principal
R. Eric Slagel	X	Town of Wilmington, Town Manager
Stephen Turner		School Committee
Vivian Varbedian, Vice Chair	X	
Other Participants		
Julie Leduc		SMMA
Sarah Traniello		SMMA
Donald Walter		Dore + Whittier Architects
Lee P. Dore		Dore + Whittier Architects
Rani Philip		Dore + Whittier Architects
Bryce Taft		Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day		Fontaine Bros.
Mark Abdella		Fontaine Bros.
Chelsey Mutrie		Fontaine Bros.
Chad “’Ecuyer		Fontaine Bros.

1 – Call to Order

Ms. O’Connell called the meeting to order at 7:00pm.

Ms. Varbedian called a verbal roll call, a quorum was present.

2 – School Building Committee Membership

Mr. Slagle noted a change to the Select Board with Greg Bendel not seeking re-election. Mr. Slagle indicated Mr. Bendel would like to continue his service on the school building committee as a resident member. Therefore, Mr. Slagle made a motion to appoint Greg Bendel as a community member of the WSBC. Motion was seconded by Mr. Kevin Caira. The committee discussed the additional member, noting the appropriateness of including

Mr. Bendel given his institutional knowledge of the project. Ms. Varbedian noted that the committee does have Mr. Caira as a member representing the Select Board. Mr. Bendel expressed his gratitude for the motion, noting his pleasure in being involved in the project.

VOTED: to appoint Greg Bendel as an additional member of the Wildwood School Building Committee by unanimous roll call vote.

3 – Approval of Minutes

Ms. O'Connell entertained a motion to approve the meeting minutes of April 15, 2025, and April 29, 2025, together, seconded by Ms. Varbedian.

VOTED: to approve the minutes of April 15, 2025, and April 29, 2025 by unanimous roll call vote.

4 – Approval of Invoices

Ms. O'Connell noted that warrant item #24 for the sum of $136,450.00 normally would have been turned over to Mr. Kelley for approval, however the subcommittee had not met earlier in the day. Mr. Kelley made a motion to approve warrant #24, seconded by Mr. Slagle, the committee discussed the cost of $136,450.00, which included the cost of a traffic study conducted by Dore and Whittier.

VOTED: To approve warrant #24 in the amount of $136,450.00 by unanimous roll call vote.

5 – Community Outreach Follow up

Ms. O'Connell shared that there were about 25-30 people in attendance at the community forum #7 on June 3, 2025 which was hosted for Dore and Whittier to address concerns related to berms, non-jurisdictional wetlands, and spacing between the project and residents' homes. Ms. Phillips of Dore and Whittier discussed the firms' efforts in addressing neighbors' concerns. The committee also discussed future traffic concerns regarding a potential North Wilmington Fire Substation, as well as idling vehicles on the property through working sessions. The committee thanked Ms. O'Connell for allowing an extended period for Public Comment during the Community Forum.

6 – Design Update

Ms. Phillip provided an update on the design to the committee. Ms. Phillip noted specific questions that the MSBA had regarding the timeline of the project, including what would and would not be considered for reimbursement. Ms. Phillip provided an overview of what

would be considered ineligible, including the gym space. Mr. Slagle noted that the recent meeting with the MSBA had gone extremely well, and the MSBA would be paying for more square footage than the town anticipated. The committee continued to discuss the benefits of the MSBA's contributions to the proposed project.

Ms. Phillip provided a presentation to the committee of the proposed project site. The committee discussed comments they hav received from the public, including their concerns with the acoustics from the gym to the cafeteria. The committee provided feedback on the presentation and how to better tailor the presentation to the public in settings such as Fun on the 4th and the town website.

Mr. Dore explained that KartoonEDU does a fantastic job visualizing the current project. The committee discussed how these visuals could be made more accessible to the community. Mr. Dore clarified that the fields demonstrated in the visual are changeable and would be determined by the town. The committee continued to discuss the fencing options of the property.

7 – Feedback on KartoonEDU Pillar

Ms. Phillip noted the previous materials had been advertised on the town website, discussed at Town Meeting, and that the next Pillar would include potential clips of the videos as well as the tax implications to come.

8 – Feedback on PR Materials for Sharing

Ms. O'Connell noted that this package would be finalized, the proposed document was a draft, and a vote would be taken on June 18th, although it would be finalized. Ms. O'Connell also added that there may be additional meetings held. The distribution of materials was discussed, including the opportunity of using an insert in the water bill. The committee continued to discuss further options to reach the public.

9 – Working Group Updates

The committee discussed opportunities for people to volunteer to stand in the WSBC booth at Fun on the 4th and that sign-ups are available on sign-up genius.

10 – Discussion/Correspondence/New Items

Ms. O'Connell noted correspondence has been received and that the leadership team is working on responses to the correspondence items received.

11 – Public Comments

Mr. Kevin McDonald of 410 Andover Street expressed his concerns with having night meetings. Ms. O'Connell informed Mr. McDonald that the timing of meetings had been discussed and there was concern for residents who are unable or uncomfortable with driving at night. Mr. McDonald proceeded to explain his historical involvement in construction, as well as his concerns with the town's proposed construction sites and debt exclusion..

12 – Next Meetings

Ms. O'Connell noted that Colliers, VERTEX, and LeftField would be interviewed on June 5th for OPM Services. Ms. O'Connell also added that the following WSBC Meetings had been scheduled June 10th, 2025, June 23rd, 2025, and July 22nd, 2025.

13 – Adjourn

Mr. Melaragni made a motion to adjourn, seconded by Mr. Kelley, voted to adjourn. 8:45 pm by unanimous role call vote.

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #35

Tuesday, July 22, 2025 In-person and Remote 6:30pm

Wilmington High School
Large Group Instruction Room
159 Church Street, Wilmington, MA

Zoom Webinar
https://wpsk12.zoom.us/j/83577025187?pwd=cAMl4Rs4iYaPdh4DoHQTNSnWq5XMom.1

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	X	Permanent Building Committee
Gregory B. Bendel	Partial, Remote	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	Remote	Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	Remote	Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran		Wildwood School, Teacher
John C. Holloway		Permanent Building Committee

Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	Remote	
Christine Murray	Partial, Remote	
Judith L. O'Connell, Chair	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	X	
David A. Ragsdale	Remote	School Committee
Paul Ruggiero		Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott		Woburn Street School, Principal
R. Eric Slagle	X	Town of Wilmington, Town Manager
Dr. David Thomson	X	Wilmington Public Schools
Stephen Turner		School Committee
Vivian Varbedian, Vice Chair	X	
Other Participants		
Tracy Ingersoll		Wilmington Public Schools
Kenneth Lord	Remote	Wilmington Public Schools
Donald Walter	Remote	Dore + Whittier Architects
Lee P. Dore	Remote	Dore + Whittier Architects
Rani Philip	X	Dore + Whittier Architects
Bryce Taft	Remote	Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day		Fontaine Bros.
Mark Abdella	Remote	Fontaine Bros.
Chelsey Mutrie		Fontaine Bros.
Chad L'Ecuyer		Fontaine Bros.
Jim Rogers	Remote	LeftField
David Saindon	X	LeftField
Craig DiCarlo	X	LeftField

1 – Call to Order

Ms. O'Connell called the meeting to order at 6:32pm.

Ms. Varbedian conducted roll call and determined that a quorum was present.

2 – Approval of Previous Meeting Minutes

A motion to approve the minutes from the School Building Committee meeting held on June 3, 2025, was made by Mr. Kelley and seconded by Mr. Golden. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel				X	Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio			X		Christine Prendergast	X			
Justin Cusce			X		David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran				X	R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson			X	
Dennis Kelley	X				Stephen Turner				X
Lilia Maselli			X		Vivian Varbedian	X			

The motion carried 13-0-4 (Yes-No-Abstain).

A motion to approve the minutes from the School Building Committee meeting held on June 10, 2025, was made by Mr. Golden and seconded by Ms. Allan. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel				X	Craig P. Miner			X	
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio			X		Christine Prendergast	X			
Justin Cusce			X		David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran				X	R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson			X	
Dennis Kelley	X				Stephen Turner				X
Lilia Maselli			X		Vivian Varbedian	X			

The motion carried 12-0-5 (Yes-No-Abstain).

3 – Administrative Actions

3a – Introduction of Owner's Project Manager (OPM)

LeftField expressed appreciation to the building committee for selecting them for the role of OPM going forward. The OPM team has begun to assist the town prepare for the upcoming public approval vote.

LeftField presented an abbreviated version of the slideshow used at the recent OPM interview. The presentation provided high-level information about LeftField as a firm, the Wildwood project team members, and recent project experience with MSBA school projects.

Ms. O'Connell expressed appreciation for the work LeftField has begun to do on the project.

3b – Invoice Summary & Warrant Approval

Ms. O'Connell presented Warrant #35 which includes the single invoice received from D+W in the month of June for geotechnical work under ASR-3 in the amount of $3,300.00. The Finance Working Group reviewed the invoice prior to this meeting.

A motion to approve Warrant #25 in the amount of $3,300.00, was made by Mr. Kelly and seconded by Dr. Thomson. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel				X	Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran				X	R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner				X
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 17-0-0 (Yes-No-Abstain).

3C – Building Committee Membership Changes

LeftField presented a slide showing the recent changes to the Wildwood School Building Committee (SBC). The SBC roster includes 24 voting members, and a quorum is made of 13 members, changes are shown **bold and underlined:**

Diane M. Allan
Gregory B. Bendel
Kate Bissell
Kevin A. Caira
Michael Camoscio
Justin Cusce
Marianne Gallezzo
Nicholas Golden
John C. Holloway
Dennis Kelley
Christine Holloran
Lilia Maselli
Paul J. Melaragni
Craig P. Miner
Christine Murray
Judith L. O'Connell, **Chair**
Christine Prendergast
David A. Ragsdale
Paul Ruggiero
Stacy Scott
R. Eric Slagle
Dr. David L. Thomson
Stephen Turner
Vivian Varbedian,
Committee Vice Chair

4 – Design Update

4a – Physical Model

Ms. O'Connell reported that the physical model of the project, produced by Dore + Whitter, was displayed at the Fun on the Fourth event.

4b – Flyby Video of the 3D Computer Model

Ms. Philip presented the latest flyby video of the project, which was shared at a recent Select Board meeting. The intent of the video is to help people visualize the interior and exterior of the building. Details will be developed in the upcoming Design Development phase.

Ms. Varbedian inquired about doors on the cubbies. Ms. Philip responded that the cubbies configuration varies by grade level. Kindergarten and first grade cubbies will be in the classrooms and upper grades are currently shown to have doors based on conversations with school staff. The design of cubbies will be revisited in the upcoming design phases.

4c – KartoonEDU Video

Ms. Philip presented a video prepared by KartoonEDU to help inform the public of the project. Ms. O'Connell advised that after this SBC meeting, the video will be added to the project website. Ms. Philip noted that the videos are intended to provide the public with an understanding of the MSBA process and progress of the project. Separate videos have been produced to present a number of "pillars", or important aspects, of the project. The first 5 pillars were previously presented to the community at Town Meeting. The video that was presented at the building committee included a recap of pillar 5 but focused on pillars 6 and 7, covering the cost of the project and what would happen if the local approval vote were to fail.

Ms. O'Connell advised that the project team wanted to present the KartoonEDU video, as well as the new flyby video produced by Dore + Whittier, to the building committee before making them available to the public. Both will be published on the project website.

5 – Working Group Updates

Mr. Slagle reported on the recent "Tri-Board" meeting, which was well attended by the School Committee, Finance Committee, and Select Board. At the meeting, the Town Manager presented a slideshow to the group. Topics that were presented included the MSBA's approval of the Project Scope and Budget Agreement, the tax impacts and tax calculator that is currently available on the project website and town's website, and the project financing plan including the MSBA's and town's shares. Members of the three groups were given an opportunity to ask questions about the project. Feedback from the School Committee and Finance Committee has been positive.

Ms. Prendergast reported on the Fun on the Fourth event, at which building committee members staffed an informational booth to raise awareness of the Wildwood project. The building committee members in attendance found that most of the people they spoke with were familiar with the project and supported the project. Mr. Camoscio noted that the tri-fold flier was well received and helpful in providing quick reference information about the project.

5a – Public Relations Working Group

Ms. O'Connell described the goal of the Public Relations Working Group's efforts is to get factual information to the public in different forms and media. The PR Working Group became aware of the public's questions which appeared on social media. Both town leadership and the PR Working Group endeavor to answer those questions, provide factual and comparative information, and revisit previously presented topics as needed. An important aspect is specific information in the Project Scope and Budget Agreement that will be presented at Town Meeting and included in the ballot vote is fixed and cannot be amended without re-starting the process from the beginning. The implications of a failed local vote are also being addressed and the time to return to the MSBA pipeline. Due to the short time until Town Meeting and the ballot vote, and the fast-paced nature of this process, there will be some decisions that must be made by the Town Managers office without the benefit of putting them before the building committee.

LeftField presented a tax impact comparison to between the Wildwood Elementary School project and other recent projects. Information was compiled from recent LeftField projects, recent Dore + Whittier projects, and readily available on the internet. Wildwood's tax impact for the average home ($702,889) is projected to be $422 per year, or $35 per

month for the term of the borrowing. The average for comparable MSBA projects was $63 per month.

Using information provided by the MSBA on their website, LeftField compared the cost of the Wildwood building, *excluding* demolition, abatement, sitework, and contractor mark-ups, to other recent MSBA school building projects. Wildwood's estimated cost of $538 per square foot is slightly lower than the average of $542 per square foot for the eight (8) comparable projects. The costs of older projects were escalated to current dollar value.

Using information provided by the MSBA on their website, LeftField compared the total construction cost of the Wildwood project, *including* demolition, abatement, sitework, and contractor mark-ups, to other recent MSBA school building projects. Wildwood's estimated cost of $835 per square foot is lower than the average of $882 per square foot for the eight (8) comparable projects. The costs of older projects were escalated to current dollar value.

LeftField presented the MSBA's policy towards failed local votes, which states, "a failed local vote likely will result in the school district being required to submit a new Statement of Interest to the MSBA and await an invitation from the MSBA to enter the Eligibility Period phase of the MSBA's process." LeftField presented two tables that were created using public information on the MSBA website which showed that after a failed local approval vote, the average time to get another Project Scope and Budget Agreement is over seven (7) years, and the average time to get to the start of construction is over eight (8) years.

Ms. O'Connell described the ongoing public relations efforts: publishing a water bill insert (date, time, and location of the Town Meeting, September 13, and the ballot vote, September 16); a pending visit and presentation to the Senior Center on August 26; informational boards displayed at upcoming public school Open House events.

The Public Relations Working Group will continue to provide information through the Town Crier, the Wilmington Apple, and the town's Facebook pages.

6 – Discussion/Correspondence/New Items

Ms. O'Connell noted that some questions received by e-mail cannot be answered at this time because the design of the project is still preliminary, at approximately the 30% completion. After Town Meeting and the ballot vote, if the project is approved, the design will continue to be developed and answers to detailed questions and concerns will be available.

An example is that some social media posts have expressed concern with traffic, which will be address as traffic is studied further in the next phase of design. Project leadership

has been communicating with the town engineer who is planning future roadway improvements and traffic mitigation projects that will be funded by the developer of the Amazon project at 800 Salem Street.

7 – Building Committee Questions

Mr. Golden heard from an Arlene Ave resident who expressed concern about Arlene Ave being used as a student drop-off area. Ms. O'Connell responded that the pedestrian way will remain as it is, and Arlene Ave will not become a student drop-off area.

Mr. Golden inquired which portions of the KartoonEDU video will be presented at Town Meeting. Mr. Slagle responded that the video will be shown at Town Meeting along with a slideshow presentation to share information from the time of the Preferred Schematic Design vote in October 2024 to now.

Mr. Golden advised that some members of the public inquired about videos of the existing schools being shared to demonstrate the reasons behind the selection of a new school as the preferred option.

Ms. Manselli suggested that whatever information is shown at Town Meeting, the source of the information be noted to lend credibility.

Mr. Melaragni recommended that the project team describe what is included in the estimated $30 million dollars of repair work that would be needed at North Intermediate if the Wildwood project vote fails. Mr. Slagle responded that information can be articulated in the slideshow presentation at Town Meeting. A discussion was held.

Mr. Cusce suggested describing the educational impacts of a failed vote to the public, from the perspective of students and staff. A discussion was held.

Ms. Gallezzo inquired about modifying the Wildwood project website for easier access to the most important project information. Ms. O'Connell responded that the project team is currently working to highlight the most salient information on the website as Ms. Gallezzo described. Ms. Prendergast responded that she is working with town staff to optimize the website design. Mr. Saindon advised that LeftField will look into assisting with that effort.

Mr. Ragsdale noted the difference in construction duration for repairs compared to new construction, with new construction anticipated to be a 3-year effort versus many more years for piecemeal repairs to the existing schools.

Ms. Allen suggested the project team show the footprint of the existing North Intermediate School on the site plan next to the new school building, to help the public's understanding that the North Intermediate School will remain open until the new school building is complete and occupied. A discussion was held.

8 – Public Comments

Mr. and Ms. Kenney, 24 Ballardvale Street, requested the homes of abutters be shown in the 3D model in the video to demonstrate the distance of the proposed school to the existing homes. A discussion was held.

Mr. Bob Donohue, 12 Ella Avenue, suggested the project be sensitive to the abutters and inquired about traffic impacts, the proposed gymnasium, and the pedestrian walkway on Arlene Avenue. A discussion was held. Mr. Slagle advised that the town and DPW are making plans to implement roadway improvements to mitigate traffic in advance of the new school opening.

Ms. Kenney, 24 Ballardvale Street, expressed concern about the proximity of new drive aisles to their property, inquired who they can speak with about their concerns during construction, and inquired about the process for counting ballot votes. A discussion was held.

Ms. Christina Ensingere, 325 Woburn Street, expressed support of the project and appreciation for the public outreach conducted by the town, suggested highlighting the benefits of the project and to continue to make that information available to the public. A discussion was held.

9 – Upcoming Meetings

The next SBC meeting is scheduled for Tuesday, August 19, 2025, at 6:30pm.

10 – Adjournment

A motion to adjourn the meeting was made by Mr. Melaragni and seconded by Mr. Kelley. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran				X	R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner				X
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 18-0-0 (Yes-No-Abstain).

The meeting was adjourned at 8:41pm.

Documents and Exhibits

- Wildwood Early Childhood Center Project School Building Committee Meeting #35 slideshow presentation, dated July 22, 2025

Attachments

- None

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #36

Tuesday, October 21, 2025 In-person 6:30pm

Wilmington High School
Large Group Instruction Room
159 Church Street, Wilmington, MA

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	Remote	Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	X	Wildwood School, Principal
Kevin A. Caira		Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo		Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	

Christine Murray		
Judith L. O'Connell, Chair	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	Remote	
David A. Ragsdale	X	School Committee
Paul Ruggiero	X	Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott	X	Woburn Street School, Principal
R. Eric Slagle	X	Town of Wilmington, Town Manager
Dr. David Thomson	X	Wilmington Public Schools, Superintendent
Stephen Turner	X	School Committee
Vivian Varbedian, Vice Chair	X	
Other Participants		
Tracy Ingersoll		Wilmington Public Schools
Angel Cartagena	X	Wilmington Public Schools
Donald Walter		Dore + Whittier Architects
Lee P. Dore	X	Dore + Whittier Architects
Rani Philip	X	Dore + Whittier Architects
Bryce Taft		Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day	X	Fontaine Bros.
Mark Abdella		Fontaine Bros.
Chelsey Mutrie	X	Fontaine Bros.
Chad L'Ecuyer	X	Fontaine Bros.
Jim Rogers		LeftField
David Saindon	X	LeftField
Craig DiCarlo	X	LeftField

1 – Call to Order

Ms. O'Connell called the meeting to order at 6:30pm.

In lieu of the roll call, the Ms. O'Connell lead introductions of the School Building Committee and project team in attendance. Ms. Varbedian determined that a quorum was present.

Ms. O'Connell expressed appreciation for everyone who has supported the Wildwood Elementary School project to this point, including involved residents, the Massachusetts School Building Authority (MSBA), and the School Building Committee (SBC) members.

2 – Approval of Previous Meeting Minutes

A motion to approve the minutes from the School Building Committee meeting held on July 22, 2025, was made by Ms. Bissell and seconded by Mr. Ragsdale. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo				X	Paul Ruggiero			X	
Nicholas Golden	X				Stacy Scott			X	
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 18-0-2 (Yes-No-Abstain).

3 – Administrative Actions

3a – Invoice Summary & Warrant Approval

Mr. Saindon presented invoice summary #20 including a pair of invoices from D+W in the amount of $13,200.00 and an invoice from KartoonEDU in the amount of $1,080.00, for a total value of $14,280.00. The Finance working group reviewed the invoices prior to this meeting.

A motion to approve Invoice Summary #20 in the amount of $14,280.00, was made by Mr. Kelly and seconded by Mr. Golden. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo				X	Paul Ruggiero	X			
Nicholas Golden	X				Stacy Scott	X			
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 20-0-0 (Yes-No-Abstain).

LeftField advised that they will begin managing the MSBA ProPay system and thanked Mr. Ruggiero for his efforts in helping LeftField catch up on the Wildwood project finances.

3b – Feasibility Study & Schematic Design Budget Recap and Expansion of the Project Budget

LeftField presented the Feasibility Study & Schematic Design (FS-SD) Budget. The total FS-SD budget was $1,215,000. The amount spent to date was $1,189,117. A forthcoming invoice in the amount of $10,535 is anticipated to be received in the coming months. The anticipated cost at completion of the FS-SD phases was $1,199,652, which represents an anticipated savings of $15,348 which will be transferred to the Owner's Contingency.

LeftField presented the Total Project Budget of $173,265,626. Over the course of the project, money will be moved between the line items, with a zero net change to the bottom line. The Owner's Project Manager contract exactly matches the value that was in the total project budget, though some of the component line items will be adjusted to match the contract. The Designer contact amendment is $240,000 lower than the original total project budget, the savings will be transferred to the Owner's Contingency.

To make adjustments to the total project budget, the MSBA utilizes Budget Revision Requests (BRRs). Prior to LeftField's involvement, BRR #1 was submitted to and accepted by the MSBA. Next month, LeftField will present BRR #2 to the SBC for review and approval.

LeftField reported that the town received the Project Funding Agreement (PFA) from the MSBA and is preparing the paperwork to return to the MSBA for execution. The PFA parallels the commitment that the MSBA previously made in the Project Scope and Budget Agreement (PSBA) and memorializes the town's and MSBA's shared participation in the project.

3c – OPM (LeftField) Contract Update

LeftField advised that after the successful passage of the Town Meeting vote and ballot measure, the Town executed the LeftField contract from earlier this summer. The SBC approved the selection of LeftField on June 10, 2025, and the MSBA approved LeftField as the OPM on July 7, 2025. The contract has been executed in the amount of $4,780,000 which is in line with the total project budget.

3d – Designer (Dore + Whittier) Contract Amendment #4

LeftField advised that after the successful passage of the Town Meeting vote and ballot measure, the Town executed the Designer Contract Amendment #4 for services related to

design development, permitting, construction documentation, bidding, construction administration, and project close-out, in the amount of $14,901,622, for a total design fee of $15,900,618. There are $240,000 savings in the designer fee budget, which will be moved to Owner's Contingency.

3e – Project Schedule

LeftField presented the detailed project schedule that has been created for tracking the progress of the project and reporting to the MSBA. LeftField has also created a simple Gantt chart schedule for the SBC's information, which shows that the Construction Manager, Fontaine Brothers, is not scheduled to mobilize for construction until June 2026.

3f – School Building Committee Meeting 2025/2026 Schedule

LeftField presented the schedule of SBC meetings for the remainder of 2025 and the 2026 calendar year. As the project progresses, any meeting instances that are not required will be cancelled and additional meetings will be added as needed. SBC meetings will typically be held the third Tuesday of each month, except when the date conflicts with school vacation weeks. LeftField will send calendar invitations to the SBC members in six-month batches.

LeftField advised that an SBC member email distribution list was created and will be used to communicate to the committee. Members are asked to refrain from using the 'reply to all' button, instead direct questions to Mr. DiCarlo and Mr. Saindon.

4 – Design Update

4a – Design Refinements

Dore + Whittier (D+W) presented updates to the school layout plans. Some of the improvements included:

1) Reorient and enlarge the main vestibule.
2) The Music Flex Classroom was moved to be adjacent to the Instrumental Rooms.
3) Circulation alignment and clarity was improved.
4) The main entrance canopy was enlarged to cover a larger exterior area.
5) The proscenium opening was enlarged.
6) The cafeteria furniture plan was optimized.
7) The main staircase was reoriented.
8) The gymnasium entry was relocated.

The above changes did not change the square footage in the program submitted to the MSBA and used for the Schematic Design cost estimate.

D+W presented exterior architectural renderings of the building and site.

Ms. O'Connell inquired about stormwater runoff at the enlarge entry canopy. D+W responded that stormwater runoff will be managed with roof drains to control the water and move it away from the pedestrian areas below.

Mr. Turner inquired about sunlight on the main façade and glazing. D+W responded that a solar study will be conducted in the upcoming design phases.

D+W presented interior renderings of the entry, main staircase, cafeteria, serving area, and circulation.

Mr. Kelley inquired about lower railings for young children. D+W advised that the current model is not complete, railings will be included in the final design.

Ms. O'Connell inquired about acoustical ceiling treatment. Mr. Kelley requested sound attenuation be addressed without the use of hanging elements. D+W responded that the acoustical engineer is reviewing these spaces and will provide design options for sound attenuation.

D+W presented upcoming meetings and existing conditions investigations scheduled over the next month.

Mr. Ragsdale and Mr. Kelley inquired about the position of the main staircase and encouraged the design team to give more consideration to its location. D+W responded that will continue to be reviewed and discussed with public safety and school administration.

Mr. Miner inquired about the soil cut and fill. D+W responded that more information needs to be collected and analyzed to help inform the soils management plan.

5 – Advisory Group Updates

Ms. O'Connell advised that LeftField has recommended a method of the SBC to continue to provide design direction and align with public meeting law and standard practices in the public design and construction industry in Massachusetts. To maintain project momentum, transparency, and efficiency, LeftField recommends specific tasks be delegated to individual committee members who will act on behalf of the SBC. Delegated individuals will meet with other SBC members and town and school staff and the project team to discuss technical design refinements. Some areas of task delegation include, but are not limited to, sustainability, site/civil design, interior design, furniture and equipment,

technology, security, and other elements of the design and or operations of the school which have not yet been defined. In consultation with committee and town leadership, Mr. Kelley is recommended as the delegated individual for the sustainability and site/civil design aspects of the project.

A motion that Dennis Kelley is designated to review, advise, and make decisions regarding sustainability and site/civil decisions related to design refinements associated with the continued design of the Project on behalf of the building committee, provided such decisions remain within the approved project scope and budget and four corners of the Project, as approved; Dennis Kelly may consult with committee members and non-members, provided the consultation does not reach a quorum of the Committee; Dennis Kelly may also, at his discretion, bring updates and decisions back to the full Committee for review, advice, and/or action, was made by Mr. Bendell and seconded by Mr. Golden.

A discuss was held. The project team clarified that the purpose of delegating tasks to an individual is to be sufficiently flexible and efficient to provide timely direction to the design team while complying with the Massachusetts Open Meeting Law. School personnel and educators will be closely consulted on decisions that impact the student experience and education. Delegated individuals will report back to the SBC as appropriate to maintain transparency and to keep the SBC informed. D+W and LeftField will assist the delegated individuals to restrain their decisions to be within the scope they are assigned; major decisions about the direction of the project or delivery of education will be brought back to the SBC. Additional tasks will be delegated to other individuals as needed to maintain the design schedule.

Voting Member	**Yes**	**No**	**Abst.**	**Not Pres.**	**Voting Member**	**Yes**	**No**	**Abst.**	**Not Pres.**
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo				X	Paul Ruggiero	X			
Nicholas Golden	X				Stacy Scott	X			
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 20-0-0 (Yes-No-Abstain).

6 – Public Engagement Update

Ms. O'Connell reported receipt of communications from members of the public who have been instrumental in supporting this Project from its earliest stages and who are now asking how they can remain engaged as the Project moves into this next phase. She expressed appreciation for the continued interest and commitment from community members.

To stay informed, interested parties may attend the monthly SBC meetings, review the project website for updates, presentations, and other documents, and attend public events such as the pending groundbreaking, steel topping-off, and ribbon-cutting ceremonies. During construction, the project team may also offer structured tours at key milestones. Also, the School Department is preparing a press release about the project which is scheduled for November 1st.

7 – Discussion/Correspondence/New Items

Ms. O'Connell addressed the neighbors and abutters and stated they have not been forgotten. The design team will continue to evaluate how the project will impact neighboring properties. The project team will reach out to abutters to review design considerations and address concerns.

During construction, the construction manager, Fontaine Bros, will host a project-specific website, open to the public, which will feature weekly updates on progress and anticipated on-site activities.

Some members of the public have raised specific questions about traffic, access drives, and circulation. At this time, some of these questions cannot be answered because those aspects of the Project are still under development. More information will become available as the design is developed.

Regarding vehicle idling on the North Intermediate School property, Ms. O'Connell noted the following:

- The prohibition on vehicle idling is a state law, not a local policy.
- There are exceptions for buses on school grounds. Non-buses, or vehicles on school grounds, may idle for up to one minute within a 15-minute duration if the exterior temperature is below 35°F or above 80°F.
- Town Leadership has met with the Department of Public Works (DPW), the Police Department, and Building Facilities to coordinate efforts related to the installation of no idling signage.
- Building signage is anticipated to be installed by this Friday.

- Two pole-mounted signs have been released for fabrication and are expected to be installed within approximately two weeks.
- The School Department will be conducting outreach and education to parents to remind them that no idling is a Massachusetts law and that it will be enforced by the Police Department.

Ms. O'Connell asked for the community's patience and trust as project team works towards the final design of a new facility that reflects the collective vision and values of the community.

8 – Building Committee Questions

Mr. Ragsdale inquired about a SharePoint email sent by LeftField to the SBC members. LeftField responded that the SharePoint link can be disregarded, it was an email automatically sent when LeftField created the Wildwood SBC distribution list.

Mr. Melaragni inquired whether the meeting packets would be archived for future reference. LeftField responded that the meeting packets are carefully maintained and can be made available on request.

Mr. Melaragni inquired about exceptions to the vehicle idling laws. LeftField and Mr. Slagle responded that the law does provide exceptions for buses and passenger vehicles depending on conditions. Ms. O'Connell responded that the school department is making efforts to spread awareness of the law and WPD is aware of the issue and making plans accordingly. Dr. Thomson responded that the school department is installing signs and communicating with staff and parents.

Ms. Varbedian inquired about the construction phase website. LeftField responded that the intention is a stand-alone Fontaine and project websites will be separate but also linked to each other.

Mr. Turner inquired about future community forums. Ms. O'Connell responded that the project team may present project updates at the spring Town Meeting and may give periodic updates to the School Committee, Financial Committee, and Select Board as needed.

9 – Public Comments

Mr. Sean Kenney, 24 Ballardvale Street, inquired about health and safety related to vehicle emissions from the school property. A discussion was held.

Ms. Karen Kenney, 24 Ballardvale Street, inquired about plans for vegetation to mitigate exposure to vehicle emissions from the school property. A discussion was held.

Ms. Karen Kenney, 24 Ballardvale Street, made a statement about social media posts that were critical of her. A discussion was held.

Ms. Karen Kenney, 24 Ballardvale Street, inquired where the new school main entrance is located. Ms. O'Connell responded that the project team will present the latest site plan at the next SBC meeting. A discussion was held.

Ms. Michelle Feeney, 5 Arlene Avenue, inquired when the next abutters meeting will be held and when will rendered views from each property be available. Ms. O'Connell responded that an abutters meeting is anticipated for December 2025. Dore + Whittier responded that the rendered views will be available after the existing conditions investigations are complete and a preliminary design is ready to be presented.

Ms. Michelle Feeney, 5 Arlene Avenue, inquired when the MSBA Project Funding Agreement will be made available. Mr. Slagle responded that he will ask town legal counsel whether the draft Project Funding Agreement can be posted to the project website.

Ms. Karen Lee, 7 Arlene Avenue, expressed a concern about ground water. Dore + Whittier responded that existing conditions investigations are ongoing, and a preliminary stormwater management strategy is being developed. A discussion was held.

Ms. Michelle Feeney, 5 Arlene Avenue, inquired whether existing conditions investigations will be posted publicly. Dore + Whittier responded that the test results are available on the project website in the Schematic Design Submission.

Ms. Karen Kenney, 24 Ballardvale Street, stated that the EPA makes recommendations for plantings to mitigate vehicle emissions. Ms. O'Connell responded that the site design professionals will review and make recommendations.

10 – Upcoming Meetings

The next SBC meetings are scheduled for Tuesday, November 18, 2025, at 6:30pm, and Tuesday, December 16, 2025, at 6:30pm, both at the Wilmington High School Large Group Instruction Room (LGIR).

11 – Adjournment

A motion to adjourn the meeting was made by Mr. Melaragni and seconded by Mr. Kelley. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo				X	Paul Ruggiero	X			
Nicholas Golden	X				Stacy Scott	X			
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 20-0-0 (Yes-No-Abstain).

The meeting was adjourned at 8:26pm.

Documents and Exhibits

- Wildwood Early Childhood Center Project School Building Committee Meeting #36 slideshow presentation, dated October 15, 2025

Attachments

- None

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #37

Tuesday, November 18, 2025 In-person 6:30pm

Wilmington High School
159 Church Street, Wilmington, MA
Large Group Instruction Room

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	X	Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	X	Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	X	Finance Committee
Nicholas Golden	Remote	School Committee
Christine Holloran	X	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	

Christine Murray		
Judith L. O'Connell, Chair	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	Remote	
David A. Ragsdale	X	School Committee
Paul Ruggiero	X	Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott	Remote	Woburn Street School, Principal
R. Eric Slagle	X	Town of Wilmington, Town Manager
Dr. David Thomson	X	Wilmington Public Schools, Superintendent
Stephen Turner	X	School Committee
Vivian Varbedian, Vice Chair	Partial	
Other Participants		
Tracy Ingersoll		Wilmington Public Schools
Angel Cartagena	X	Wilmington Public Schools
Donald Walter		Dore + Whittier Architects
Lee P. Dore	X	Dore + Whittier Architects
Rani Philip	X	Dore + Whittier Architects
Bryce Taft		Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day	X	Fontaine Bros.
Mark Abdella		Fontaine Bros.
Chelsey Mutrie	X	Fontaine Bros.
Chad L'Ecuyer	X	Fontaine Bros.
Jim Rogers		LeftField
David Saindon	X	LeftField
Craig DiCarlo	X	LeftField

1 – Call to Order

Ms. O'Connell called the meeting to order at 6:30pm.

Roll call was taken and a quorum was present.

2 – Approval of Previous Meeting Minutes

A motion to approve the minutes from the School Building Committee meeting held on October 21, 2025, as issued was made by Mr. Slagle and seconded by Mr. Bendel. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			

Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo			X		Paul Ruggiero	X			
Nicholas Golden	X				Stacy Scott	X			
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian				X

The motion carried 20-0-1 (Yes-No-Abstain).

3 – Administrative Actions

LeftField reported that the Wildwood School Building Committee (WSBC) packet distributed on Friday, November 14, 2025, contained two clerical errors: 1) the invoice related to Fontaine Brothers inadvertently listed the Tyngsborough project, and 2) Budget Revision Request (BRR) #2 included a typo pertaining to the name listed in the signature block for the school committee chair. These two items were corrected and are now filed in our committee packet folder with the suffix "Rev1".

3a – Invoice Summary Review

LeftField presented invoice summary #21 including a pair of Dore + Whittier invoices in the amount of $684,526.20, a Fontaine Brothers invoice in the amount of $26,666.00, and a pair of LeftField invoices in the amount of $126,400.00, for a total of $837,592.20. Prior to the WSBC meeting, the Finance working group reviewed the invoices.

A motion to approve Invoice Summary #21 in the amount of $837,592.20, was made by Mr. Kelly and seconded by Mr. Ragsdale. There was no discussion. A roll call vote was taken.

Voting Member	**Yes**	**No**	**Abstain**	**Not Pres.**	**Voting Member**	**Yes**	**No**	**Abstain**	**Not Pres.**
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner			X	
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero	X			
Nicholas Golden	X				Stacy Scott	X			
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 21-0-1 (Yes-No-Abstain).

LeftField reported that on November 17, 2025, the MSBA executed a Project Funding Agreement (PFA). With an executed PFA, LeftField will submit monthly reimbursement requests to the MSBA on behalf of the town, a process previously managed by Paul Ruggiero. The MSBA's review of reimbursement requests can take approximately 8 weeks from the date the invoices are approved by the WSBC. Once the project gets into the rhythm of reviewing and approving invoices every month, the town will receive reimbursement payments monthly.

3b – Total Project Budget Update

LeftField presented the status of the Total Project Budget a rolled-up version of the project budget. An expanded version showing the full budget has been included in the committee packet. Aside from routine month-to-month expenditures being captured in the 'Expended' column, there will be no significant change to the budget from month to month.

LeftField presented a table and chart of the cash flow that was prepared for the Town Manager's reference. A summary table was presented showing anticipated expenditures for each year of the project:

May 2023 – August 2025	$1.2 million (already expended)
September – December 2025	$2.5 million
2026	$22.4 million
2027	$80.1 million
2028	$58.8 million
2029	$8.3 million
TOTAL	**$173.3 million**

LeftField will update this regularly, and approximately every six months LeftField will perform a thorough update and forecast of the cash flow. Mr. Slagle reported that he spoke to the Finance Director and town's lending consultant to develop a preliminary plan for cash flow lending, which will likely start with a short-term Bond Authorization Note (BAN) in the anticipation that interest rates will go down.

3c – Budget Revision Request #2

LeftField continued the discussion from last month regarding Budget Revision Request (BRR) #2 and presented it to the School Building Committee for approval. The form is essentially an accounting document, utilized between the District and the MSBA to

coordinate funds being reclassified from one MSBA ProPay cost code to another. Prior to LeftField's involvement in the project, the Committee approved BRR #1.

BRR #2 will:

- Reclassify savings from the Feasibility Study cost codes to the Owners' Contingency cost code,
- Reclassify ProPay cost codes to align with the OPM (LeftField) contract values,
- Reclassify ProPay cost codes to align with the Designer (Dore + Whittier) contract amendment #4 values. The resulting savings will be reclassified to the Owners Contingency cost code.

A motion to approve Budget Revision Request #2 as presented was made by Mr. Slagle and seconded by Ms. Gallezzo. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero	X			
Nicholas Golden	X				Stacy Scott	X			
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 22-0-0 (Yes-No-Abstain).

3d – Access to Committee Meeting Packets

Following up on a question at last month's WSBC meeting, LeftField clarified how it intends to provide access to committee meeting packets:

- The Friday before each meeting, LeftField will send an email with a link to a shared folder.
- The files are often too large for email, so LeftField uses a web-based file-sharing platform, Egnyte, which has a maximum share time of 14 weeks.
- This will allow committee members to look back several months simply by pulling up the old email and clicking the link.

- If any member cannot find an old email, they may email LeftField who will promptly provide a fresh link.
- For any meetings that are more than 14 weeks in the past, LeftField will quickly provide access to any WSBC member who requests it – with a fresh link that will remain valid for another 14 weeks.
- LeftField keeps careful records of the meeting packets for the duration of the project and can provide packets as far "back in time" as is desired.

Ms. Gallezzo inquired whether the meeting packets will be posted to the project website. LeftField responded that is not their recommendation because the information is very detailed and can cause confusion when viewed by a member of the public not regularly involved in the project. All project documents would be made available to a member of the public who files a Freedom of Information Act (FOIA) request to the town. For the past two years, the project website has hosted four documents related to the WSBC meetings: 1) agenda posted at least 48 hours in advance of each meeting, 2) the presentation slideshow, 3) the meeting recording, and 4) the meeting minutes.

A discussion was held. The WSBC requested LeftField coordinate with the school department to post the full meeting packet to the project website, pending an understanding of server storage limitations and additional cost to run the project website.

4 – Design Update

4a – General Update

Dore + Whittier (D+W) reported on the progress of eighteen (18) User Group meetings held with staff and teachers from the end of October into early November. Recent User Group meetings are a continuation of meetings held in prior phases of design. The purpose is to confirm the needs of the school and inform the design as it continues to be developed. D+W provided a sample of the information presented and feedback collected at a typical User Group meeting. The goal is to provide a customized school design that is homogenized for each grade level and includes flexibility for changes over time, in both educational methods and enrollment.

4b – Existing Conditions Investigations

Dore + Whittier (D+W) reported on the status of existing conditions investigations:

Updated Traffic Study – Completed November 7, awaiting final report.
Hydrant Flow Test – Completed. No fire pump required.
Environmental Site Analysis – Ongoing.

User Group Meetings – Design Development User Group meetings completed.
Future meetings will continue in subsequent phases.
Bore/Test Pits – In progress / ongoing.
Existing Ambien Noice Level Measurements – Scheduled for first week of December.

5 – Public Engagement Update

Ms. O'Connell reported the school department issues a press release on November 1, 2025.

6 – Discussion/Correspondence/New Items

Ms. O'Connell addressed correspondence previously received by the town pertaining to idling vehicles at the North Intermediate school property. Since the last WSBC meeting, five building signs indicating "Idle-Free Zones" were installed by the facilities department on October 24, 2025. Additionally, the DPW installed two pole-mounted "No-Idling" signs on October 29, 2025. Dr. Thomson reported that the school department sent information about the state law to staff and parents in the Superintendent's November newsletter, and the information will be repeated and reinforced in separate Principal newsletters. Signs will be posted at all Wilmington Public Schools. Ms. O'Connell stated that the first effort is community education; if needed, the School Resource Officer will assist with community engagement to reduce the impact of idling vehicle emissions. A discussion was held.

Ms. O'Connell addressed correspondence previously received by the town regarding a request from an abutter for the measurement of car exhaust fumes present at the North Intermediate property during drop-off and pick-up times. The project team is coordinating with an environmental hygienist consultant to conduct vehicle exhaust measurements at the North Intermediate property. Additional information will be shared as it becomes available.

7 – Building Committee Questions

There were no questions from the WSBC members.

8 – Public Comments

Ms. O'Connell stated that in coordination with Dore & Whittier, an abutter meeting is planned for December 11, 2025, at 6:00 PM in the Wilmington High School Large Group Instructional Room. Abutters who have a common boundary property line (adjoining landowner) with the North Intermediate site will be notified in the coming weeks regarding this meeting.

At that meeting, the design team will present an update on the current design of the North Intermediate site, which adjoins various properties, and outline the measures planned to address feedback received from abutters. She noted that the design team made and will continue to make every reasonable effort to address concerns raised. However, there will be limits on what can be accomplished, as the program (square footage) of the school cannot be altered, and the proposed site amenities will remain as part of the project.

After the presentation, attendees will have opportunities to ask questions and provide feedback.

9 – Upcoming Meetings

The next SBC meetings are scheduled for Tuesday, December 16, 2025, at 6:30pm, and Tuesday, January 20, 2026, at 6:30pm, both at the Wilmington High School Large Group Instruction Room (LGIR).

LeftField reported that batch of meeting invitations were send to WSBC committee members for approximately the next six months. All meetings will be publicly posted in accordance with Massachusetts Open Meeting Law.

10 – Adjournment

Ms. O'Connell recognized committee member Paul Ruggiero and thanked him for his service and dedication to Wilmington Public Schools and stated that this is his final meeting before his pending retirement. Mr. Ruggiero expressed appreciation to the WSBC for their work on the Wildwood Elementary School project and the prior Wilmington High School project.

A motion to adjourn the meeting was made by Ms. Allan and seconded by Mr. Melaragni. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray				X
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero	X			
Nicholas Golden	X				Stacy Scott	X			

Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 22-0-0 (Yes-No-Abstain).

The meeting was adjourned at 7:24pm.

Documents and Exhibits

- Wildwood Early Childhood Center Project School Building Committee Meeting #37 slideshow presentation, dated November 18, 2025

Attachments

- None

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #38

Tuesday, December 16, 2025 In-person 6:30pm

Wilmington High School
159 Church Street, Wilmington, MA
Large Group Instruction Room

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	X	Permanent Building Committee
Gregory B. Bendel		
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira		Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	Remote	Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner		

Christine Murray	Partial	
Judith L. O'Connell, Chair	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast		
David A. Ragsdale	X	School Committee
Paul Ruggiero		Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott		Woburn Street School, Principal
R. Eric Slagle	X	Town of Wilmington, Town Manager
Dr. David Thomson	X	Wilmington Public Schools, Superintendent
Stephen Turner	X	School Committee
Vivian Varbedian, Vice Chair	X	
Other Participants		
Angel Cartagena	X	Wilmington Public Schools
Donald Walter		Dore + Whittier Architects
Lee P. Dore	X	Dore + Whittier Architects
Rani Philip	X	Dore + Whittier Architects
Bryce Taft		Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day		Fontaine Bros.
Mark Abdella		Fontaine Bros.
Chelsey Mutrie		Fontaine Bros.
Chad L'Ecuyer	X	Fontaine Bros.
Jim Rogers		LeftField
David Saindon	X	LeftField
Craig DiCarlo	X	LeftField

1 – Call to Order

Ms. O'Connell called the meeting to order at 6:30pm.

Roll call was taken and a quorum was present.

2 – Approval of Previous Meeting Minutes

A motion to approve the minutes from the School Building Committee meeting held on October 21, 2025, as issued was made by Mr. Melaragni and seconded by Dr. Thomson. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel				X	Craig P. Miner				X
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast				X

Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 16-0-0 (Yes-No-Abstain).

3 – Administrative Actions

3a – Invoice Summary Review

LeftField presented invoice summary #22 including invoices from Dore + Whittier in the amount of $735,767.50, an invoice from Fontaine Brothers in the amount of $26,666.00, and an invoice from LeftField in the amount of $30,400.00, for a total of $792,833.50. Prior to the WSBC meeting, the Finance review group reviewed the invoice summary. It was noted that Ms. O'Connell has stepped in to fill the vacancy left by Mr. Ruggiero's retirement.

A motion to approve Invoice Summary #22 in the amount of $792,833.50, was made by Mr. Kelly and seconded by Ms. O'Connell. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel				X	Craig P. Miner				X
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast				X
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 16-0-0 (Yes-No-Abstain).

3b – Total Project Budget Update

LeftField presented a Total Project Budget roll-up summary. An expanded version showing the full budget was included in the committee packet. The only change since last month appears in the expenditure and unspent columns to reflect invoices that have been paid.

3c – Access to Committee Meeting Packets

LeftField reported on the response to the WSBC's request that meeting packets be posted to the project website. The school department's network and IT team proposed posting the meeting packets via an embedded link to a Google Drive folder on the project website, the same way the School Committee shares its meeting documents. The method is easy for the public to access, easy to maintain on the back end, and comes at no additional cost to the town. The school department has posted the November Committee meeting packet to the project website as a sample for review by the WSBC.

A discussion was held. The WSBC was satisfied with the proposed method, which will be used for all future WSBC meetings.

3d – Designated Individual for Interior Design

LeftField reported that at the October 21, 2025, committee meeting, it was explained that as the project enters the next phase, the best way to keep decisions and design refinements moving efficiently while staying fully compliant with public law and industry standards is to recommend that certain specific tasks be delegated to individual committee members. These individuals will meet in small working sessions with the project and design teams—without forming a quorum—to review technical continued design and detail associated with the project. Based on these ongoing meetings, certain high-level findings and recommendations will be brought back to the full Committee for discussion and formal action. Areas for delegation include sustainability, site and civil design, which at the October 21, 2025, committee meeting was delegated to Mr. Dennis Kelley. Other areas of the design process will include, interior design, furniture and equipment, technology, security, and other design or operational elements as we may determine at a later date. That said, to maintain the project schedule and deliverables, it is request that the committee designate a member to serve as the delegated individual for interior design elements associated with the school project.

A motion that Vivian Varbedian is designated to review, advise, and make decisions regarding interior design decisions related to design refinements associated with the continued design of the Project on behalf of the building committee, provided such decisions remain within the approved project scope and budget and four corners of the Project, as approved; Vivian Varbedian may consult with committee members and non-members, provided the consultation does not reach a quorum of the Committee; Vivian Varbedian may also, at his discretion, bring updates and decisions back to the full Committee for review, advice, and/or action, was made by Ms. O'Connell and seconded by Mr. Slagle.

A discuss was held.

Voting Member	Yes	No	Abst.	Not Pres.	Voting Member	Yes	No	Abst.	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel				X	Craig P. Miner				X
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast				X
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 16-0-0 (Yes-No-Abstain).

4 – Design Update

4a – Interior Design Concepts

Dore + Whittier (D+W) presented preliminary interior design concepts for the project. The interior design will reflect the community, culture and growth of Wilmington, and use themes of nature and growth as inspiration. The concept of growth in plants will be used in the context of the school as a metaphor for the grade levels; the roots represent Pre-K and kindergarten, the truck represents 1st and 2nd grade, and the branches represent 3rd and 4th grades. The color palette is being developed with earth tones, more neutral colors may be used for the lower grades, and more vibrant colors may be used for the upper grades. D+W presented an array of images from other projects, which demonstrate how these ideas could manifest in the interior design.

Mr. Melaragni expressed support for the interior design concept and recommends incorporating the Whitefield Elm, which is the tree features in the Wilmington Town Seal.

5 – Public Engagement Update

Mr. Saindon reported on a project coordination meeting that was held on December 11, 2025, with land adjoining abutters. Of 15 land adjoining abutters invited, three adjoining landowner abutters participated in person, and one participated remotely. In addition, one neighbor participated in the meeting as well. The meeting was very productive, with

feedback from all abutters who participated. Another meeting will be coordinated in the future.

Mr. Camoscio requested the design team consider 7-foot-high wood fences. D+W responded that D+W will investigate 7-foot-high wood fences.

Mr. Camoscio expressed appreciation for the property-specific imagery that D+W presented for two properties and inquired when the same would be provided for the remaining abutter properties. D+W responded that they intend to provide those images in a subsequent meeting at the end of January 2026.

Mr. Camoscio inquired whether the existing playground in the location of the proposed construction access road will be relocated. Fontaine Brothers responded that Fontaine Brothers intends to relocate the playground, though the specifics have not been determined yet. Mr. Kelley noted that CARES will be relocated to another school before the start of construction.

Ms. O'Connell requested the design team to consider screening techniques for the 8-10 years during which the proposed trees and shrubs are growing and filling in. D+W responded that the design team is looking into costs and options and is considering a layering of screening elements plus fencing for visual and acoustical barrier.

6 – Discussion/Correspondence/New Items

There were none.

7 – Building Committee Questions

Mr. Melaragni inquired when the geotechnical report would be available. D+W responded that the geotechnical bores are complete, and test pits are scheduled to occur over winter break; results from both investigates are needed to complete the geotechnical report.

Ms. Allan inquired about security at the new school. D+W responded that they have met with Wilmington Fire and Police Departments and school Administrators to discuss security and the entry sequence. The design will continue to develop to meet the needs of the school and community.

Mr. Ragsdale inquired when the final traffic study report will be available and when will the road improvements be completed. D+W responded that the draft report was recently shared with the DPW and Town Engineer for review and comment. The report will be finalized and included in the Design Development submission to the MSBA in March 2026, and will be available to the public at that time. Mr. Slagle responded that the town

intends to engage an engineering firm separate, from the Wildwood project, to design intersection improvements at Salem Street and High Street by the end of FY2026, start construction work around July 1, 2026, and complete the roadway construction before the Wildwood project is complete.

Mr. Camoscio inquired about the status of vehicle emissions testing. LeftField responded that a proposal was submitted and approved. D+W added that a date for on-site testing is being scheduled for January 2026.

8 – Public Comments

There were no public comments.

9 – Upcoming Meetings

The next SBC meeting is scheduled for Tuesday, January 20, 2025, at 6:30pm, at the Wilmington High School Large Group Instruction Room (LGIR).

LeftField requested that the date of the WSBC meeting in February be changed from the Tuesday after February vacation (2/24/26) to the Tuesday before February vacation (2/10/26). There were no objections.

10 – Adjournment

A motion to adjourn the meeting was made by Mr. Golden and seconded by Mr. Slagle. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel				X	Craig P. Miner				X
Kate Bissell	X				Christine Murray				X
Kevin A. Caira				X	Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast				X
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 16-0-0 (Yes-No-Abstain).

The meeting was adjourned at 7:12pm.

Documents and Exhibits

- Wildwood Early Childhood Center Project School Building Committee Meeting #38 slideshow presentation, dated December 16, 2025

Attachments

- None

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #39

Tuesday, January 20, 2026 In-person 6:30pm

Wilmington High School
159 Church Street, Wilmington, MA
Large Group Instruction Room

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	Remote	Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	X	Select Board
Michael Camoscio	Remote	
Justin Cusce	X	
Marianne Gallezzo		Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli		Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	
Christine Murray	X	
Judith L. O'Connell, Chair	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	Remote	

David A. Ragsdale	X	School Committee
Paul Ruggiero		Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott		Woburn Street School, Principal
R. Eric Slagle	X	Town of Wilmington, Town Manager
Dr. David Thomson	X	Wilmington Public Schools, Superintendent
Stephen Turner	X	School Committee
Vivian Varbedian, Vice Chair	X	
Other Participants		
Angel Cartagena	X	Wilmington Public Schools
Donald Walter		Dore + Whittier Architects
Lee P. Dore		Dore + Whittier Architects
Rani Philip	X	Dore + Whittier Architects
Bryce Taft		Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day		Fontaine Bros.
Mark Abdella		Fontaine Bros.
Chelsey Mutrie	X	Fontaine Bros.
Chad L'Ecuyer		Fontaine Bros.
Jim Rogers		LeftField
David Saindon	X	LeftField
Craig DiCarlo	X	LeftField

1 – Call to Order

Ms. O'Connell called the meeting to order at 6:30pm.

Roll call was taken and a quorum was present.

2 – Approval of Previous Meeting Minutes

Ms. O'Connell advised that in the December meeting, the committee unintentionally included the wrong date in the motion for the November meeting minutes. The motion stated "October 21st" instead of "November 18th". Therefore, the committee is requested to take another vote to correct the mistake.

A motion to approve the minutes from the School Building Committee meeting held on November 18, 2025, as issued was made by Mr. Melaragni and seconded by Mr. Slagle. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray	X			
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			

Marianne Gallezzo				X	Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli				X	Vivian Varbedian	X			

The motion carried 19-0-0 (Yes-No-Abstain).

A motion to approve the minutes from the School Building Committee meeting held on December 16, 2025, as issued, was made by Dr. Thomson and seconded by Mr. Ragsdale.

Mr. Melaragni noted a correction needed on page 5: the tree name is “Whitefield Elm”. LeftField will correct the minutes accordingly.

A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner			X	
Kate Bissell	X				Christine Murray	X			
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast			X	
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo				X	Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli				X	Vivian Varbedian	X			

The motion carried 17-0-2 (Yes-No-Abstain).

3 – Administrative Actions

3a – Invoice Summary Review

LeftField presented invoice summary #23 including invoices from Dore + Whittier in the amount of $701,191.20, an invoice from Fontaine Brothers in the amount of $26,666.00, and an invoice from LeftField in the amount of $60,800.00, for a total of $788,657.20. Prior to the WSBC meeting, the Finance review group reviewed the invoice summary.

A motion to approve Invoice Summary #23 in the amount of $788,657.20, was made by Mr. Kelly and seconded by Ms. Varbedian. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner			X	

Kate Bissell	X				Christine Murray	X			
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo				X	Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli				X	Vivian Varbedian	X			

The motion carried 18-0-1 (Yes-No-Abstain).

3b – Total Project Budget Update

LeftField presented a Total Project Budget roll-up summary. An expanded version showing the full budget was included in the committee packet. The only change since last month appears in the expenditure and unspent columns to reflect invoices that have been paid.

4 – Design Update

4a – Interior Design Concepts

Dore + Whittier (D+W) presented the list of design activities that were completed and ongoing during the current Design Development phase.

1. Completed Tasks:
    a. User Group Meetings
    b. Updated Traffic Study
    c. Hydrant Flow Test
    d. Environmental Site assessment
    e. Acoustical Measurements
    f. Geotechnical Analysis
    g. Ambient Noise Levels
    h. Emissions Measurements
2. Ongoing Tasks:
    a. Site and Building Plan Refinement
    b. Interior Selections
    c. Design coordination (MEP/FP/Tech/Comm)
    d. Safety and Security
    e. Cost Estimating Package
    f. Conservation NOI
    g. Permitting

D+W presented recent plan refinements including:

1. two Coordinator offices were combined into a single, larger space.
2. entrances to multi-stall restrooms were reconfigured to have no entrance door, the change is based on request from the principals, observations by administration of door usage in existing school, and well-functioning restroom layout at schools that were toured, and

3. water fountains were relocated to the corridor for easier access.

D+W advised that other layout changes are ongoing.

A discussion was held regarding the entrances to multi-stall restrooms. The committee deferred to the school department's direction.

Ms. Varbedian inquired when the cost estimate will be priced. D+W responded the pricing documents will be available on February 6, 2026, and the cost estimates will be prepared and reconciled before the WSBC meeting in March 2026.

A discussion was held regarding the Coordinator offices combined into a single space. The committee deferred to the school department's direction.

Ms. Allan inquired about the traffic study and other reports and requested design consultants attend a future WSBC meeting to report on their findings. A discussion was held. LeftField responded that the committee will be given access to the final reports prior to the MSBA Design Development package is submitted and the public will be given access shortly thereafter. Mr. Slagle advised that the DPW and Town Engineer intend to hire an engineering firm to perform design work for the two intersections recommended for improvements in the current traffic impact study. Ms. O'Connell responded that town leadership will discuss with the design team and OPM the potential for design consultants to present to the committee at a future date. The design team reported there were no major surprises revealed in the existing conditions reports.

5 – Public Engagement Update

Ms. O'Connell advised that the project team is preparing for the next Abutters Meeting and would like to schedule it on February 10th, 2026. The WSBC meeting start time is proposed to change to 6:00pm to accommodate the Abutters Meeting start time of 7:00pm. No concerns were voiced by the committee. After February 10th, the building committee will go back to meeting at 6:30pm.

The Town will send letters to the abutters to inform them of the date and time of their meeting on February 10, 2026.

6 – Discussion/Correspondence/New Items

There were none.

7 – Building Committee Questions

There were none.

8 – Public Comments

There were none.

9 – Upcoming Meetings

The next WSBC meeting is scheduled for Tuesday, February 10, 2026, at 6:00pm. The meeting location will either be the High School Large Group Instruction Room (LGIR) or the new Town Hall. Once the location has been

determined, LeftField will update the calendar event and indicate the location on the agenda, which will be publicly posted.

10 – Adjournment

A motion to adjourn the meeting was made by Mr. Golden and seconded by Dr. Thomson. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan	X				Paul J. Melaragni	X			
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray	X			
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast	X			
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo				X	Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott				X
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley	X				Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 19-0-0 (Yes-No-Abstain).

The meeting was adjourned at 7:13pm.

Documents and Exhibits

- Wildwood Early Childhood Center Project School Building Committee Meeting #39 slideshow presentation, dated January 20, 2026
    - *(Note: the title slide of the presentation shown on the night of the meeting incorrectly displayed the meeting number and meeting date from the prior meeting in December 2025; the version appearing on the project website displays the correct information)*

Attachments

- None

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #40

Tuesday, February 10, 2026 In-person 6:30pm

Wilmington High School
159 Church Street, Wilmington, MA
Large Group Instruction Room

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan		Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	Remote	Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	Remote	Finance Committee
Nicholas Golden	Remote	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley		Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	Remote	Select Board
Paul J. Melaragni		Permanent Building Committee
Craig P. Miner	X	
Christine Murray	X	
Judith L. O'Connell, Chair	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	Remote	

David A. Ragsdale	X	School Committee
Paul Ruggiero		Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott	Remote	Woburn Street School, Principal
R. Eric Slagle	X	Town of Wilmington, Town Manager
Dr. David Thomson	X	Wilmington Public Schools, Superintendent
Stephen Turner	X	School Committee
Vivian Varbedian, Vice Chair	X	
Other Participants		
Angel Cartagena	Remote	Wilmington Public Schools
Donald Walter		Dore + Whittier Architects
Lee P. Dore	X	Dore + Whittier Architects
Rani Philip	X	Dore + Whittier Architects
Bryce Taft		Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day		Fontaine Bros.
Mark Abdella	X	Fontaine Bros.
Chelsey Mutrie	Remote	Fontaine Bros.
Chad L'Ecuyer	X	Fontaine Bros.
Jim Rogers		LeftField
David Saindon	X	LeftField
Craig DiCarlo	X	LeftField

1 – Call to Order

Ms. O'Connell called the meeting to order at 6:01pm.

Roll call was taken and a quorum was present.

2 – Approval of Previous Meeting Minutes

A motion to approve the minutes from the School Building Committee meeting held on January 20, 2026, as issued was made by Ms. Varbedian and seconded by Mr. Slagle.

Mr. Ragsdale noted that the minutes included the phrase, "a discussion was held", and requests that future minutes include details of discussions.

A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan				X	Paul J. Melaragni				X
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray	X			
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast			X	
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X

Nicholas Golden	X				Stacy Scott			X	
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley				X	Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 17-0-2* (Yes-No-Abstain).

*Ms. Prendergast and Ms. Scott were remotely present but did not have audio. Their votes are recorded as abstentions.

3 – Administrative Actions

3a – Invoice Summary Review

LeftField presented invoice summary #24 including invoices from Dore + Whittier in the amount of $735,412.75, an invoice from Fontaine Brothers in the amount of $26,666.00, and an invoice from LeftField in the amount of $60,800.00, for a total of $822,878.75. Prior to the WSBC meeting, the Finance review group reviewed the invoice summary.

A motion to approve Invoice Summary #24 in the amount of $822,878.75, was made by Ms. O'Connell and seconded by Mr. Ragsdale. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan				X	Paul J. Melaragni				X
Gregory B. Bendel	X				Craig P. Miner			X	
Kate Bissell	X				Christine Murray	X			
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast			X	
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott			X	
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley				X	Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 16-0-3* (Yes-No-Abstain).

*Ms. Prendergast and Ms. Scott were remotely present but did not have audio. Their votes are recorded as abstentions.

3b – Total Project Budget Update

LeftField presented a Total Project Budget roll-up summary. A version showing the full budget was included in the committee packet. The only change since last month appears in the expenditure and unspent columns to reflect invoices that have been paid. No action by the building committee is needed.

4 – Design Update

4a – Existing Conditions Investigations

Ms. O'Connell advised that Dore + Whitter and their consultants have conducted a series of investigations into existing conditions and prepared a report for each, which are presently in draft form. The final reports will be available to the committee around mid-March, shortly before the MSBA Design Development submission on March 20th. Shortly after the submission, the reports will also be made available to the public via the project website. At the last Building Committee meeting, several members requested that the draft consultant reports be shared with the Committee, potentially through presentations by the consultants who prepared them. After coordination with LeftField and Dore + Whittier, it was collectively recommended that LeftField and Dore + Whittier prepare and present executive summaries of the reports in lieu of individual consultant presentations. This approach was recommended due to the number of reports involved, the highly technical nature of the material, the logistical challenges of coordinating multiple consultants, and in consideration of the Committee's limited time. Executive summaries of each report, including key takeaways and an explanation of how the findings may or may not impact the ongoing design, were included in the meeting packet.

LeftField presented the results of the air quality testing. Testing confirmed that bus activity during student arrival and dismissal does not negatively impact outdoor air quality, with pollutant levels remaining well below health-based safety standards, indicating no air quality concerns for students, staff, or nearby neighbors.

LeftField presented the results of geotechnical investigations. The proposed site can be safely built on, and while some soil improvements are required, they are routine, well-understood construction measures that do not pose unusual risk or concern for the project. The project team is evaluating Rammed Aggregate Piers (RAPs) versus full soil removal and replacement. Based on experience from similar projects with both clean and arsenic-impacted soils, RAPs typically offer a clear cost advantage while reducing the risk of unforeseen soils, limiting trucking impacts to abutters, and providing a schedule benefit by advancing foundation work and reducing winter construction exposure.

LeftField presented the results of geo-environmental investigations. Arsenic detected in site soils is likely naturally occurring and does not meet the definition of a reportable release under the MCP. If soil removal is required, the presence of the naturally occurring arsenic will affect handling, disposal, cost, and schedule, potentially requiring replacement fill and further evaluation as design advances. The project team is evaluating Rammed Aggregate Piers (RAPs) versus full removal and replacement. Based on similar projects, RAPs typically offer cost and schedule advantages while reducing unforeseen soil risks, trucking impacts on abutters, and winter construction exposure by expediting foundation construction.

LeftField presented results of wetland protection area. The site contains one regulated wetland area with a required 100-foot buffer zone; any work near that area will need Conservation Commission approval. No additional constraints related to floodplains or rare species were identified elsewhere on site. The project team is taking a conservative approach to both wetland areas identified in the report. The school and site design will continue to avoid or minimize work within the regulated wetland and its associated buffer zones. The building footprint, internal roadways, and parking areas will remain largely as currently designed, subject to minor refinements anticipated as the project progresses. D+W advised that the design team is making efforts to improve the condition around the wetland areas.

LeftField presented the hydrant flow test. The existing water pressure and flow meet the project's needs. A dedicated fire pump is not required for the project. D+W advised that a fire pump room and equipment were previously included in the scope of the project, but since they are not needed, they will be removed.

LeftField presented the results of the traffic study. The traffic study found that while the new school will increase traffic during peak arrival and dismissal times, the impacts can be mitigated with targeted roadway and signal improvements. With these measures in place, the surrounding road network is expected to continue operating acceptably. The school design will continue with site access and circulation features that separate buses, parent drop-off, and staff parking to improve safety and reduce congestion. The Town will further evaluate and advance design concepts for off-site intersection improvements—particularly at Salem Street and Middlesex Avenue and at Route 62 and Middlesex Avenue/High Street—including signal timing changes and potential geometric upgrades, which are not part of the immediate school site but are necessary to support future traffic conditions. Ms. O'Connell advised that the town and DPW have begun the process of designing off-site intersection improvements.

LeftField presented the results of the acoustic baseline testing. Existing background noise levels are relatively low, particularly during nighttime hours, which establishes limits for new noise-generating equipment. Based on measured conditions, allowable broadband sound levels for new equipment are approximately 49–52 dBA at night and 51–56 dBA during the day. The findings directly inform mechanical and architectural design decisions. The project team is incorporating noise mitigation strategies early to ensure regulatory compliance and minimize community impacts.

D+W advised that this information helps to inform the design of the project.

Ms. O'Connell inquired why the acoustic benchmark testing was performed when school was not in session. LeftField responded that projects use the benchmark to limit the acoustical impact of new developments on the neighborhood. D+W added that performing acoustic baseline testing during the winter when outdoor activity is limited provides a more stringent requirement for the design team to satisfy, and is therefore more sensitive to the neighbors and a more conservative design approach.

4b – Interior Design Concepts

Ms. O'Connell reported that Dore + Whitter has met twice with Vivian Varbedian and others, as designated by Vivian to assist with feedback in the ongoing development of the interior design.

Ms. Varbedian confirmed there have been two prior interior design meetings which have included her as well as other members of the school building committee, including Ms. Prendergast, Ms. Bissell, and Mr. Kelley. The intent of these meetings is to give the designer guidance on the type and quality of finish materials to include in the project, not necessarily final selection of the colors or finish materials, primarily to ensure the correct values are included in the upcoming cost estimating exercise.

D+W presented an example floor plan, color-coded for the types of finish flooring that are included in the cost estimate package. Classroom areas are shown to have linoleum flooring, public areas have terrazzo flooring. Administrative wing are proposed to have carpet tiles. Maintenance areas are proposed to have epoxy flooring. This is presented as a typical discussion that takes place at the interior design meetings.

4c – MSBA Design Development Submission Format

LeftField reported that on or around March 20, 2026, the Project Team, on behalf of the District, will submit the Design Development package—commonly referred to as the DD submittal—to the MSBA for their review. As with all MSBA submissions, this is a critical milestone, as the overall project and construction schedule is built around submitting this package on time.

As part of the DD process, the MSBA conducts a formal document review and issues review comments within a defined timeframe. The timing of that review and the receipt of comments are especially important because they directly affect the early release scope packages planned for the project. In short, any delay in submitting the DD package to the MSBA could have downstream impacts on the construction schedule.

A slide was shown that outlined a typical MSBA Design Development submittal. Several components were highlighted that are particularly important for the Committee to be aware of, as they relate to schedule, cost, and overall project scope.

Another slide was shown with an early release scope matrix that LeftField developed and successfully used on past projects. The chart illustrated how the early release packages are coordinated with the MSBA DD, 60%, and 90% submissions, as well as the MSBA review periods. The intent is to clearly demonstrate how maintaining the MSBA submission and review timelines supports the planned early construction activities and helps protect the overall project schedule.

5 – Public Engagement Update

Ms. O'Connell advised that tonight's Building Committee meeting was moved to a 6:00 pm start time to accommodate the Abutters Meeting scheduled for 7:00 pm. Building Committee members are welcome to attend the Abutters Meeting; however, it is not a public meeting, and therefore, no more than 12 Committee members may be present, and no Building Committee business may be conducted.

In response to a request from the Committee at the January meeting, the project team is planning a community presentation in advance of the start of construction. This meeting will be open to the public and intended to inform neighbors, school staff, parents, and other interested community members about what to expect once construction begins this summer. The presentation is tentatively planned for May 2026, and the Committee will be kept informed as details are finalized

6 – Discussion/Correspondence/New Items

Ms. O'Connell reported that the Town periodically receives correspondence related to the project. Recently, the Town received a letter on December 17, 2025, from an abutting property owner outlining concerns related to drainage, groundwater, potential impacts to an existing septic system, and construction-related vibration and access, and requesting confirmation of mitigation measures and regulatory compliance. Following the holidays, the project team reviewed and addressed the concerns, and the Town issued a response on February 5, 2026.

7 – Building Committee Questions

Mr. Golden reported he recently attended a town function at which two students approached him about whether the new school playgrounds can be designed to accommodate not only physical disabilities but also cognitive and sensory differences, similar to sports stadiums that include child play areas that are sheltered from

the loud noises common in stadiums. On behalf of the students who asked the question, he would like to hear how those considerations might be incorporated into the design. D+W responded that they have recently been coordinating with their landscape designer and making plans to assemble district representatives to help guide the design of the playgrounds and to ensure they are accessible to individuals with all different needs.

Mr. Turner inquired why rammed aggregate piers (RAPs) are noted to be less expensive but are not included in the default design. LeftField responded that the decision to consider RAPs is a holistic building strategy. The cost to export unsuitable soils can be very expensive, therefore there can be advantages to leaving the existing soil in place. On a geotechnically and geo-environmentally perfect site, RAPs are not needed, however those ideal conditions are rare. Fontaine added that the project has performed soil testing and borings, and the resulting data is being analyzed to help make a decision on whether to plan for a full export and replacement of the existing soils or install RAPs. LeftField noted that RAPs may not be needed on all portions of the building footprint. D+W added that cost is the primary decider, whether it is more costly to export the existing soil materials, amend them in place or pursue a hybrid solution; minimizing construction duration and disruption to the surrounding area are also factors.

Mr. Caira inquired about the disposition of the playground equipment that was built for $50,000 each by the Sons of Italy at the North Intermediate School and Woburn Street School. Ms. O'Connell prompted a response by the project team to the concept of salvaging the existing playground equipment. D+W acknowledged how important it is to have a playground at the North Intermediate School during construction. Considerations include the cost effectiveness of relocating the existing equipment as well as handicapped accessibility, which is currently being evaluated in the cost estimating process. Mr. Slagle added he spoke to Jamie Magaldi at the DPW about the feasibility of relocating the existing equipment; his initial concerns are with damaging the equipment during removal and conforming to the current safety code, all of which he is evaluating. D+W asked about the scenario in which it is determined the existing equipment cannot be relocated, what should be done with it. Mr. Caira did not know the age of the equipment, but believes it is safe and usable. Ms. O'Connell is confident the DPW will have more information about the playground equipment, and the project team will work on it and report back to the committee.

8 – Public Comments

There were none.

9 – Upcoming Meetings

The next WSBC meeting is scheduled for Tuesday, March 17, 2026, at 6:30pm. The meeting location will either be the High School Large Group Instruction Room (LGIR) or the new Town Hall. Once the location has been determined, LeftField will update the calendar event and indicate the location on the agenda, which will be publicly posted. Ms. O'Connell expressed appreciation to the community for their patience as the audio visual systems are being adjusted to allow for this meeting to be moved to the town hall.

10 – Adjournment

A motion to adjourn the meeting was made by Ms. Varbedian and seconded by Mr. Miner. There was no discussion. A roll call vote was taken.

Voting Member	Yes	No	Abstain	Not Pres.	Voting Member	Yes	No	Abstain	Not Pres.
Diane M. Allan				X	Paul J. Melaragni				X
Gregory B. Bendel	X				Craig P. Miner	X			
Kate Bissell	X				Christine Murray	X			
Kevin A. Caira	X				Judith L. O'Connell	X			
Michael Camoscio	X				Christine Prendergast			X	
Justin Cusce	X				David A. Ragsdale	X			
Marianne Gallezzo	X				Paul Ruggiero				X
Nicholas Golden	X				Stacy Scott			X	
Christine Holloran	X				R. Eric Slagle	X			
John C. Holloway				X	Dr. David Thomson	X			
Dennis Kelley				X	Stephen Turner	X			
Lilia Maselli	X				Vivian Varbedian	X			

The motion carried 17-0-2* (Yes-No-Abstain).

*Ms. Prendergast and Ms. Scott were remotely present but did not have audio. Their votes are recorded as abstentions.

The meeting was adjourned at 6:43pm.

Documents and Exhibits

- Wildwood Early Childhood Center Project School Building Committee Meeting #40 slideshow presentation, dated February 10, 2026

Attachments

- None

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

Community Forum #7

June 3, 2025

Massachusetts School Building Authority

smma dw DORE + WHITTIER FONTAINE



Agenda

Introductions

MSBA Process and Schedule

The Big Picture

The Project Need

Schematic Design Update

Supporting Education Through Design

Cost Update

Community Outreach

Stay Connected

Questions



Introductions



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MSBA Process and Schedule



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Wildwood Early Childhood Center
1955 (**68 yrs**)

Enrollments & Grade Configurations

PreK-K

Wildwood Only

130+

PreK-3rd

Wildwood & Woburn St.

510+

PreK-5th

Wildwood, Woburn St., & North

755+

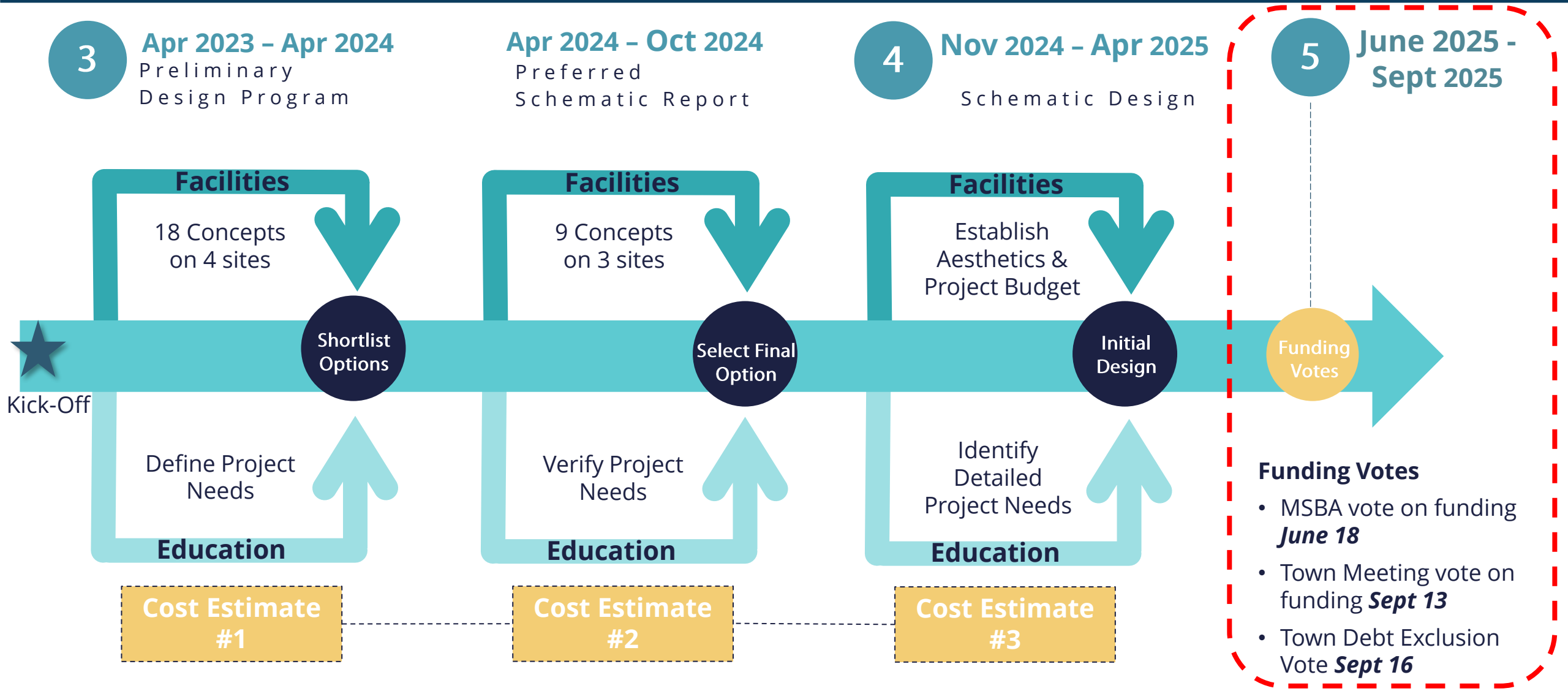
MSBA Process

Step-by-Step



MSBA Process

Where We're Going: Schematic Design

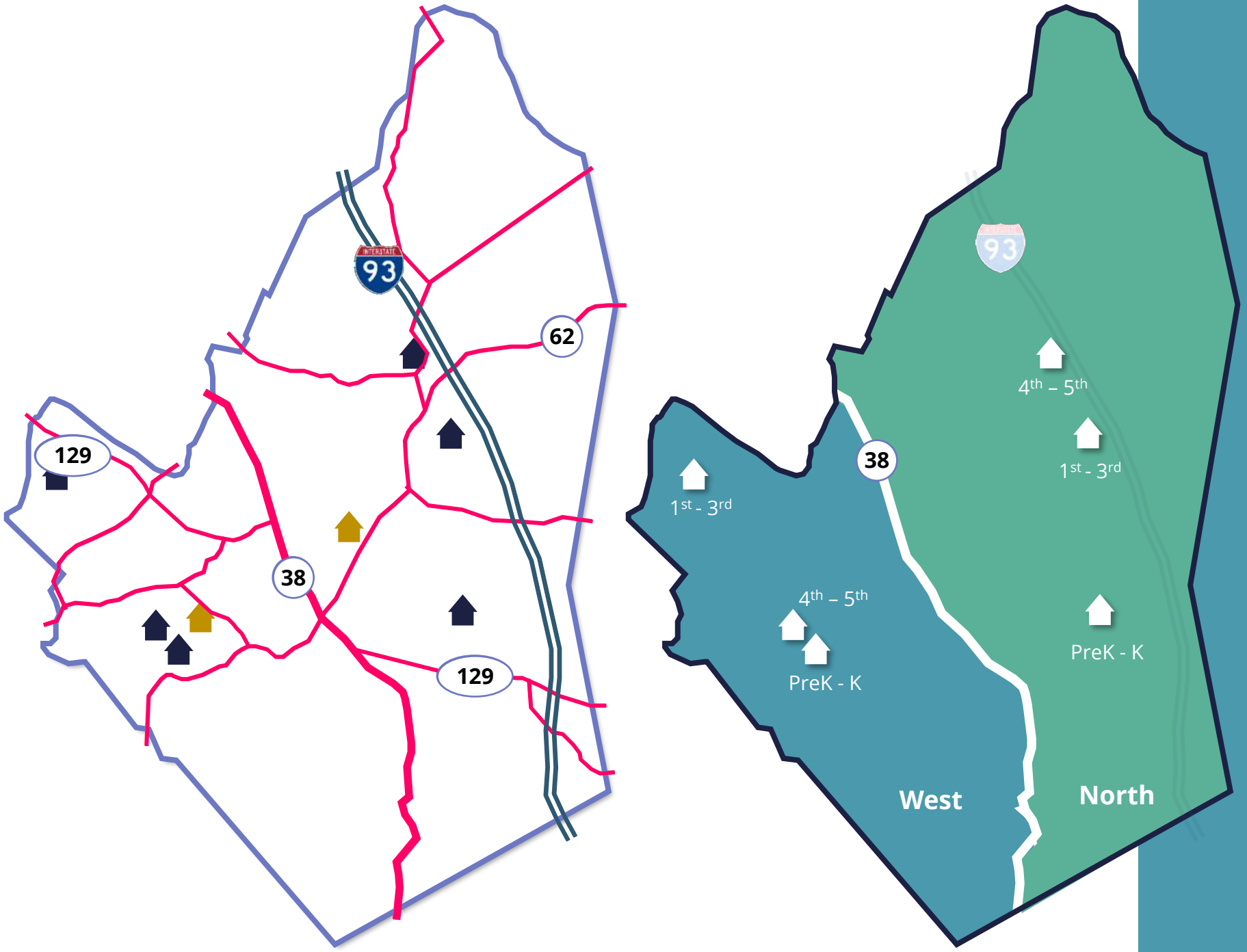


The Big Picture

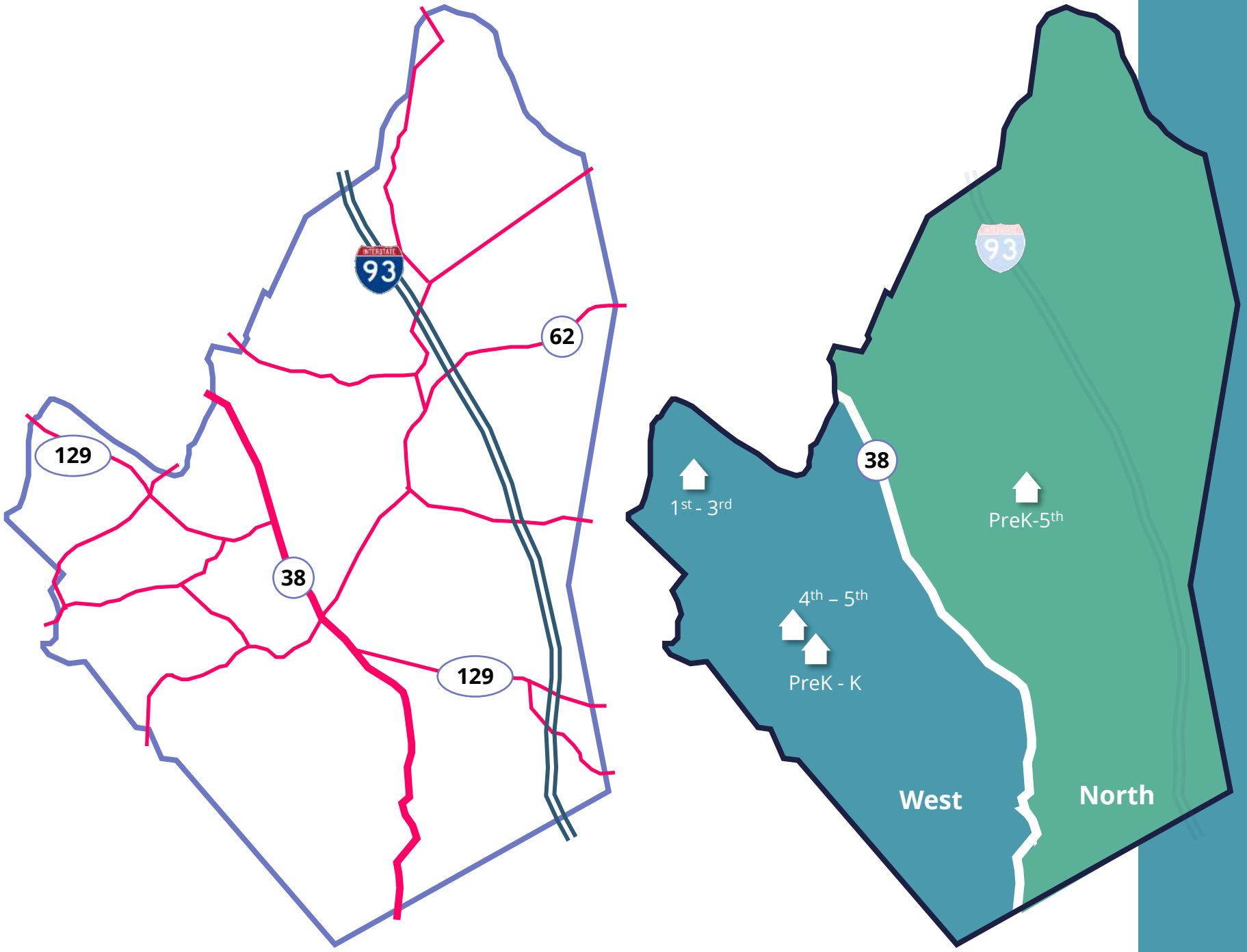


The Big Picture

A District-Wide Solution



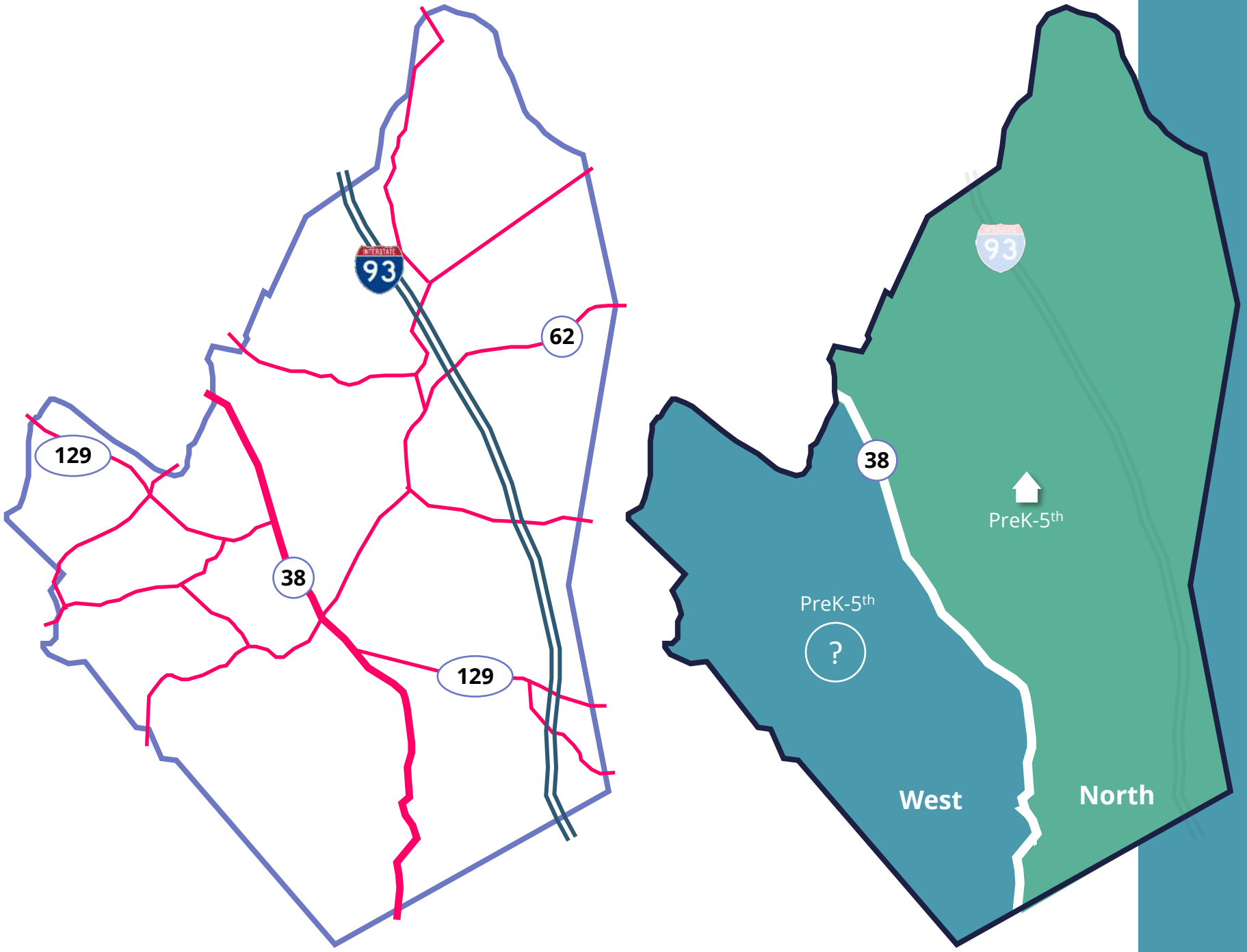
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The Big Picture

A District-Wide Solution
PreK-5

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  - Consolidate North Elementaries
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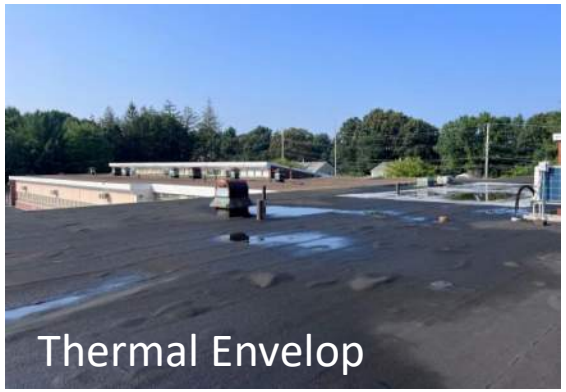
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The Project Need



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Thermal Envelop


Accessibility


Doors/Accessibility


Site


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- Need for dedicated classrooms for differentiated instruction
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Scan me!

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Schematic Design



Site Plan Update

1 ACCESSIBLE PATH
MOTOR CORTEX (PHYSICAL)

CIRCUITOUS CAMPUS PATH
CONNECTING PROGRAMS



2A OPEN PLAY
MOTOR CORTEX (PHYSICAL)





2B ACTIVE PLAY: PLAYGROUND
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7 DINING & GATHERING
SOCIAL / EMOTIONAL / INTERACTIVE





terraink landscape architecture

WILMINGTON ELEMENTARY SCHOOL | CONCEPT PLAN

N.T.S. CONCEPT DESIGN PREPARED FOR TEAM COORDINATION . NOT FOR CONSTRUCTION

NORTH

Wilmington . Massachusetts
Schematic Design Phase
February 2025





Site Circulation

80 +/- vehicles on-site queue space

12 +/- busses on-site queue space

193 +/- on site parking spaces

LEGEND

- : PASSENGER CARS
- : MINIBUS
- : BUS
- : BUS CIRCULATION
- : CAR CIRCULATION

terraink landscape architecture

WILMINGTON ELEMENTARY SCHOOL | VEHICULAR CIRCULATION - OPTION B

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NORTH

Wilmington . Massachusetts
Schematic Design Phase
February 2025



Floor Plan Update

Floor Plan Review



First Floor

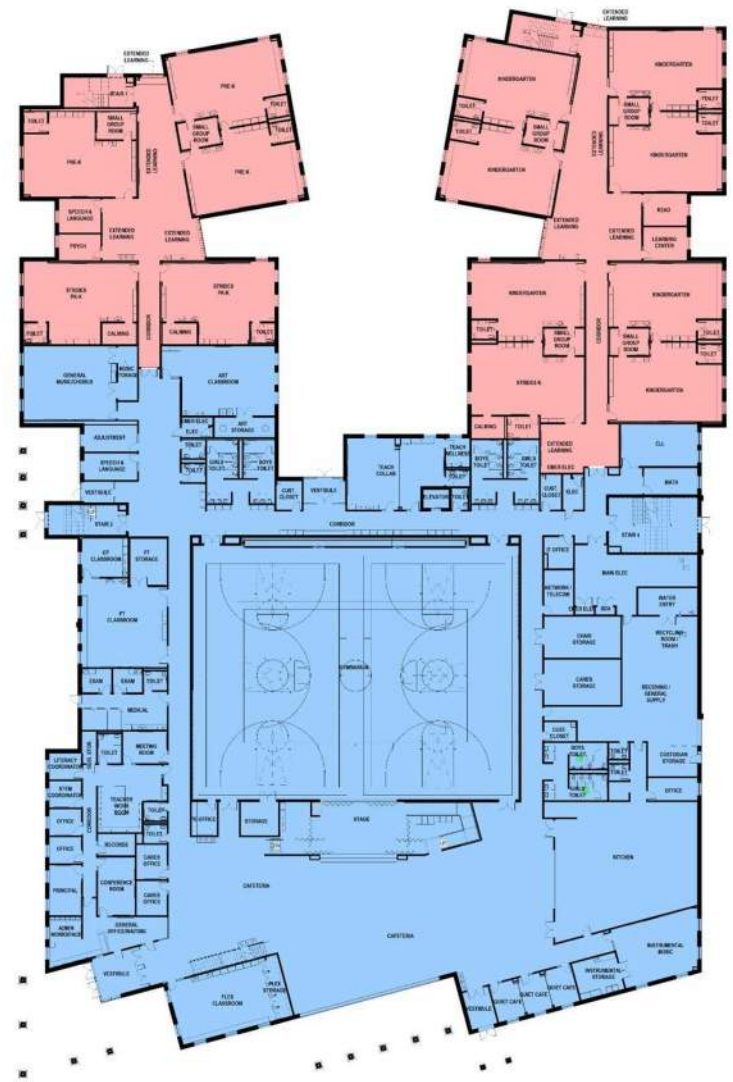


Second Floor

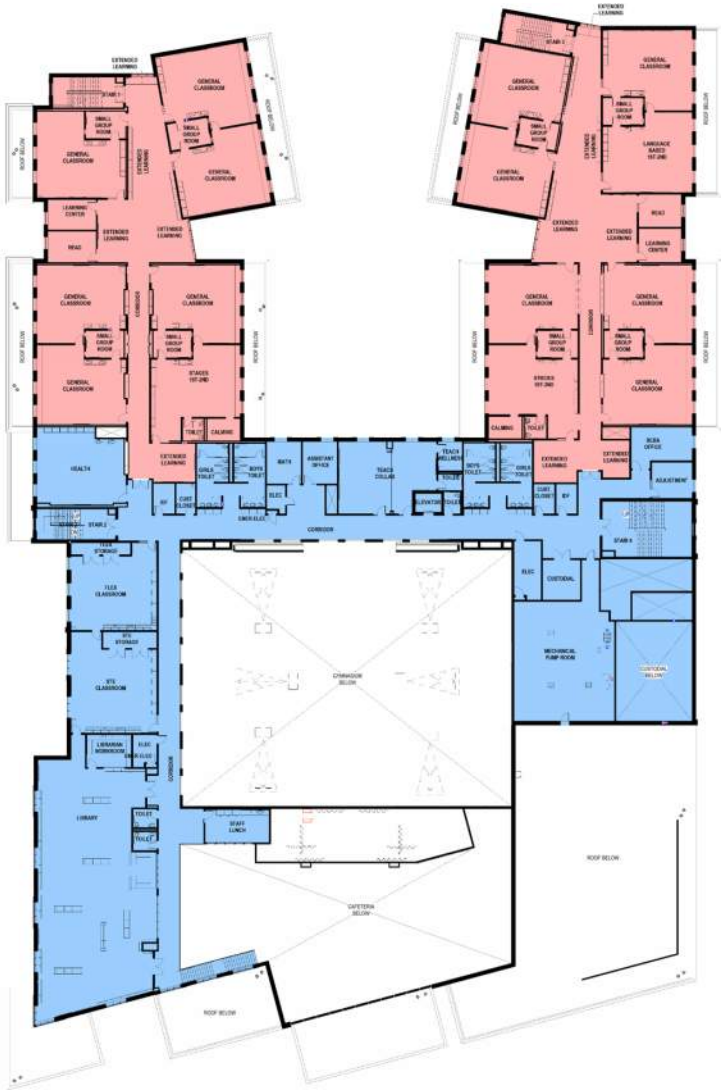


Third Floor

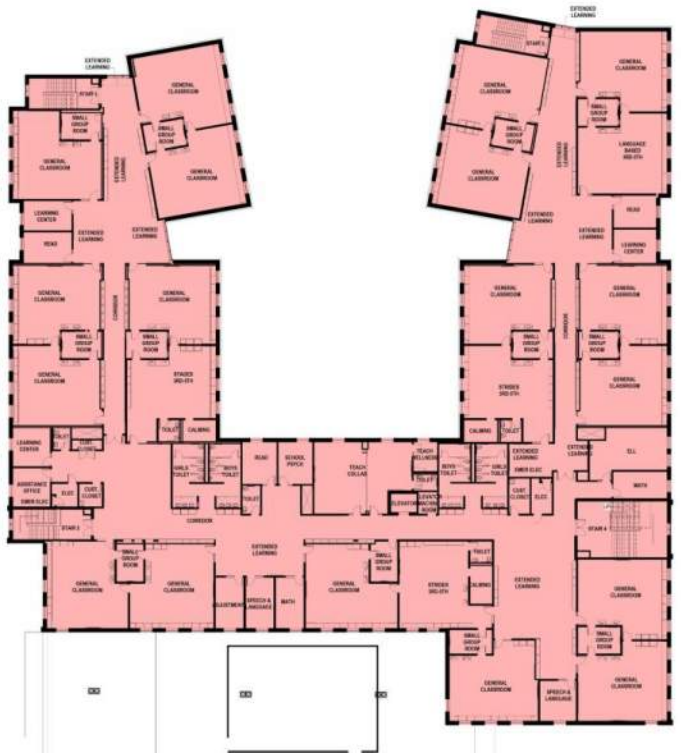
Floor Plan Review



First Floor



Second Floor



Third Floor

Public

Private

Supporting Education Through Design



Overview



Overview



Southeast view towards Main Entry



View from East towards Cafeteria



View from West towards Courtyard



Main Entry



Cafeteria/Stage



Cafeteria/Stage



Cafeteria/Stage



Gymnasium


Gymnasium



Gymnasium



Library



Library



Typical Classroom



Level 1: Extended Learning Area



Level 1: Extended Learning Area



Level 2: Extended Learning Area



Level 2: Extended Learning Area



Level 2/3: Extended Learning Area



Level 3: Extended Learning Area

Cost Overview



Preliminary Design Program

Estimated Construction Cost Range

$149.3M – $165.0M

$936/SF

Preferred Schematic Report

Estimated Construction Cost Range

$136.4M - $150.7M

$878/SF

Schematic Design

Estimated Construction Cost

$137,743,666

$835/SF

Within Budget!

Preliminary Design Program

Estimated Project Cost Range

$194.0M – $214.5M
(March 2024)

$1,156 - $1,278 /SF

Preferred Schematic Report

Estimated Project Cost Range

$177.6M - $196.3M
(July 2024)

$1,086 - $1,200 /SF

Schematic Design

Estimated Project Cost

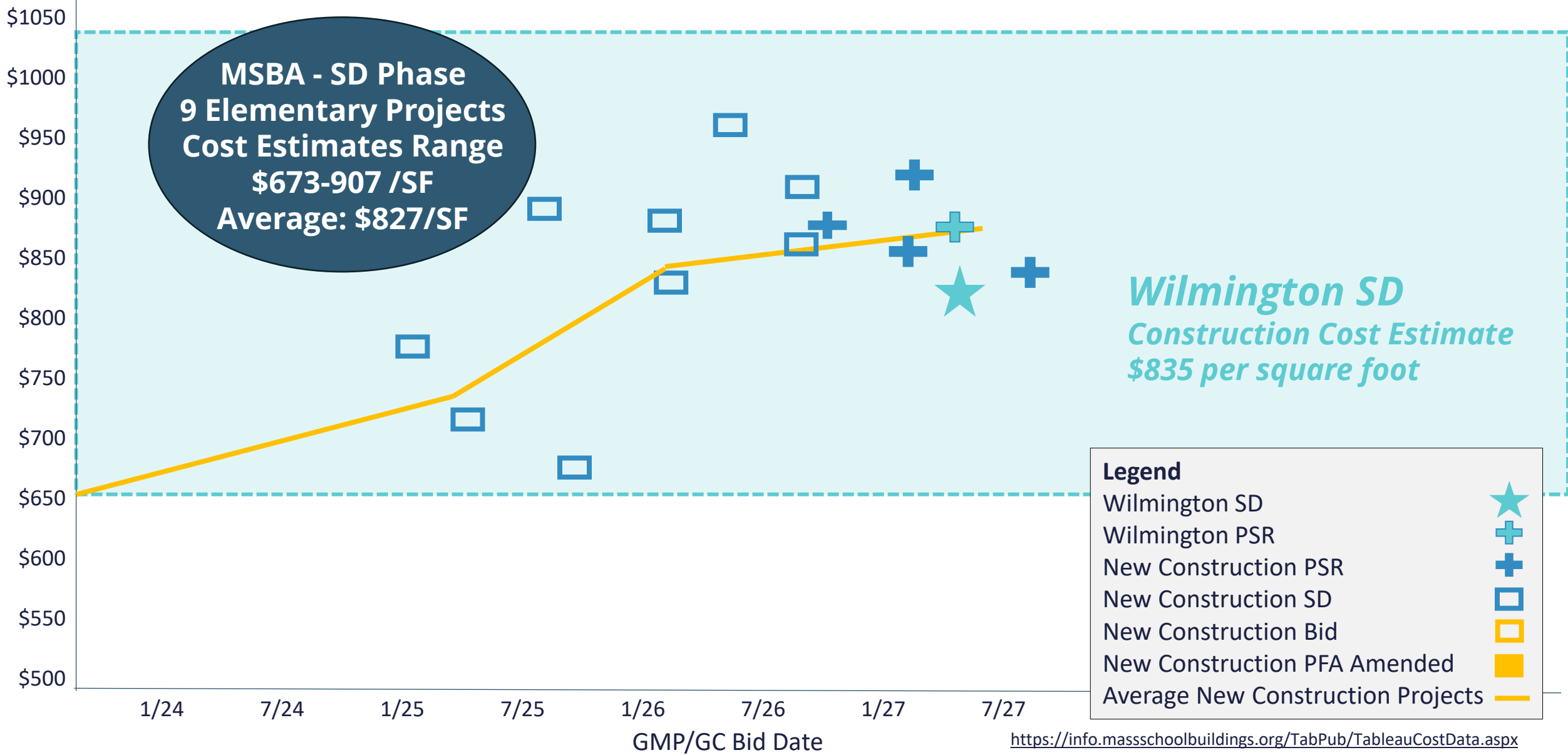
$173,265,626
(May 2025)

$1,050/SF

Within Budget!

MSBA Project – Construction Cost Data

Phase: SD Elementary Schools



https://info.massschoolbuildings.org/TabPub/TableauCostData.aspx

Community Outreach



Community Outreach Efforts

SBC Meetings
Community Forums
Water Bill Inserts
District Superintendent’s Newsletter
WCTV Wildcat Corner
Senior Center
Fun on the Fourth
School District Website
Project Specific Website with FAQs
Display Boards around Town
Town-Wide Communication of all project Information

What a **YES** vote at Town Meeting and the Ballot means to the project:

- The Town executes a Project Funding Agreement with the MSBA for the proposed grant amount, for the approved Project Scope and Budget
- Project Design continues through Bidding of the project in the fall of 2026
- Construction commences as soon as the summer of 2026 with early release packages
- The new elementary school is open for students in September of 2028

What a **NO** vote at Town Meeting or the Ballot means to the project:

- The Town is removed from the MSBA program
- The Town will need to resubmit the Statement of Interest and upon acceptance into the program, will self fund another Feasibility Study (over $1.2M town share spent to date)
- Real facility-driven educational needs in existing elementary schools will continue to be unmet

Next Steps:

- June 18th MSBA Board Meeting
- Community Forum #8 Late Summer/Early Fall

Voting Information:

- **Saturday, September 13th, starts at 9 AM Special Town Meeting at Wilmington High School**
- **Tuesday, September 16th 8 AM 8 PM –Debt Exclusion Vote *early voting available; same day voting at precinct location***

Stay Connected

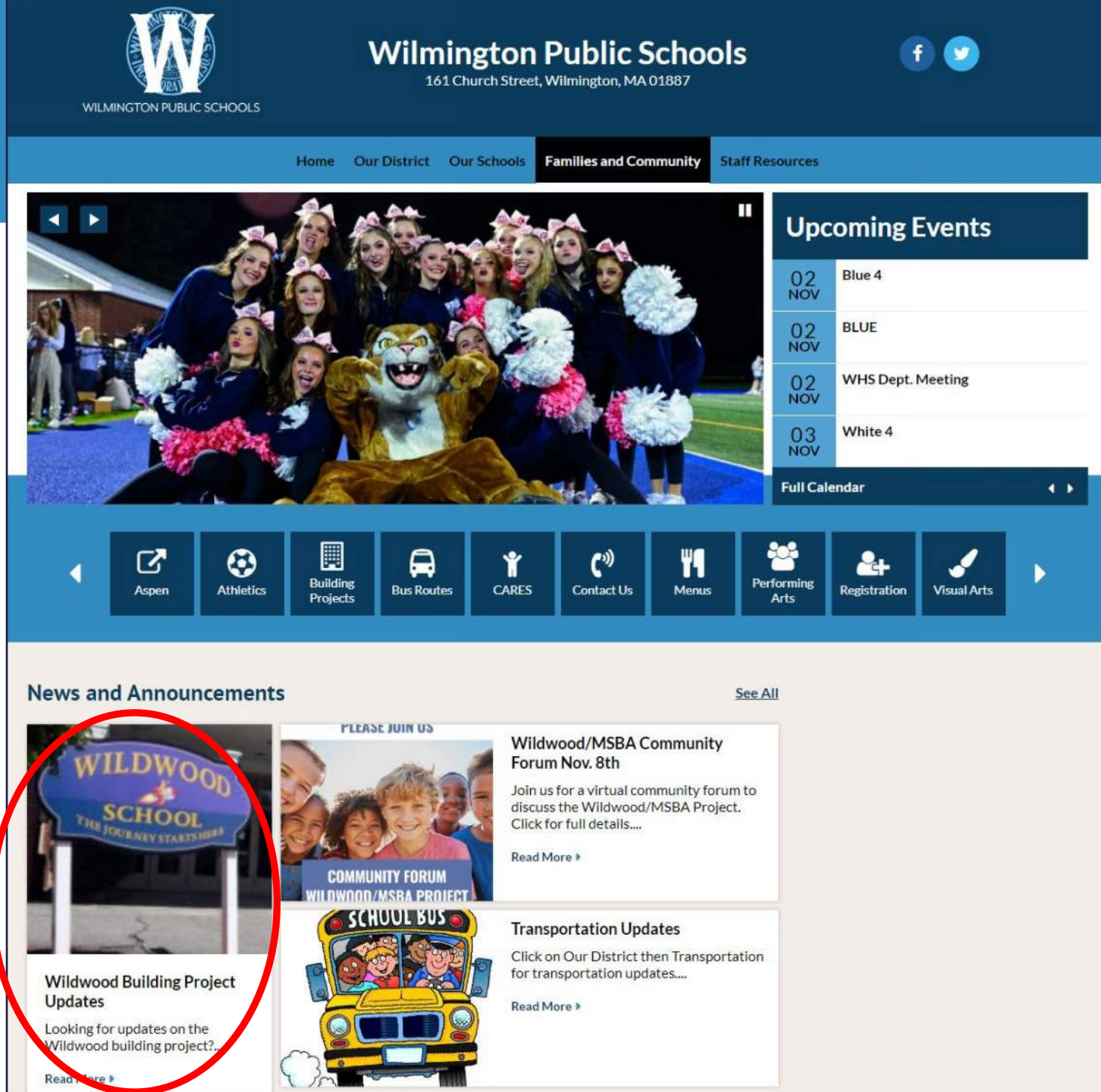


Stay Connected

Find updates on the District website - click on Wildwood Building Project Updates

Email questions/comments:
wildwoodprojectquestions@wpsk12.com

WCTV WILMINGTON COMMUNITY TELEVISION



Questions & Answers

Thank You

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

Select Board Meeting

June 23, 2025

Massachusetts School Building Authority

DORE + WHITTIER

FONTAINE



Agenda:

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DORE + WHITTIER

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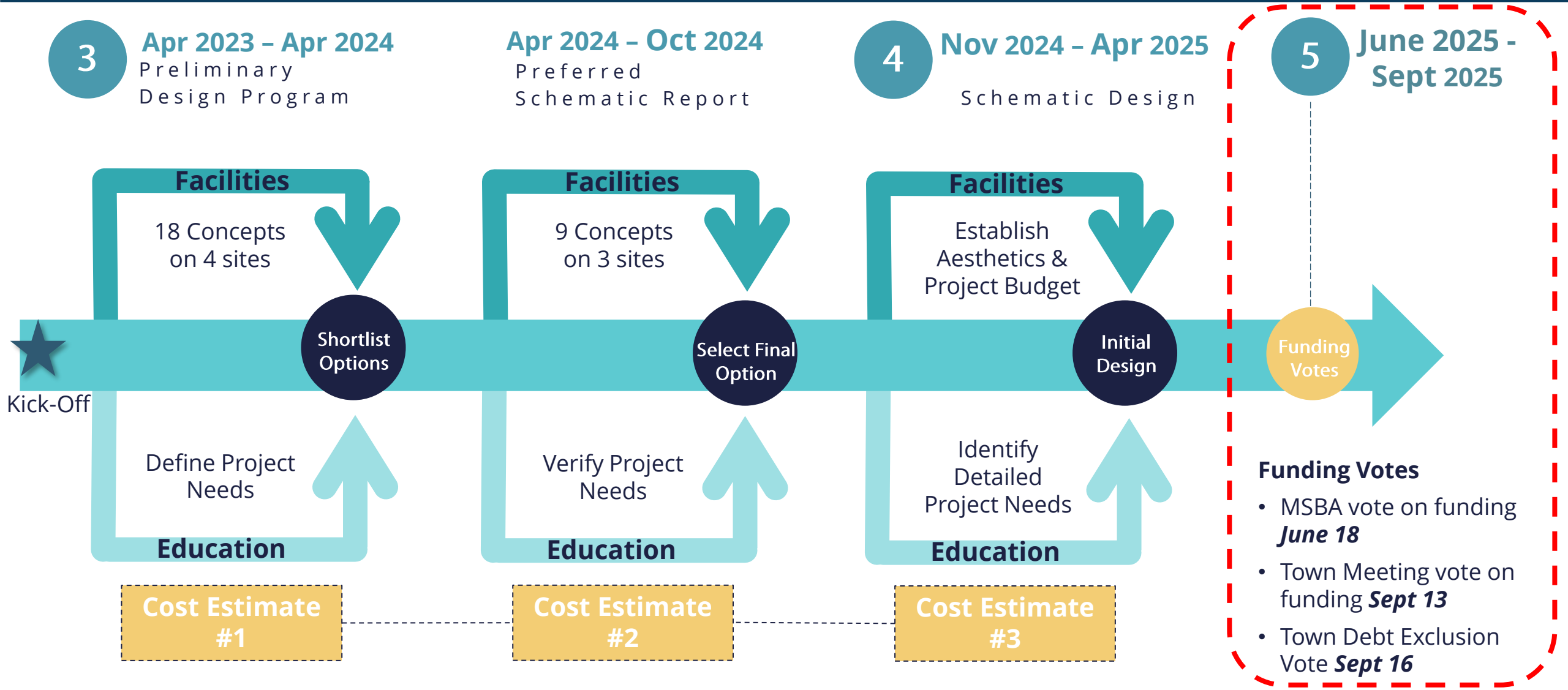
MSBA Process

Step-by-Step



MSBA Process

Where We're Going: Project Funding

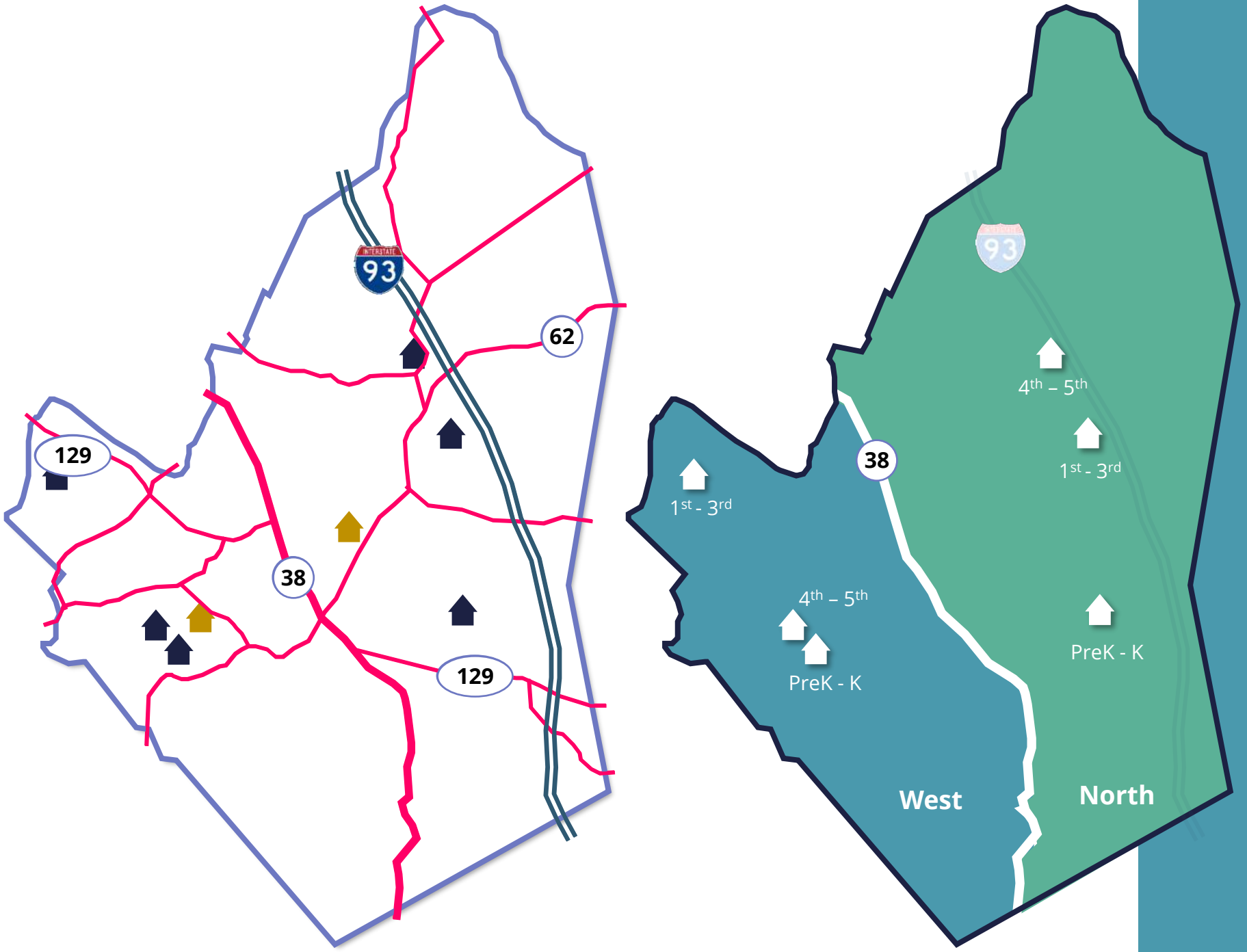


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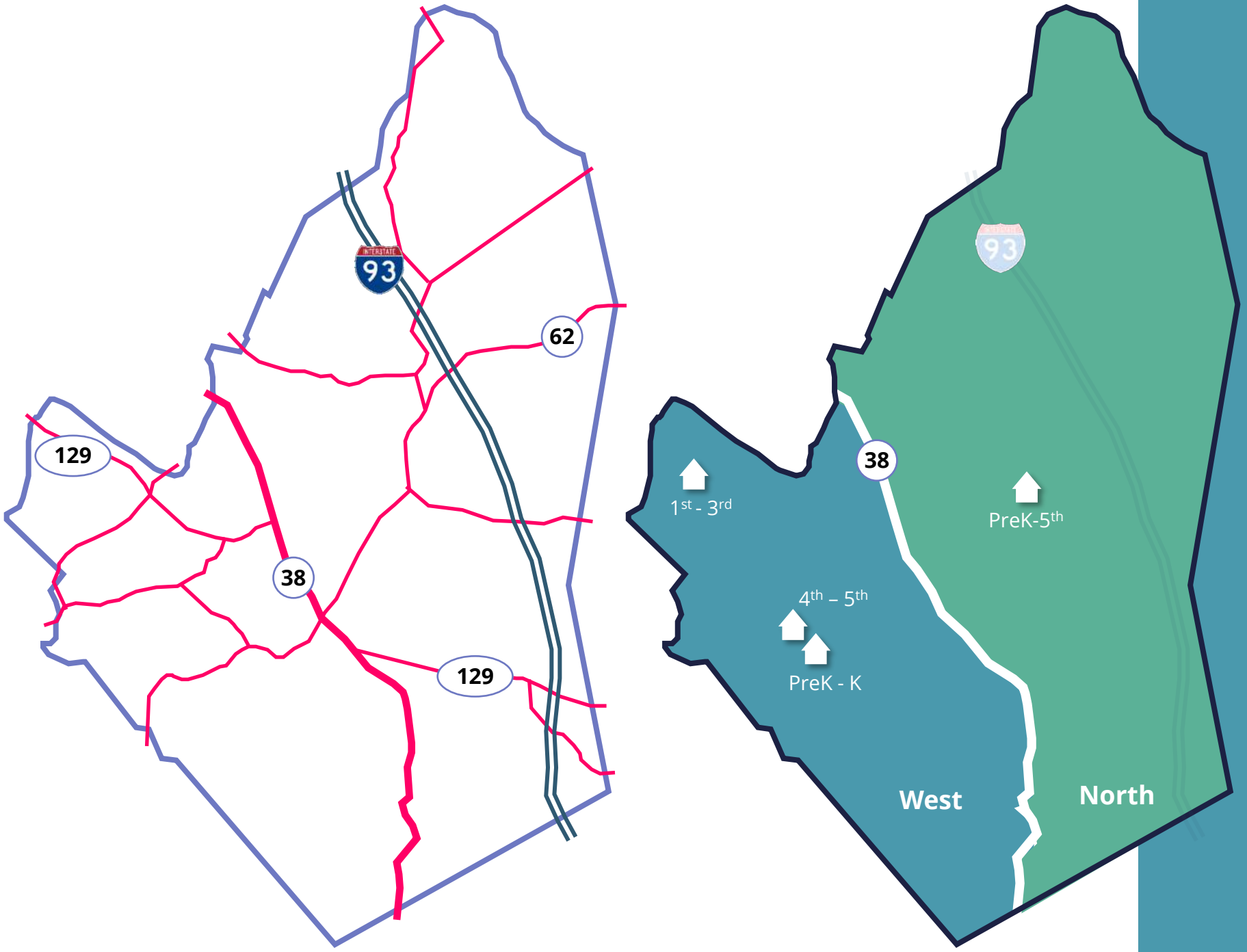


The Big Picture

A District-Wide Solution



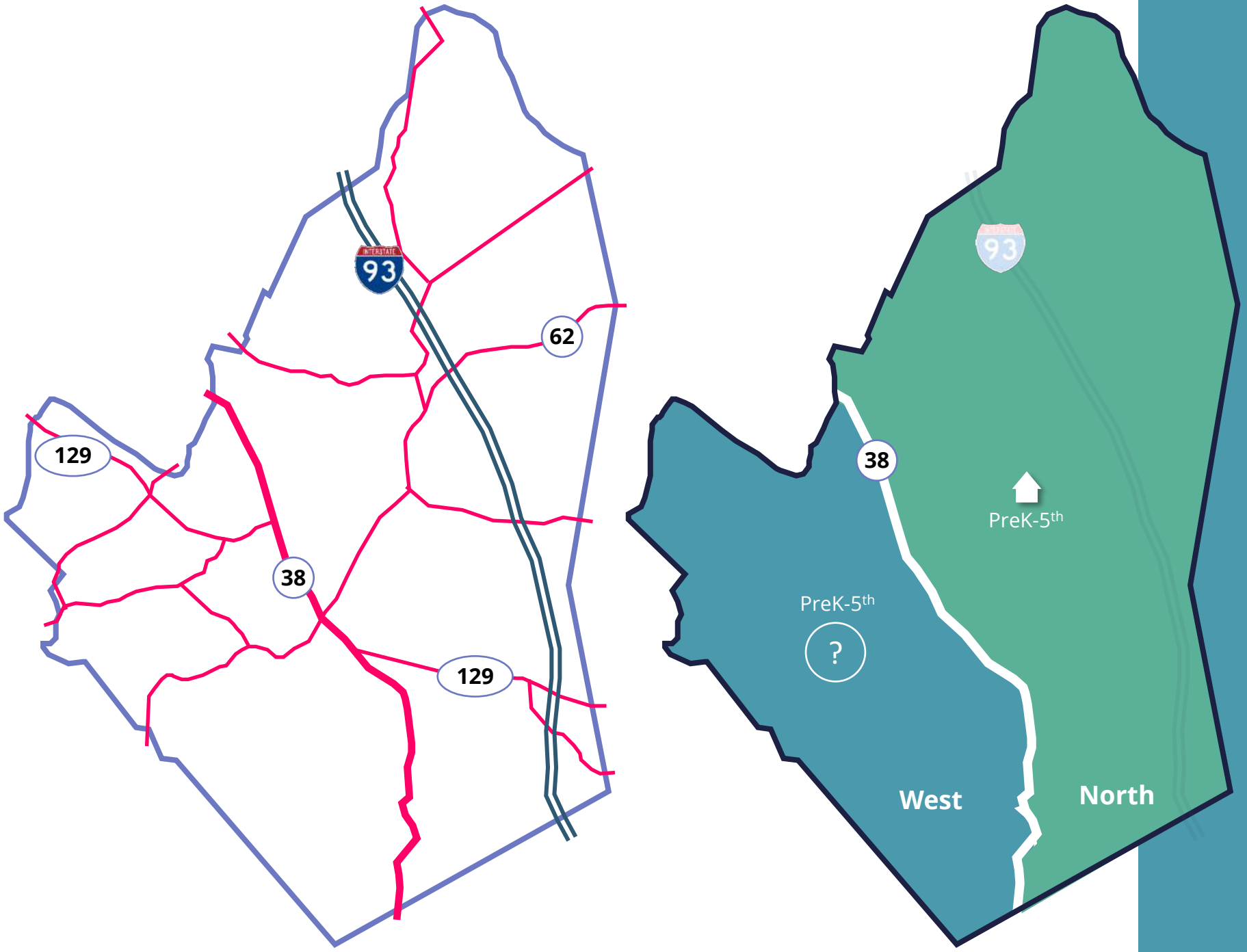
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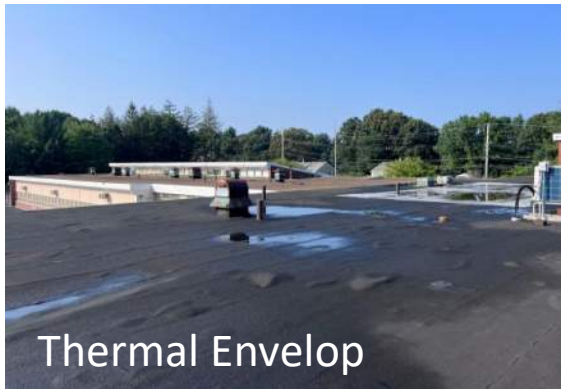
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Schematic Design Update

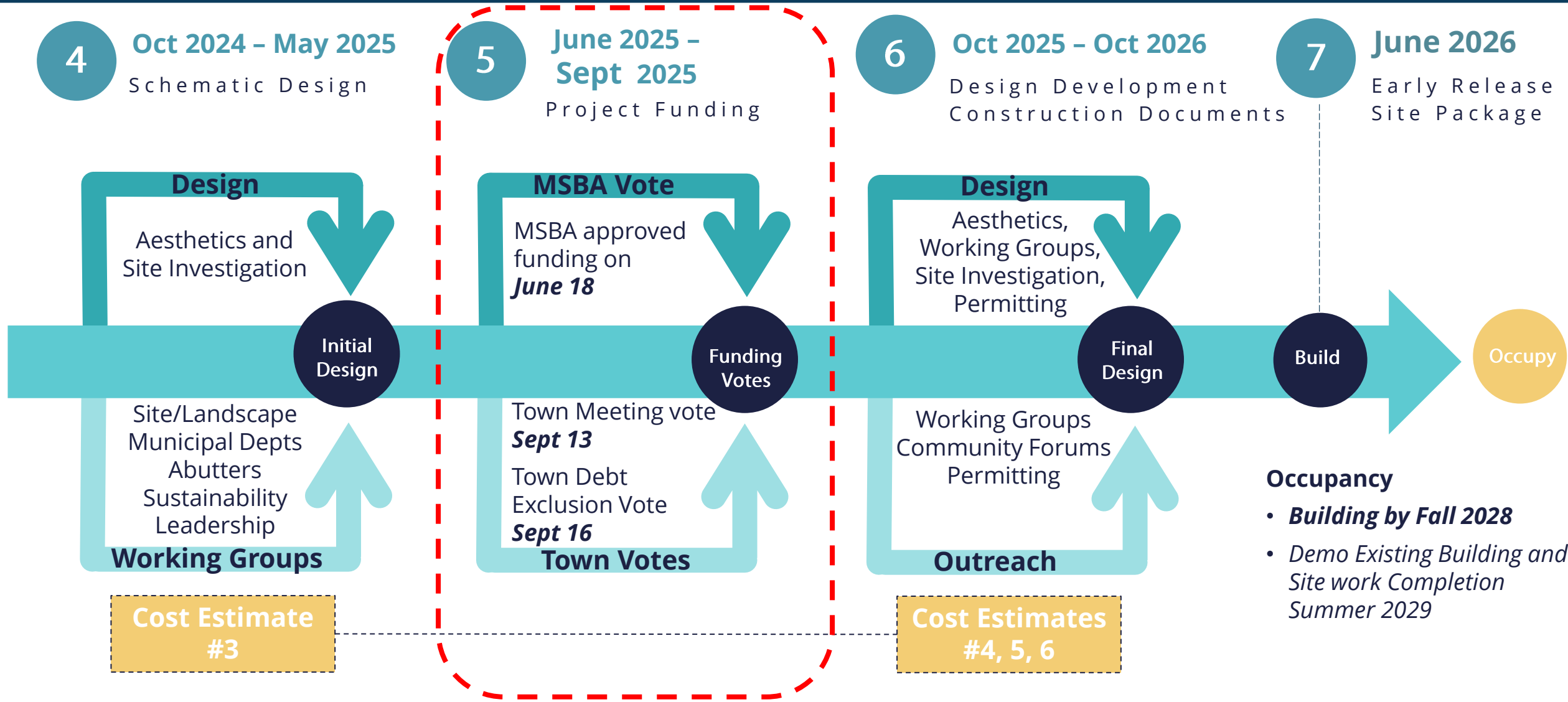


Site Planning

Update

Site Exploration

Where We're Going: Design Development



Occupancy

- ***Building by Fall 2028***
- *Demo Existing Building and Site work Completion Summer 2029*

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MOTOR CORTEX (PHYSICAL)
CIRCUITOUS CAMPUS PATH
CONNECTING PROGRAMS



2A OPEN PLAY
MOTOR CORTEX (PHYSICAL)





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MOTOR CORTEX (PHYSICAL)





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terraink
landscape architecture

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NORTH

Wilmington . Massachusetts
Schematic Design Phase
February 2025



Floor Plan Update

Floor Plan Review



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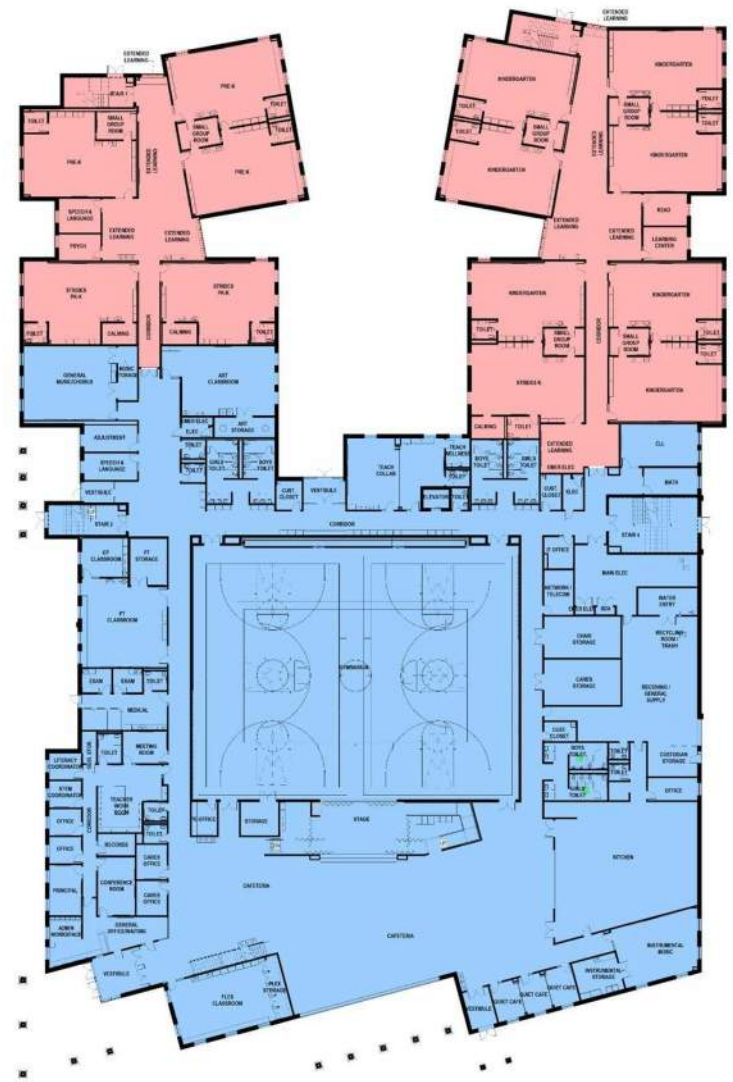


Second Floor

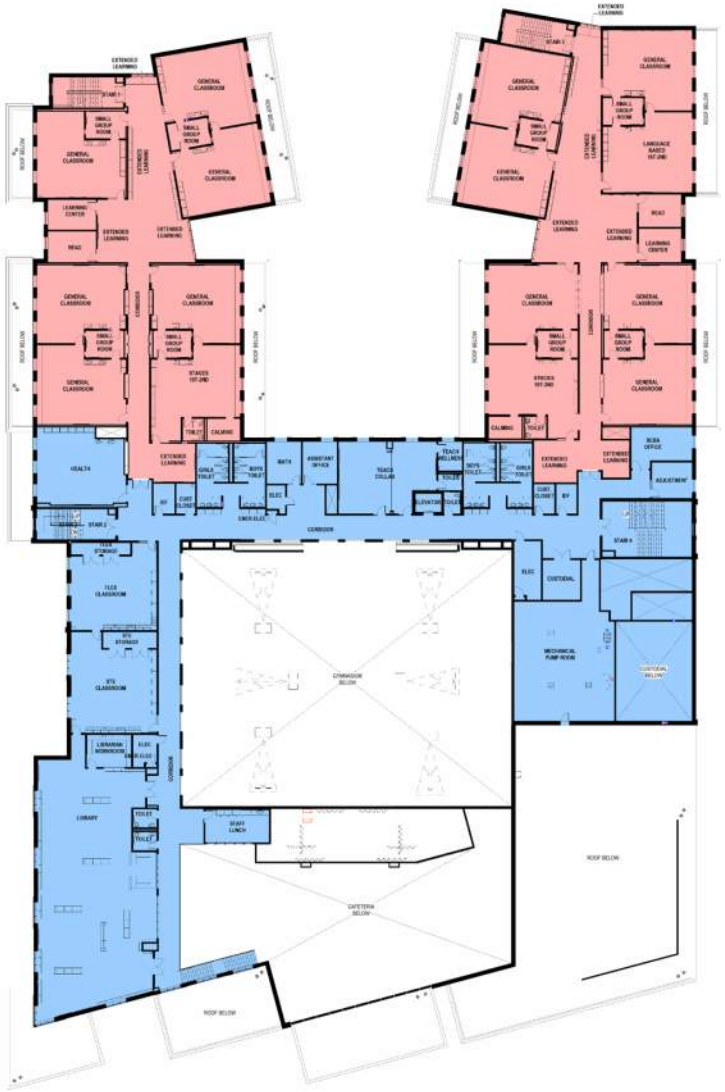


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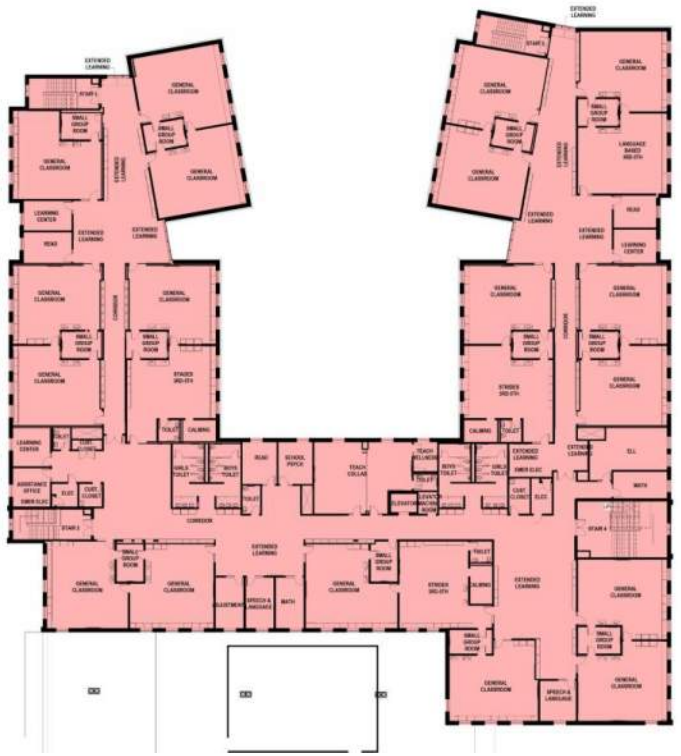
Floor Plan Review



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Second Floor



Third Floor

Public

Private

Supporting Education Through Design

Cost Overview



Preliminary Design Program

Estimated Project Cost Range

$194.0M – $214.5M
(March 2024)

$1,156 - $1,278 /SF

Preferred Schematic Report

Estimated Project Cost Range

$177.6M - $196.3M
(July 2024)

$1,086 - $1,200 /SF

Schematic Design

Estimated Project Cost

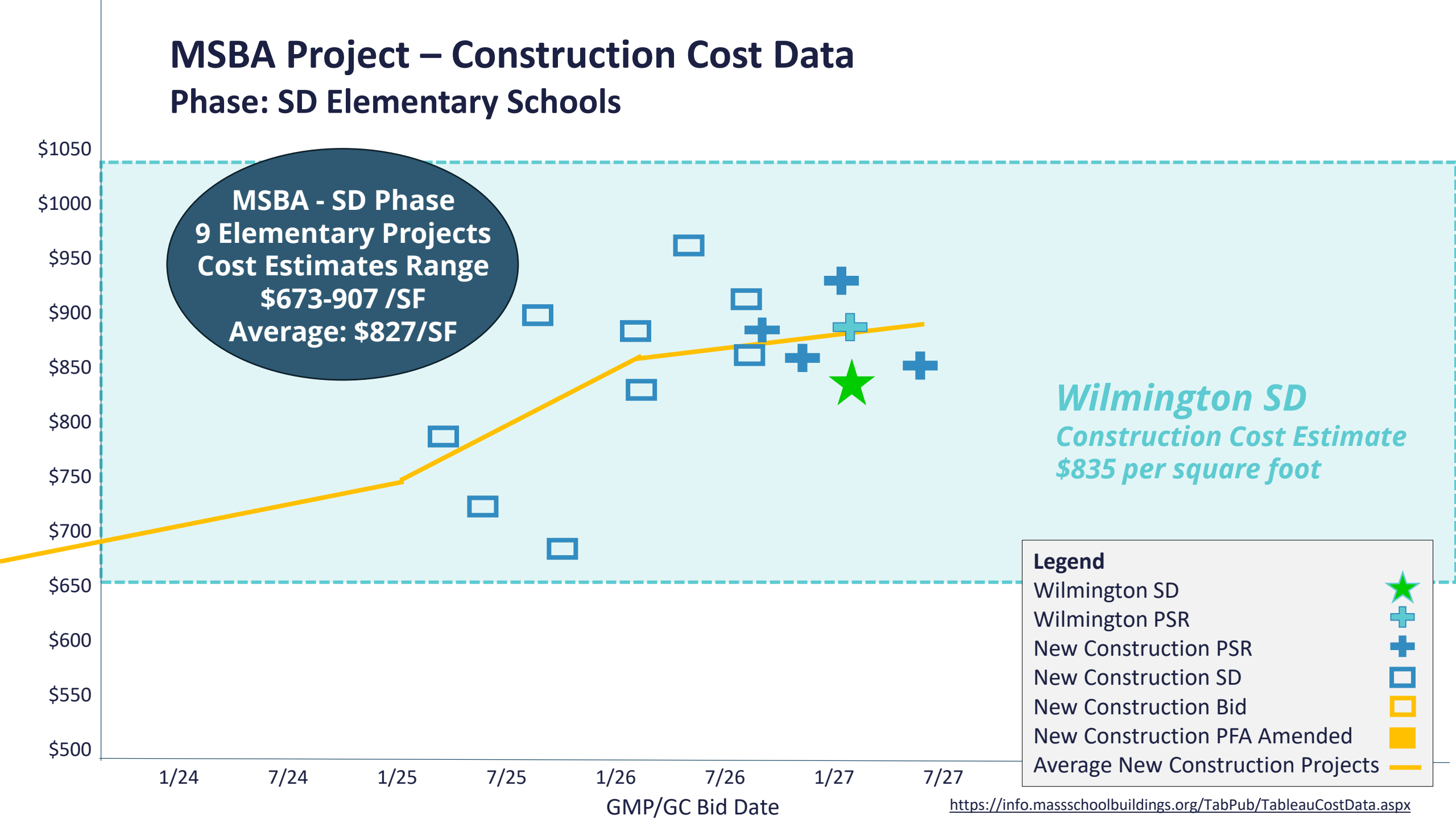
$173,265,626
(May 2025)

$1,050/SF

Within Budget!

MSBA Project – Construction Cost Data

Phase: SD Elementary Schools



https://info.massschoolbuildings.org/TabPub/TableauCostData.aspx

Project Budget Detail

Schematic Design (SD)	Amount
Construction Budget	$137,743,666
Soft Costs at 25.8% of Construction	$ 35,521,960
Total Project Budget (SD)	**$173,265,626**
MSBA Approved Maximum Grant (54.78%)	$ (62,134,793)
Town Share	**$111,130,833**

Notes:

- ✓ MSBA increased grant rate in SD to 49.11 reimbursement rate points + 5.67 incentive points
- ✓ Soft costs increased to 25.8% of Construction to include additional contingencies

Wilmington Elementary School Finances at a Glance

Total Project Cost to be voted upon	**$173,265,626**
MSBA Approved Maximum Reimbursement	**$62,134,793**
Proposed Town Stabilization Fund Allocation	***$15,000,000***
Estimated Taxpayer Share	**$96,130,833**
Estimated Taxpayer Impact on $702,889 Home – 1st Year	**$422**
Estimated Taxpayer Impact on $702,889 Home - 30th Year	**$422**
Estimated Taxpayer Monthly Impact on $702,889 Home	**$35.17**

(1) Please note these are estimates and subject to change. The average assessed home value in Wilmington is currently $702,889 and changes annually.

(2) Project cost estimates based on a fixed payment 30-year bond.

(3) The Town's financial advisor has recommended we assume a **conservative** 4.5% interest rate.

Data provided as of June 23, 2025 for informational purposes only.

Community Outreach



Community Outreach Efforts

SBC Meetings
Community Forums
Water Bill Inserts
District Superintendent’s Newsletter
WCTV Wildcat Corner
Senior Center
Fun on the Fourth
School District Website
Project Specific Website with FAQs
Display Boards around Town
Town-Wide Communication of all project Information
Working Group Meetings with Municipal Depts. and Abutters

Next Steps:

- Community Forum #8 – Late Summer/Early Fall

Voting Information:

- **Saturday, September 13th, starts at 9 AM – Special Town Meeting at Wilmington High School**
- **Tuesday, September 16th – 8 AM – 8 PM –Debt Exclusion Vote – *early voting available; same day voting at precinct location***

Stay Connected



Stay Connected

Find updates on the District website - click on Wildwood Building Project Updates

Email questions/comments:
wildwoodprojectquestions@wpsk12.com

WCTV WILMINGTON COMMUNITY TELEVISION




Thank
You

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

School Building Committee Meeting #35

July 22, 2025

Massachusetts School Building Authority

Left Field

DORE + WHITTIER

FONTAINE



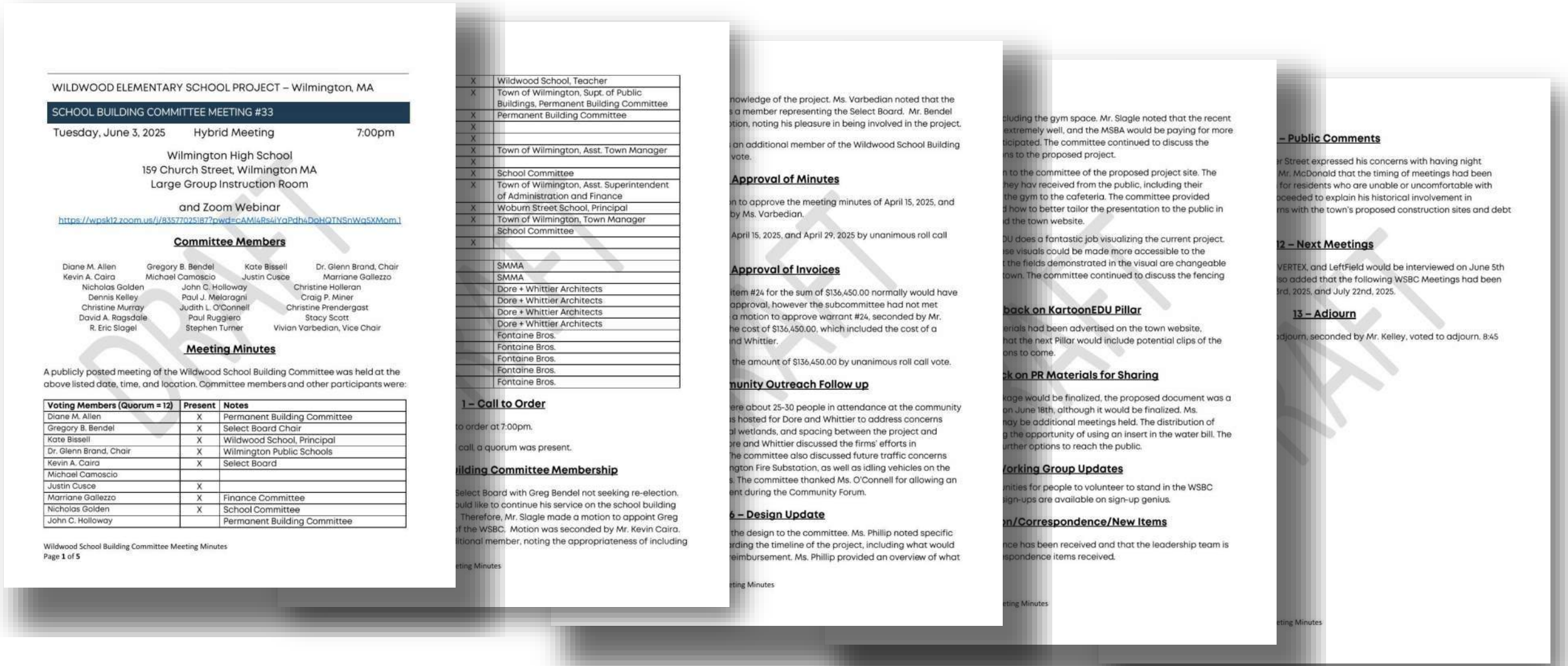
Agenda

1. Call to Order
2. Approval of Minutes
3. Administrative
    a. OPM Introduction
    b. Invoice Summary/ Warrant – Vote
    c. School Building Committee Membership
4. Design Update
    a. Fly-by Video and Physical Model
    b. KartoonEDU video
5. Working Group Update
    a. Public Relations Working Group
        i. Tax impact comparison
        ii. Cost/SF for building only, as compared to other MSBA projects
        iii. Cost/SF for construction as compared to other MSBA projects
        iv. Failed vote policy
        v. Timeline for failed projects to return to the MSBA pipeline
6. Discussion/Correspondence/New Items
7. Committee Questions
8. Public Comments
9. Next Meeting: Tuesday August 19, 2025
10. Adjourn

Approval of Minutes



Approval of Meeting Minutes | June 3, 2025



WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #33

Tuesday, June 3, 2025 Hybrid Meeting 7:00pm

Wilmington High School
159 Church Street, Wilmington MA
Large Group Instruction Room

and Zoom Webinar
https://wpsk12.zoom.us/j/83577025187?pwd=cAMI4Rs4iYaPdh4DoHQTNSnWq5XMom.1

Committee Members

Diane M. Allen, Kevin A. Caira, Nicholas Golden, Dennis Kelley, Christine Murray, David A. Ragsdale, R. Eric Slagel, Gregory B. Bendel, Michael Camoscio, John C. Holloway, Paul J. Melaragni, Judith L. O'Connell, Paul Ruggiero, Stephen Turner, Kate Bissell, Justin Cusce, Christine Holleran, Craig P. Miner, Christine Prendergast, Stacy Scott, Dr. Glenn Brand, Chair, Marriane Gallezzo, Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 12)	Present	Notes
Diane M. Allen	X	Permanent Building Committee
Gregory B. Bendel	X	Select Board Chair
Kate Bissell	X	Wildwood School, Principal
Dr. Glenn Brand, Chair	X	Wilmington Public Schools
Kevin A. Caira	X	Select Board
Michael Camoscio		
Justin Cusce	X	
Marriane Gallezzo	X	Finance Committee
Nicholas Golden	X	School Committee
John C. Holloway		Permanent Building Committee

Wildwood School Building Committee Meeting Minutes
Page 1 of 5

	X	Wildwood School, Teacher
	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
	X	Permanent Building Committee
	X	
	X	
	X	Town of Wilmington, Asst. Town Manager
	X	
	X	School Committee
	X	Town of Wilmington, Asst. Superintendent of Administration and Finance
	X	Woburn Street School, Principal
	X	Town of Wilmington, Town Manager
		School Committee
	X	
		SMMA
		SMMA
		Dore + Whittier Architects
		Dore + Whittier Architects
		Dore + Whittier Architects
		Dore + Whittier Architects
		Fontaine Bros.
		Fontaine Bros.
		Fontaine Bros.
		Fontaine Bros.
		Fontaine Bros.

1 – Call to Order

to order at 7:00pm.

call, a quorum was present.

ilding Committee Membership

Select Board with Greg Bendel not seeking re-election. ould like to continue his service on the school building Therefore, Mr. Slagle made a motion to appoint Greg f the WSBC. Motion was seconded by Mr. Kevin Caira. itional member, noting the appropriateness of including

eting Minutes

nowledge of the project. Ms. Varbedian noted that the s a member representing the Select Board. Mr. Bendel tion, noting his pleasure in being involved in the project.

an additional member of the Wildwood School Building vote.

Approval of Minutes

n to approve the meeting minutes of April 15, 2025, and by Ms. Varbedian.

April 15, 2025, and April 29, 2025 by unanimous roll call

Approval of Invoices

tem #24 for the sum of $136,450.00 normally would have approval, however the subcommittee had not met a motion to approve warrant #24, seconded by Mr. he cost of $136,450.00, which included the cost of a nd Whittier.

the amount of $136,450.00 by unanimous roll call vote.

munity Outreach Follow up

ere about 25-30 people in attendance at the community s hosted for Dore and Whittier to address concerns l wetlands, and spacing between the project and re and Whittier discussed the firms' efforts in he committee also discussed future traffic concerns ngton Fire Substation, as well as idling vehicles on the s. The committee thanked Ms. O'Connell for allowing an ent during the Community Forum.

6 – Design Update

the design to the committee. Ms. Phillip noted specific rding the timeline of the project, including what would eimbursement. Ms. Phillip provided an overview of what

eting Minutes

luding the gym space. Mr. Slagle noted that the recent extremely well, and the MSBA would be paying for more icipated. The committee continued to discuss the ns to the proposed project.

n to the committee of the proposed project site. The hey hav received from the public, including their the gym to the cafeteria. The committee provided d how to better tailor the presentation to the public in d the town website.

DU does a fantastic job visualizing the current project. se visuals could be made more accessible to the t the fields demonstrated in the visual are changeable town. The committee continued to discuss the fencing

back on KartoonEDU Pillar

erials had been advertised on the town website. hat the next Pillar would include potential clips of the ons to come.

k on PR Materials for Sharing

kage would be finalized, the proposed document was a on June 18th, although it would be finalized. Ms. ay be additional meetings held. The distribution of g the opportunity of using an insert in the water bill. The urther options to reach the public.

/orking Group Updates

nities for people to volunteer to stand in the WSBC sign-ups are available on sign-up genius.

n/Correspondence/New Items

nce has been received and that the leadership team is spondence items received.

eting Minutes

– Public Comments

r Street expressed his concerns with having night Mr. McDonald that the timing of meetings had been for residents who are unable or uncomfortable with oceeded to explain his historical involvement in rns with the town's proposed construction sites and debt

12 – Next Meetings

VERTEX, and LeftField would be interviewed on June 5th so added that the following WSBC Meetings had been 5rd, 2025, and July 22nd, 2025.

13 – Adjourn

djourn, seconded by Mr. Kelley, voted to adjourn. 8:45

eting Minutes

Approval of Meeting Minutes | June 10, 2025

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #34

Tuesday, June 10, 2025 Remote Meeting 6:30pm

Zoom Webinar

https://wpsk12.zoom.us/j/83577025187?pwd=cAMl4Rs4iYqPdh4DoHQTNSnWq5XMom.1

Committee Members

Diane M. Allen	Gregory B. Bendel	Kate Bissell	Dr. Glenn Brand, Chair
Kevin A. Caira	Michael Camoscio	Justin Cusce	Marriane Gallezzo
Nicholas Golden	John C. Holloway	Christine Holleran	
Dennis Kelley	Paul J. Melaragni	Craig P. Miner	
Christine Murray	Judith L. O'Connell	Christine Prendergast	
David A. Ragsdale	Paul Ruggiero	Stacy Scott	
R. Eric Slagel	Stephen Turner	Vivian Varbedian, Vice Chair	

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Dr. Glenn Brand, Chair	X	Wilmington Public Schools
Kevin A. Caira		Select Board
Michael Camoscio		
Justin Cusce		
Marriane Gallezzo	X	Finance Committee
Nicholas Golden	X	School Committee
John C. Holloway		Permanent Building Committee
Christine Holleran	X	Wildwood School, Teacher
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner		

Christine Murray		
Judith L. O'Connell	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	X	
David A. Ragsdale	X	School Committee
Paul Ruggiero	X	Town of Wilmington, Asst. Superintendent of Administration and Finance
Stacy Scott	X	Woburn Street School, Principal
R. Eric Slagel	X	Town of Wilmington, Town Manager
Stephen Turner	X	School Committee
Vivian Varbedian, Vice Chair	X	
Other Participants		
Donald Walter		Dore + Whittier Architects
Lee P. Dore		Dore + Whittier Architects
Rani Philip		Dore + Whittier Architects
Bryce Taft		Dore + Whittier Architects
David Fontaine, Jr.		Fontaine Bros.
Rob Day		Fontaine Bros.
Mark Abdella		Fontaine Bros.
Chelsey Mutrie		Fontaine Bros.
Chad "Ecuyer		Fontaine Bros.

1 – Call to Order

Ms. O'Connell called the meeting to order at 6:30pm.

Ms. Varbedian called a verbal roll call, a quorum was present.

2 – Review of the Results of the Owner's Project Manager (OPM) Interviews

Ms. O'Connell informed the committee that there had been nine submissions, and with the help of the review committee, three firms were selected for interviews, Colliers, VERTEX, and LeftField. Ms. O'Connell detailed the review committees process and ranking system to arrive at their choice of the top three. Interviews were conducted on June 6th, 2025, at which time each firm was evaluated once again. The group had concluded that they would recommend LeftField. Ms. O'Connell noted that all three firms were highly qualified, however LeftField stood out and would be well placed with Wilmington. Ms. O'Connell also detailed LeftField's involvement with similar projects as well as with Dore and Whittier and Fontaine Bros. The review committee provided their comments regarding their selection as well. The committee continued to discuss the review committee's selection.

3 – Vote to Recommend a Finalist as the Owner's Project Manager (OPM)

Ms. O'Connell entertained a motion to select LeftField as the new OPM. A motion was made by Mr. Turner, seconded by Mr. Golden, and unanimously:

VOTED: To select LeftField as the new OPM.

4 – Discussion / New Items

Ms. O'Connell reminded the committee that the project will go before the MSBA on June 18th, 2025. Ms. O'Connell also reminded the committee of the SignUpGenius for those who would like to volunteer at the project's booth at Fun on the Fourth.

Mr. Bendel took a moment to congratulate Mr. Slagle for reaching one year as Town Manager with the Town, acknowledging that he and the Assistant Town Manager were doing a fantastic job.

Ms. Prendergast reminded the committee of the importance of the committee to participate in the project's booth for Fun on the Fourth.

5 – Adjourn

Mr. Golden made a motion to adjourn, seconded by Mr. Kelley, it was unanimously voted to adjourn. 7:04 pm.

OPM Introduction



OWNER'S PROJECT MANAGEMENT SERVICES

Wildwood Elementary School
Wilmington, MA

June 5, 2025

LeftField



ABOUT US

THE RIGHT CHOICE IN PROJECT MANAGEMENT

- Established in 2007 by Jim Rogers
- Locally owned with 49 employees
- Significant MSBA experience with elementary schools
- Experience with both DBB and CM-at-Risk methodologies
- Boston, Providence (RI), Rockland, Worcester, and Manchester (NH)

Depth of our Firm

- 1 Principal
- 33 Project Managers
- 6 Clerks
- 3 MEP Specialists
- 1 Design Review Expert
- 1 Cost Manager
- 1 Education Liaison
- 1 Business Strategy Director
- 1 Administration Director
- 1 Marketing Coordinator

Services Provided

- Owner's Representation
- Educational Programming
- Clerk of the Works
- Cost Management and Reporting
- Construction Administration
- Relocation Management
- Audit Services
- MEP Expertise

75% of business from repeat clients

$4.4B in active public projects

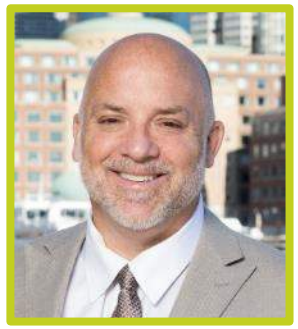
92% percentage of our work in the K-12 & higher ed market

97% employee retention

30% women/ minority employees

PROJECT TEAM

CORE TEAM



Jim Rogers
Principal in Charge



David Saindon
Project Director



Craig DiCarlo
Project Executive



Brian Johnson
On-Site Project Rep. /
Project Manager

SUBCONSULTANTS

Cost Estimating

PM&C

Code Consulting

JENSEN HUGHES

Building Envelope Consulting

BUILDING ENCLOSURE ASSOCIATES, LLC

CORE TEAM OF EXPERTS



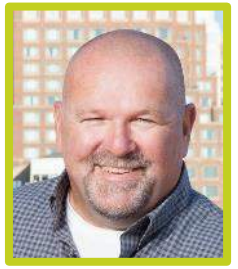
Brian Dakin
Project Advisor



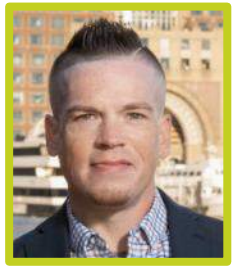
Kevin Sullivan
Community Outreach
Advisor



Dan McSweeney
Cost Manager



Jay Faxon
MEP Expert



Josh Brewster
Relocation Manager

MEP EXPERIENCE
PUBLIC PROJECTS – K-12 SCHOOLS

MEP Services

- Drawing and plan review
- Equipment inspection as it arrives on site
- Field inspections during construction to insure proper installation
- Equipment useful life maximization
- Existing buildings, mechanical assessments and review
- New building operations training for staff





Clients

- Billerica Memorial High School
- BMC Durfee High School
- Nashoba Valley Regional Technical High School
- Waltham High School
- Brown Elementary School
- Florence-Roche Elementary School
- Billerica Howe School
- Brookline Driscoll K-8 School

HVAC Assessments & Studies Clients

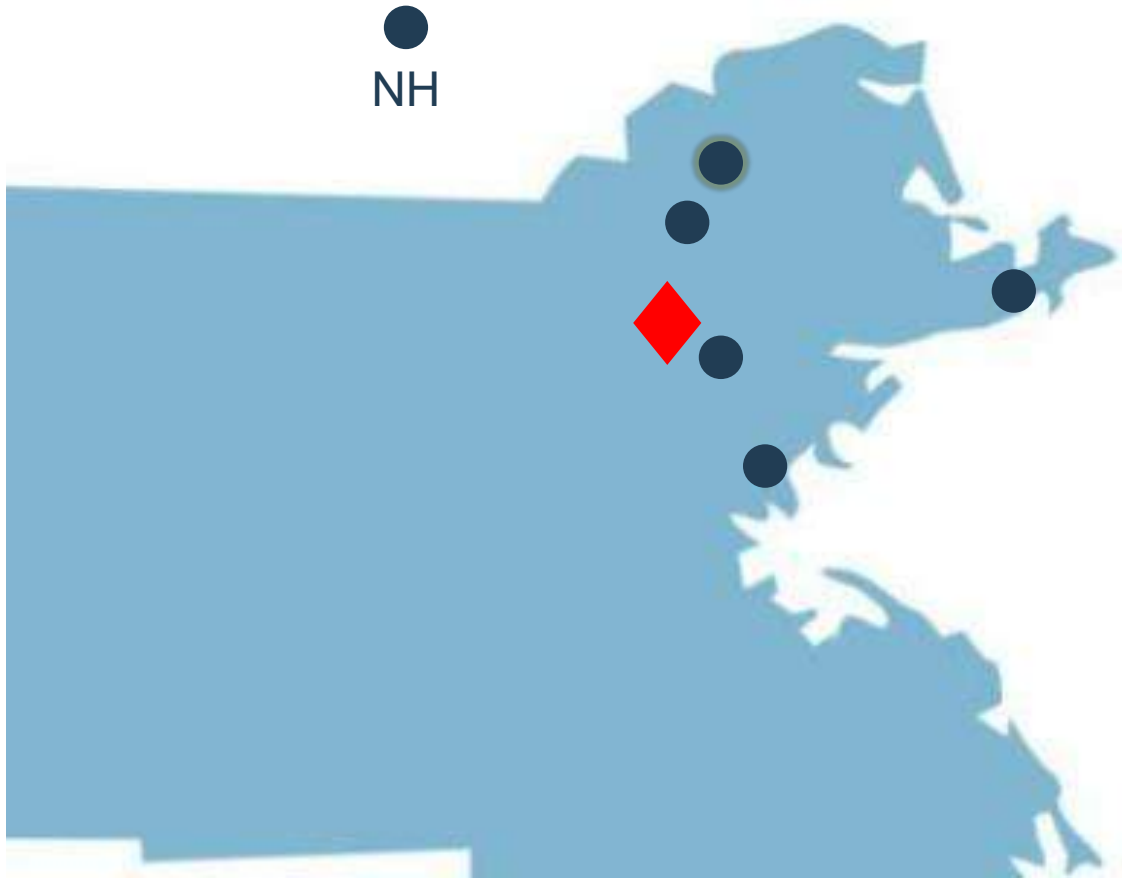
- Whittier Regional Vocational Technical High School
- Old Rochester Regional School District Schools
- Salem Public Schools
- Fall River Public Schools
- Haverhill Public Schools

PROJECT TEAM

LOCAL PROJECT TEAM

Core Team Location

- Craig | Reading, MA [5 miles]
- David | North Andover, MA [8.5 miles]
- Jay | Haverhill, MA [19 miles]
- Brian D | Revere, MA [19 miles]
- Brian J | Gloucester, MA [35 miles]
- Josh | Merrimack, NH [37 miles]



PROJECT TEAM
LOCAL EXPERIENCE

Town of Chelmsford	High School Kitchen Renovation
Town of Chelmsford	Fire Stations #3 and #5
Town of Chelmsford	Parker Middle School
MSBA / Gloucester	O'Maley Innovation Middle School ARP
MSBA / Groton	Florence Roche Elementary School
Groton-Dunstable	MEP Review / Designer Procurement
City of Haverhill	Haverhill HVAC PM study
Haverhill Schools	Haverhill Mechanical Study (School Ventilation)
MSBA / Leominster	Fall Brook Elementary School
UMBA/UMass Lowell	McGauvran Hall Dining Renovation
UMBA/UMass Lowell	Fox Hall Elevator Modernization
UMass Lowell	45 Lawrence - Advancement
UMass Lowell	5 Lawrence - Outdoor Recreation/Bike Shop
UMass Lowell	Cumnock Hall
MSBA / Lowell	Bailey Elementary School ARP
MSBA / Lowell	Daley Middle School ARP
MSBA / Lowell	Greenhalge Elementary School ARP
MSBA / Lowell	McAuliffe Elementary School ARP
MSBA / Lowell	Rogers Early Learning Centre ARP
MSBA / Lowell	Sullivan Middle School ARP
MSBA / City of Lynn	Pickering Middle School
City of Lynn	Park Playground and Field Improvements
Lynn Health Center	Health Center MEP Assessment
Lynnfield	Huckleberry Hill & Summer Schools Expansion
Town of Lynnfield	ESCO Projects HVAC (Municipal Buildings)
MSBA / Marblehead	Brown Elementary School
Town of Marblehead	High School Roof Replacement
Town of Marblehead	Schools HVAC Assessment
Town of Marblehead	HVAC Designer Procurement
City of Nashua	Public Works Garage
MSBA / Revere	Garfield School
MSBA / Revere	Revere High School
City of Revere	Multiple School Repairs
MSCBA / Salem State	Marsh Hall
MSCBA / Salem State	Atlantic Hall
MSCBA / Salem State	Gassett Fitness Center
MSCBA / Salem State	Sophia Gordon Center
MSCBA / Salem State	Viking Hall
MSCBA / Salem State	Parking Garage
MSCBA / Salem State	Salem State Summer Projects (2020)
Salem HS	School Ventilation (MEP) Support (2020)
Salem	Witchcraft Heights Chiller Replacement
MSCBA / Salem State	Peabody and Atlantic Hall Hot Water (2021)
MSCBA / Salem State	Bowditch Hot Water Replacement 2022
MSBA / Tyngsborough	Tyngsborough Middle School
MSBA / Wakefield	Walton Elementary School
Wakefield	Wakefield Public Safety Facility
MSBA / Wakefield	Wakefield Memorial High School
MSBA / Wareham	Wareham Middle School ARP
MSBA / Wareham	Wareham High School ARP
MSBA / Westford	Abbot Elementary School
MSBA / NVTHS RSD	Nashoba Valley Technical High School ARP
MSBA / Billerica	Billerica Memorial HS
Town of Billerica	PHR Recreation Complex
Town of Billerica	Pinehurst Fire Station
Town of Billerica	Vining & Ditson Demo
Town of Billerica	Library HVAC
Town of Billerica	Town Hall Chiller,
Town of Billerica	Pollard Field,
Town of Billerica	Vining Field
Town of Billerica	Recreation Building
Town of Billerica	North Fire Station
Town of Billerica	Police Station
Town of Billerica	Old Ditson Park
Town of Billerica	Billerica Skate Park

PROJECT EXPERIENCE
ELEMENTARY SCHOOLS

Non-MSBA



Driscoll Elementary School
Brookline, MA

PROJECT STATS

CLIENT	TOWN OF BROOKLINE
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	154,000 SF
PROJECT COST	$115 MILLION
SCHEDULE	COMPLETION BY JUNE 2024
ARCHITECT	JONATHAN LEVI ARCHITECTS
CONTRACTOR	GILBANE BUILDING COMPANY



John R. Pierce School
Brookline, MA

PK-8

PROJECT STATS

CLIENT	TOWN OF BROOKLINE
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	170,000 SF
PROJECT COST	$212 MILLION
SCHEDULE	COMPLETION BY MARCH 2027
ARCHITECT	MILLER DYER SPEARS/SASAKI
CONTRACTOR	CONSIGLI

Add/Reno



Huckleberry Hill and Summer Street Elementary Schools
Lynnfield, MA

K-4

PROJECT STATS

CLIENT	TOWN OF LYNNFIELD
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	DESIGN-BID-BUILD
BUILDING AREA	145,850 GFA
PROJECT COST	$18.7 MILLION
SCHEDULE	AUGUST 2022
ARCHITECT	TAPPE ASSOCIATES
CONTRACTOR	CASTAGNA CONSTRUCTION

PROJECT EXPERIENCE
ELEMENTARY SCHOOLS

Multiple Enrollments Studied



Brown Elementary School
Marblehead, MA

PROJECT STATS

CLIENT	TOWN OF MARBLEHEAD
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	82,000 SF
PROJECT COST	$56 MILLION
COMPLETION	DECEMBER 2021
ARCHITECT	RAYMOND DESIGN ASSOCIATES
CONTRACTOR	GILBANE BUILDING COMPANY

Multiple Enrollments Studied



Florence Roche Elementary
Groton, MA

PROJECT STATS

CLIENT	GROTON-DUNSTABLE RSD
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	110,000 SF
PROJECT COST	$89 MILLION
COMPLETION	AUGUST 2024
ARCHITECT	STUDIO G ARCHITECTS
CONTRACTOR	GILBANE BUILDING COMPANY

Multiple Enrollments Studied



Woodland Elementary School*
Milford, MA

PROJECT STATS

CLIENT	TOWN OF MILFORD
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	132,5000 SF
PROJECT COST	$60.9 MILLION
COMPLETION	JULY 2016
ARCHITECT	HMFH ARCHITECTS
CONTRACTOR	SHAWMUT

PROJECT EXPERIENCE
MIDDLE SCHOOLS

Multiple Enrollments Studied



William H. Galvin Middle School
Canton, MA

PROJECT STATS

CLIENT	TOWN OF CANTON
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	TBD
BUILDING AREA	176,000 SF
PROJECT COST	$175 MILLION (EST.)
SCHEDULE	STUDY COMPLETION IN 2024
ARCHITECT	Ai3 ARCHITECTS
CONTRACTOR	TBD

Multiple Enrollments Studied



Pickering Middle School
Lynn, MA

PROJECT STATS

CLIENT	CITY OF LYNN
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	183,000 SF
PROJECT COST	$175 MILLION
SCHEDULE	COMPLETION BY FALL 2027
ARCHITECT	RAYMOND DESIGN ASSOCIATES
CONTRACTOR	CONSIGLI CONSTRUCTION



Tyngsborough Middle School
Tyngsborough, MA

PROJECT STATS

CLIENT	TOWN OF TYNGSBOROUGH
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	112,000 SF
PROJECT COST	$83 MILLION
SCHEDULE	COMPLETION BY 2026
ARCHITECT	JCJ ARCHITECTURE
CONTRACTOR	FONTAINE BROS., INC.

PROJECT EXPERIENCE

HIGH SCHOOLS



Billerica Memorial High School
Billerica, MA

PROJECT STATS

CLIENT	TOWN OF BILLERICA
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	326,000 SF
PROJECT COST	$176 MILLION
COMPLETION	OCTOBER 2020
ARCHITECT	PERKINS+WILL
CONTRACTOR	SHAWMUT



BMC Durfee High School
Fall River, MA

PROJECT STATS

CLIENT	CITY OF FALL RIVER
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	501,330 SF
PROJECT COST	$263 MILLION
COMPLETION	OCCUPIED SEPTEMBER 2021
ARCHITECT	Ai3 ARCHITECTS
CONTRACTOR	SUFFOLK



Waltham High School
Waltham, MA

PROJECT STATS

CLIENT	CITY OF WALTHAM
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	400,000 SF
PROJECT COST	$375 MILLION
SCHEDULE	COMPLETION BY 2024
ARCHITECT	SYMMES, MAINI & MCKEE
CONTRACTOR	CONSIGLI

PROJECT EXPERIENCE

HIGH SCHOOLS



Agawam High School
Agawam, MA

PK

PROJECT STATS

CLIENT	TOWN OF AGAWAM
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	275,000 SF
PROJECT COST	$231 MILLION (EST.)
SCHEDULE	STUDY COMPLETION IN 2024
ARCHITECT	FLANSBURGH
CONTRACTOR	TBD



Revere High School
Revere, MA

PROJECT STATS

CLIENT	CITY OF REVERE
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	APPROX. 420,000 SF
PROJECT COST	$497 MILLION (EST.)
SCHEDULE	DESIGN BY JULY 2024
ARCHITECT	PERKINS EASTMAN
CONTRACTOR	CONSIGLI



Wakefield Memorial High School
Wakefield, MA

PROJECT STATS

CLIENT	TOWN OF WAKEFIELD
SERVICES	OWNER'S PROJECT MANAGER
DELIVERY METHOD	CM-AT-RISK (CH. 149A)
BUILDING AREA	260,000 SF
PROJECT COST	$275 MILLION
SCHEDULE	COMPLETION BY 2027
ARCHITECT	SYMMES, MAINI & MCKEE
CONTRACTOR	BOND BUILDING COMPANY

WHY LEFTFIELD

THE RIGHT CHOICE IN PROJECT MANAGEMENT

- Significant experience with elementary schools
  - MSBA schools
  - Addition/renovation and new construction
- Community outreach and engagement
- Our significant in-house MEP experience
- In-house education expert
- Locally-owned, independent firm whose reputation is built on our staff's good work. Ask around!



Invoices and Warrants



Warrant #25

Warrant No. 25

Project: Wildwood Early Childhood Center, Wilmington, MA
Date: Wednesday, July 16, 2025
Prepared by: LeftField

The School Building Committee for the Wildwood Early Childhood Center hereby authorizes the payment for the obligations incurred for the value received in services and for the materials shown below:

Vendor	Invoice No.	Invoice Date	Invoice Amount	ProPay Code	Balance After invoice
Dore & Whittier Architects, Inc. SITE SERVICES - ASR-3 Geo-Environmental	25	7/1/2025	$ 3,300.00	0204-0300	$ 10,536.90
		TOTAL	**$ 3,300.00**		

School Building Committee Membership



School Building Committee Membership Update

Twenty-four (24) voting members

Quorum = Thirteen (13)

Diane M. Allan
Gregory B. Bendel
Kate Bissell
Kevin A. Caira
Michael Camoscio
Justin Cusce
Marianne Gallezzo
Nicholas Golden
John C. Holloway
Dennis Kelley
Christine Holloran
Lilia Maselli
Paul J. Melaragni
Craig P. Miner
Christine Murray
Judith L. O'Connell, Committee Chair
Christine Prendergast
David A. Ragsdale
Paul Ruggiero
Stacy Scott
R. Eric Slagle
Dr. David L. Thomson
Stephen Turner
Vivian Varbedian, Committee Vice Chair

Design Update



Fly-By Video



KartoonEDU


Elementary School
Schematic Design
A New PK-5 School
Built on Site of Existing
North Intermediate School
WILMINGTON PUBLIC SCHOOLS



Working Group Updates



Public Relations
Community Outreach

Select Board Meeting - 6/23/25
Fun on the Fourth

Agenda Items:

- Tax impact comparison
- Cost/SF for building only, as compared to other MSBA projects
- Cost/SF for construction as compared to other MSBA projects
- Failed vote policy
- Timeline for failed projects to return to the MSBA pipeline

Upcoming:
Water Bill Inserts
Senior Center
Project Website with updated FAQs
Display Boards around Town

Tax Impact Comparison

Tax Impact Comparison of Recent MSBA Projects

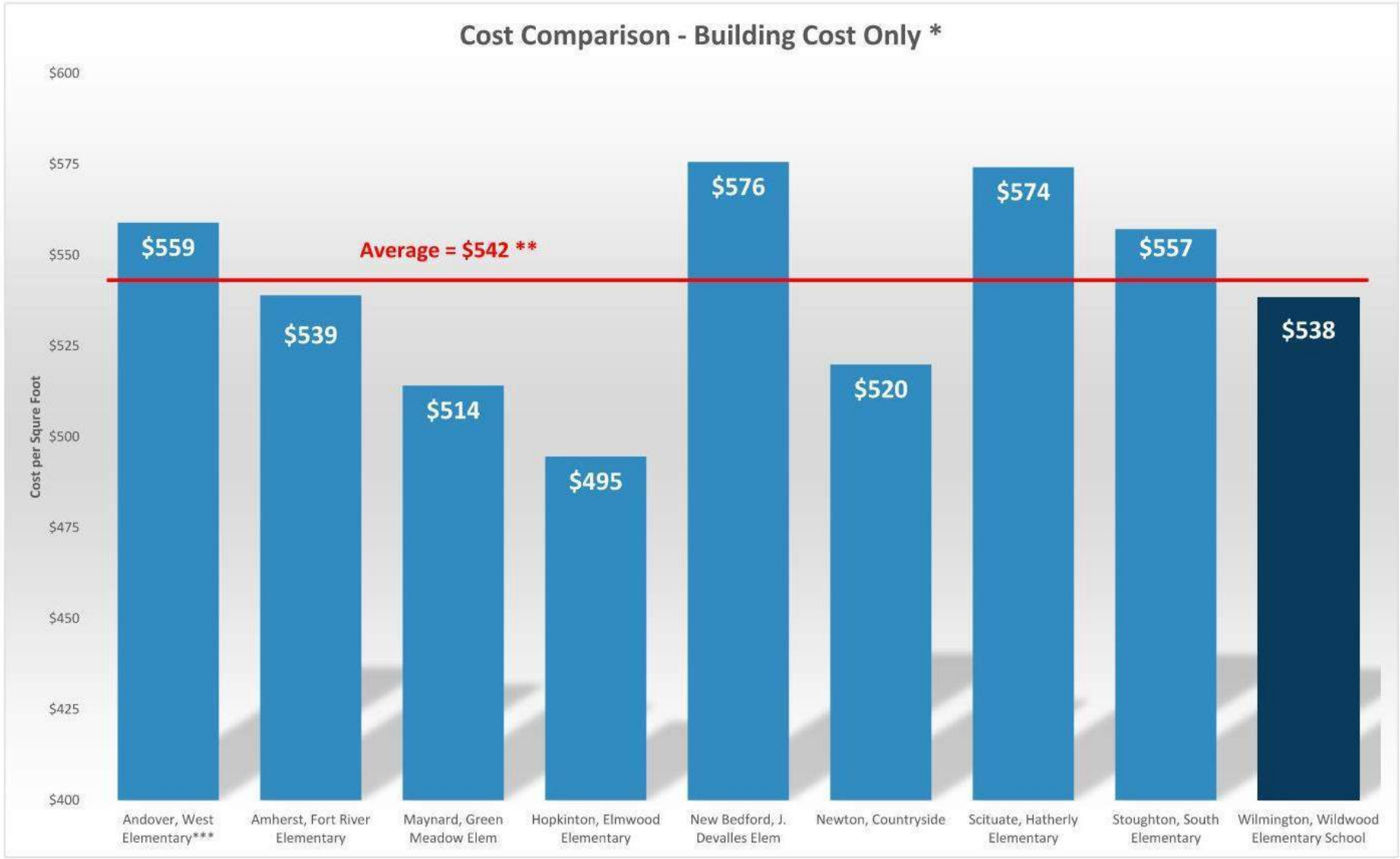
District	School	Average Home Value	Tax Impact Per Year *	Tax Impact Per Month	Local Approval Date
Wilmington	**Wildwood ES**	**$702,889**	**$422**	**$35**	**Sep-25**
Burlington	Burlington HS	$783,000	$1,102.20 – $1,202.40	$91.85 – $100.20	Sept 2025 Town Meeting; Jan 2026 Debt Exclusion
Lexington	Lexington HS	$1,416,000	$300 in 1st yr to $1,749 in 11th yr **	$25 in 1st yr to $145.75 in 11th yr	Nov/Dec 2025
North Attleborough	North Attleboro HS	$570,000	$969	$81	3-Jun-25
Reading	Killam ES	$890,000	$714	$60	May-25
Southborough	Neary ES	$900,000	$1,207	$101	May-25
Burlington	Fox Hill ES	$725,782	$217	$18	Spring 2025
North Adams	Greylock ES	+/- $200,000	$270	$23	Oct-24
Scituate	Cushing-Hatherly ES	$921,000	$866 in 1st yr to $414 in 25th yr	$72.17 in 1st yr to $34.50 in 25th yr	May-24
Clinton	Clinton MS	$403,286	$605	$50	Jun-24
Agawam	Agawam High School	$335,714	$669 1st yr to $305 30th yr – average $465	$55.75 1st yr to $25.42 30th yr	Jun-24
Wakefield	Wakefield Memorial HS	+/-$800,000	$1,600 +/- 1st yr to $672 30th year	$133.33 1st yr to $56 30th yr	Mar-23
Canton	Galvin Middle School	$725,000	$753 1st year to $587 30th year (highest – not determined yet)	$62.75 1st yr to $48.91 30th yr	Nov-24

* The average monthly tax impact among all 13 Districts, excluding Wilmington, is **$63**. Where Districts provided varying tax figures over the period of the bond, said figures have been averaged.

** Lexington has a Capital Stabilization reserve fund of over $40 million and a levy debt capacity to absorb a portion of the annual debt service. At this time, no additional information is available beyond fiscal year 2038.

Building Cost

Cost/SF as Compared to Other MSBA Projects



* Building Construction Cost values represent building costs only; abatement, demolition, site development, construction mark-ups, and other miscellaneous construction related costs have been EXCLUDED. To level projects from preceding years, escalation adjustments have been made from the date of MSBA Board Approval to the midpoint of construction for the Wildwood Elementary School project. All project data was collected from the MSBA website.

** Wilmington Wildwood Elementary School building cost has NOT been included in the average.

*** Andover West Elementary, Total Construction Cost at Schematic Design was estimated at $119,178,907 but Total Construction Cost at the date of the Guaranteed Maximum Price (GMP) was $136,311,316, the latter has been included above; Building Construction Cost at Schematic Design was estimated at $72,338,002 but Building Construction Cost at the date of the GMP was $91,020,733, the latter has been included above. The values have been escalated from the date of the GMP.

Total Construction Cost

Cost/SF as Compared to Other MSBA Projects



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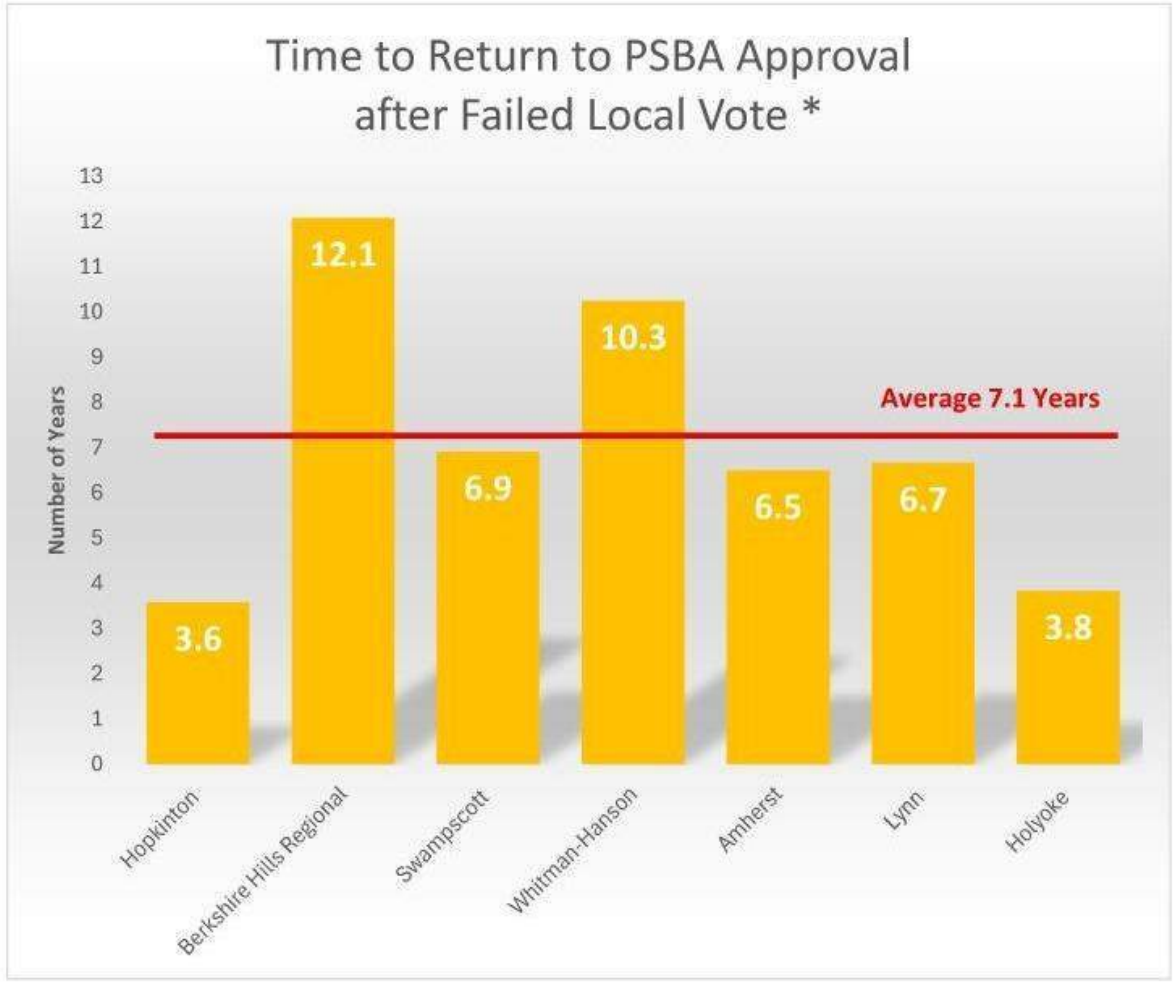
MSBA Failed Vote Policy

[excerpt – emphasis added]

In the event that a school district fails to approve funding for a proposed project within the 120-day deadline, by no later than 10 business days following the failed vote, the school district must submit to the MSBA a plan that: (1) presents the vote results, (2) explains the school district's understanding of the reason(s) for the failed vote, and (3) sets forth the school district's plan to remedy the failed vote and a suggested timeline for such a remedy. The MSBA will review the plan and determine whether it can continue to set aside MSBA funds for the proposed project. **However, a failed local vote likely will result in the school district being required to submit a new Statement of Interest to the MSBA and await an invitation from the MSBA to enter the Eligibility Period phase of the MSBA's process.**

The full MSBA policy can be downloaded here:
https://www.massschoolbuildings.org/sites/default/files/edit-contentfiles/Guidelines_Forms/Vote_Requirements/Policy_Statement_revote_fail_feas_study.pdf

Timeline for a failed Project to return to the MSBA Capital Pipeline



* All data was collected from the MSBA website.



* All data was collected from the MSBA website.

Voting Information:

Saturday, September 13th, starts at 9 AM – Special Town Meeting at Wilmington High School

Tuesday, September 16th – 8 AM – 8 PM –Debt Exclusion Vote – ***early voting available; same day voting at precinct location***

Agenda

1. Call to Order
2. Approval of Minutes
3. Administrative
    a. OPM Introduction
    b. Invoice Summary/ Warrant – Vote
    c. School Building Committee Membership - Vote
4. Design Update
    a. Fly-by Video and Physical Model
    b. KartoonEDU video
5. Working Group Update
    a. Public Relations Working Group
        i. Tax impact comparison
        ii. Cost/SF for building only, as compared to other MSBA projects
        iii. Cost/SF for construction as compared to other MSBA projects
        iv. Failed vote policy
        v. Timeline for failed projects to return to the MSBA pipeline
6. **Discussion/Correspondence/New Items**
7. **Committee Questions**
8. **Public Comments**
9. **Next Meeting: Tuesday August 19, 2025**
10. **Adjourn**

Discussion/ Correspondence/ New Items



Committee Questions



Public Comment



THANK YOU!

Massachusetts School Building Authority

WILMINGTON, MASS. INCORPORATED 1730

Left Field
PROJECT MANAGEMENT

dw
DORE + WHITTIER

FONTAINE

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

Senior Center Update

August 26, 2025

Massachusetts School Building Authority

DORE + WHITTIER

FONTAINE



Agenda:

Introductions

MSBA Process and Schedule

The Big Picture

The Project Need

Schematic Design Update

Cost Update

Stay Connected



Introductions



The Team

Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Program Administrator & Funding Partner

School Committee

School Building Committee

LeftField

*Pending MSBA Approval

Owner's Project Manager (OPM)

DORE + WHITTIER

Designer (Architect)

FONTAINE

Construction Manager (CM)

MSBA Process and Schedule



How we got here...
Wilmington Elementary Schools

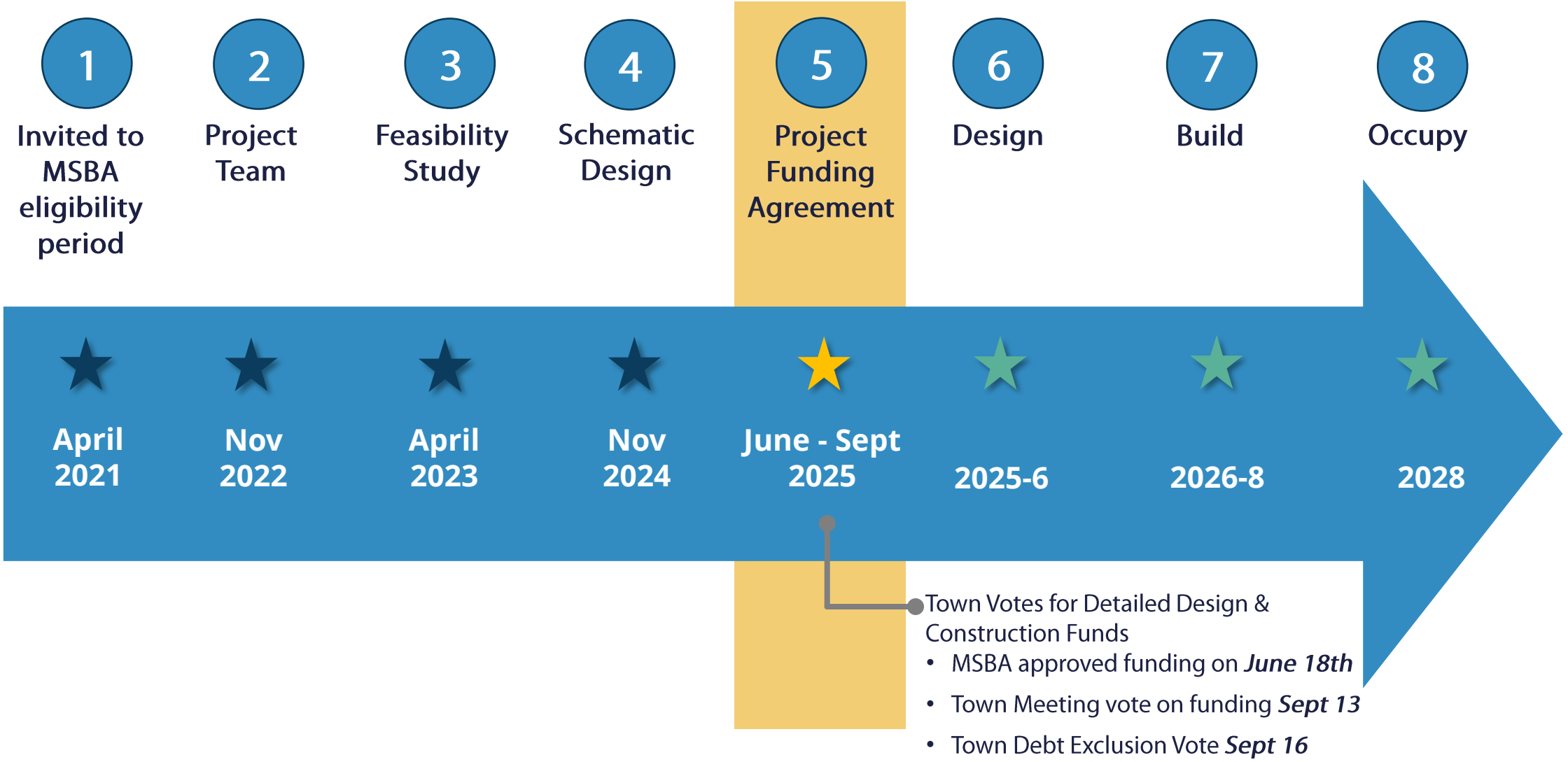
- All six elementary schools are of similar vintage 1950s/1960s and experience space deficiencies in their educational programs
- Each school needs significant upgrades, including HVAC, plumbing, electrical, exterior windows and envelope, accessibility, etc.
- **Wildwood** was determined to be in the most need of the six district elementary schools.



Wildwood Early Childhood Center
1955 (**68 yrs**)

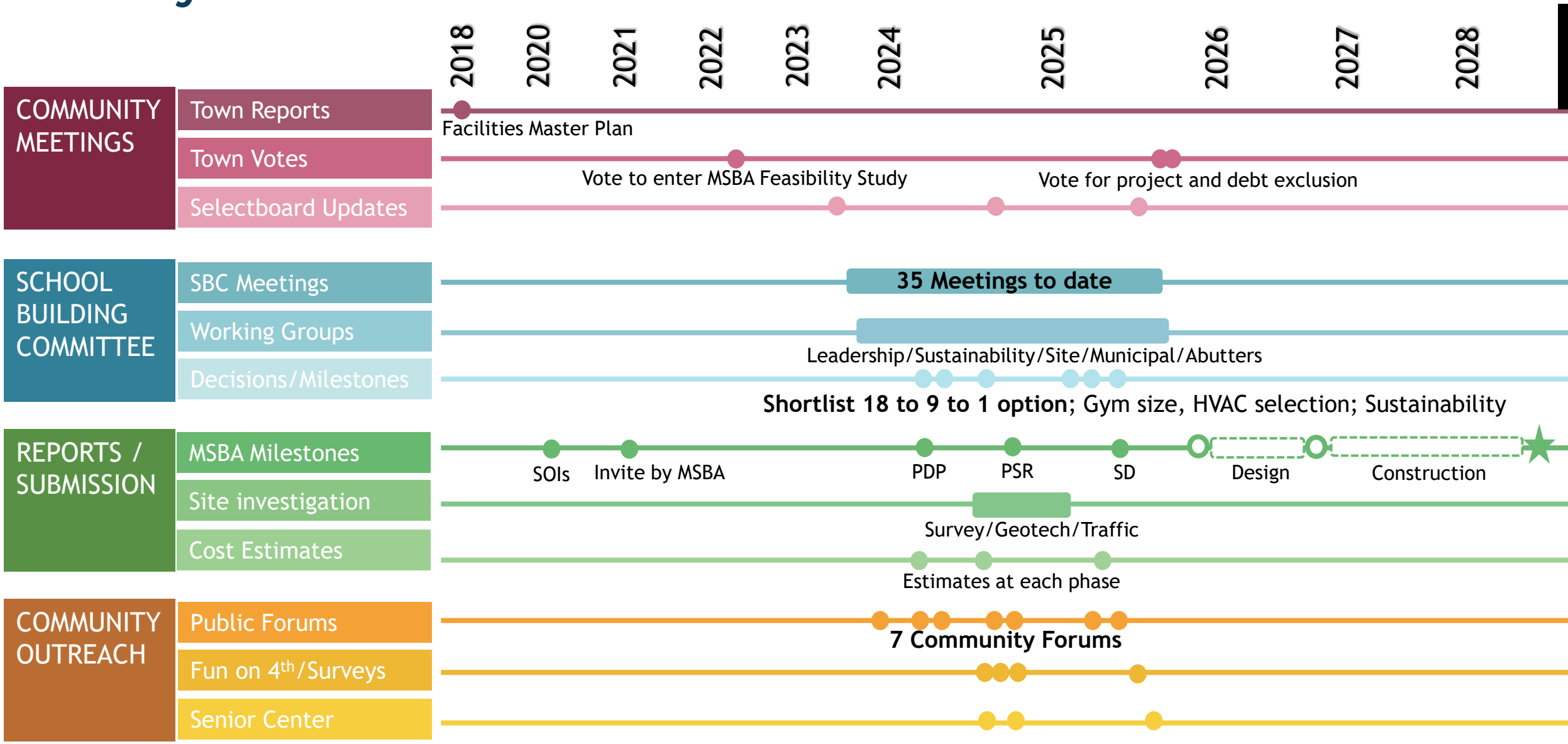
MSBA Process

Step-by-Step



Project Timeline

History and Milestones

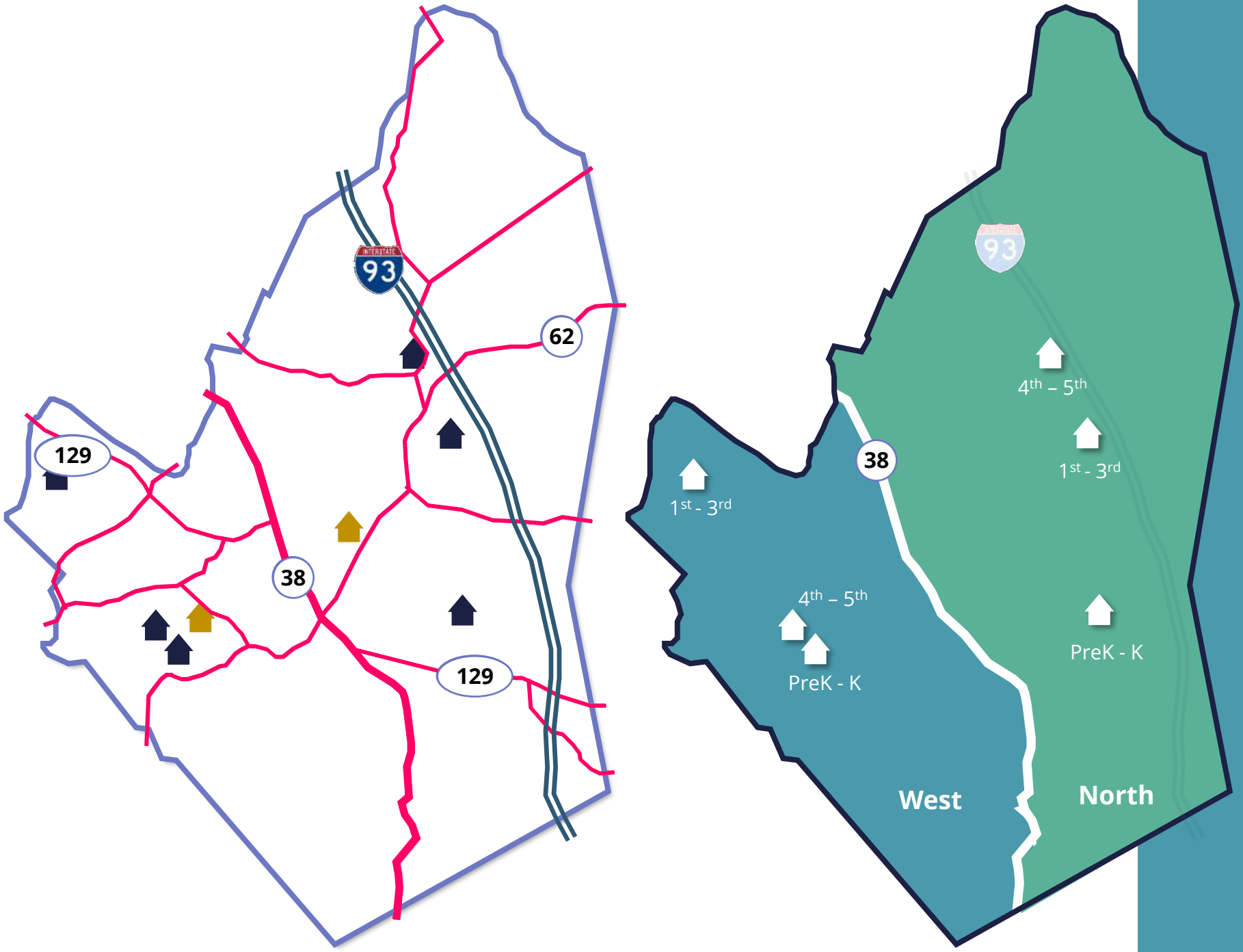


The Big Picture

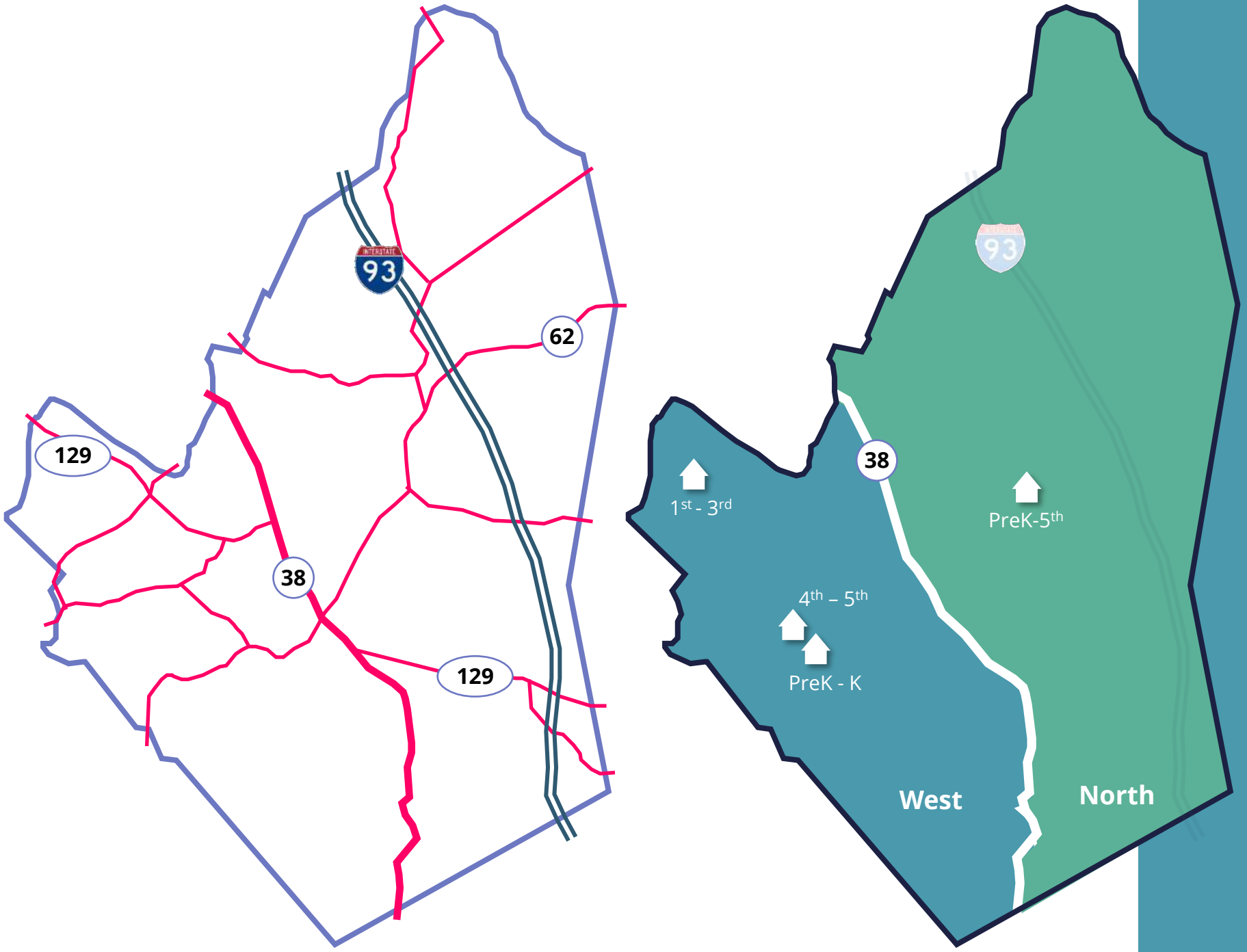


The Big Picture

A District-Wide Solution



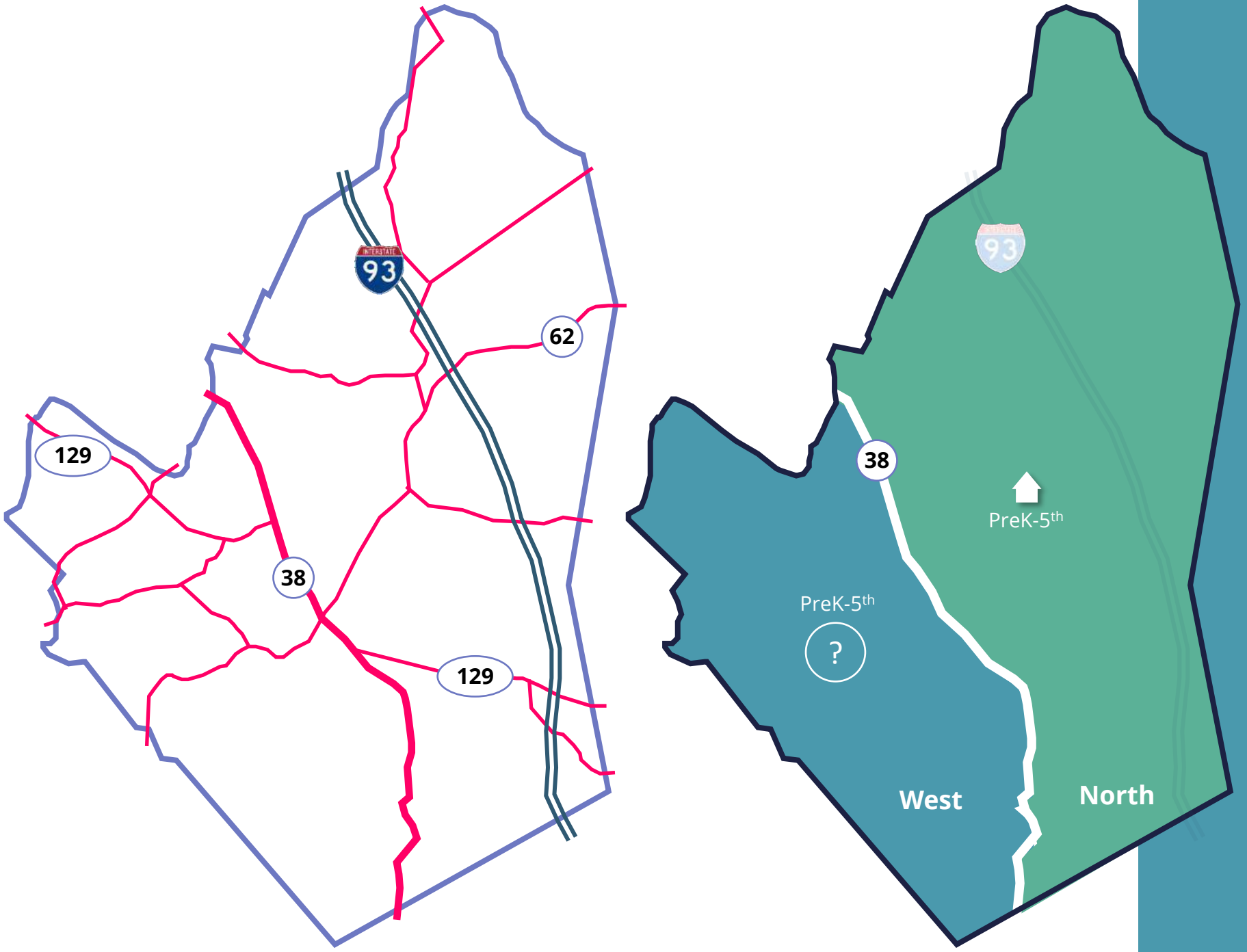
- Capacity Mismatch
  - Number of Facilities
  - Grade Configuration
- Multiple Elementary Transitions



The Big Picture

A District-Wide Solution
PreK-5

- Capacity Mismatch
  - Number of Facilities
  - Grade Configuration
- Multiple Elementary Transitions
- Potential Solution:
  - Consolidate North Elementaries
  - Eliminates elementary transitions on North side



The Big Picture

A District-Wide Solution
PreK-5

- Capacity Mismatch
  - Number of Facilities
  - Grade Configuration
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- Potential Solution:

  Consolidate Elementaries from 6 to 2 in two steps.

  Step 1: North Elementaries

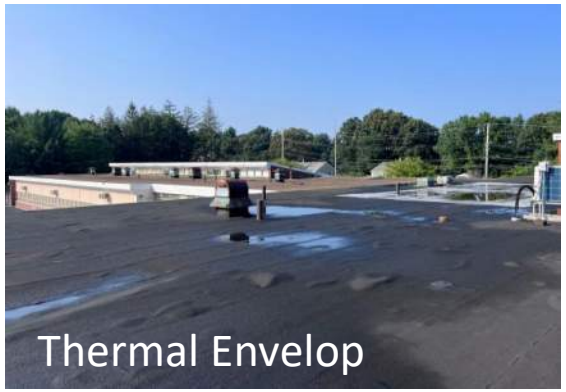
  Step 2: West Elementaries

The Project Need



Existing Conditions Summary































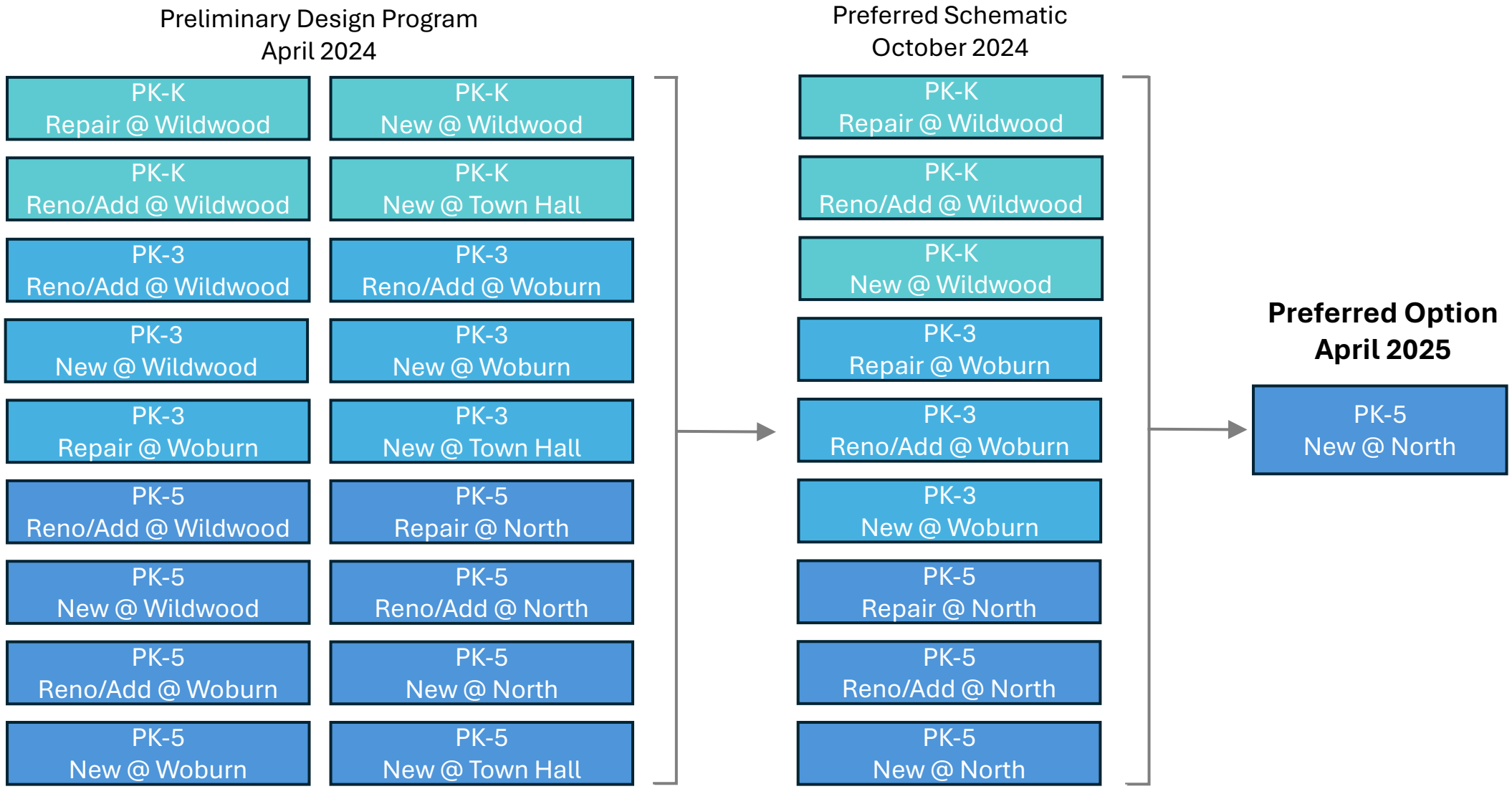
Educational Challenges Identified

- Multiple transitions in elementary years
- Schools have different start and end times
- Undersized classrooms as compared to MSBA guidelines
- Need for dedicated classrooms for differentiated instruction
- Limitations of spaces to support wide range of student needs
- No designated science and computer spaces (STEM)
- Limited dedicated workspaces for service providers to meet with students
- Limited time and spaces for staff collaboration and combined professional development
- Accessibility throughout buildings
- Nurses Suite with separate examination area



Scan me!

Summary of Options Studied



Schematic Design Update



1 ACCESSIBLE PATH
MOTOR CORTEX (PHYSICAL)
CIRCUITOUS CAMPUS PATH
CONNECTING PROGRAMS



2A OPEN PLAY
MOTOR CORTEX (PHYSICAL)





2B ACTIVE PLAY: PLAYGROUND
MOTOR CORTEX (PHYSICAL)





3 RAISED GARDEN BEDS
SENSORY CORTEX







4 SENSORY GARDEN: EDUCATIONAL
SENSORY CORTEX
STORMWATER MITIGATION
HANDS-ON OBSERVATION





5 OUTDOOR CLASSROOM / INTERACTIVE /
PASSIVE / INCLUSIVE FRONTAL CORTEX





6 OUTDOOR DISCOVERY LAB
SENSORY CORTEX





7 DINING & GATHERING
SOCIAL / EMOTIONAL / INTERACTIVE





terraink
landscape architecture

WILMINGTON ELEMENTARY SCHOOL | CONCEPT PLAN

N.T.S. CONCEPT DESIGN PREPARED FOR TEAM COORDINATION . NOT FOR CONSTRUCTION

NORTH

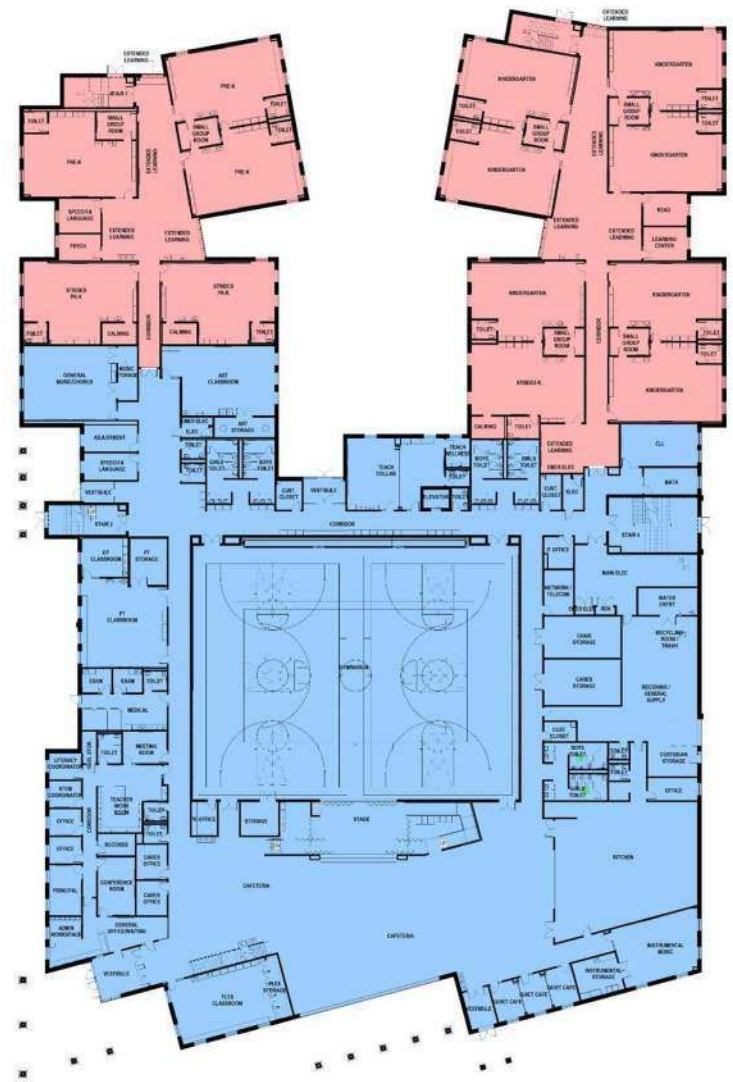
Wilmington . Massachusetts
Schematic Design Phase
February 2025



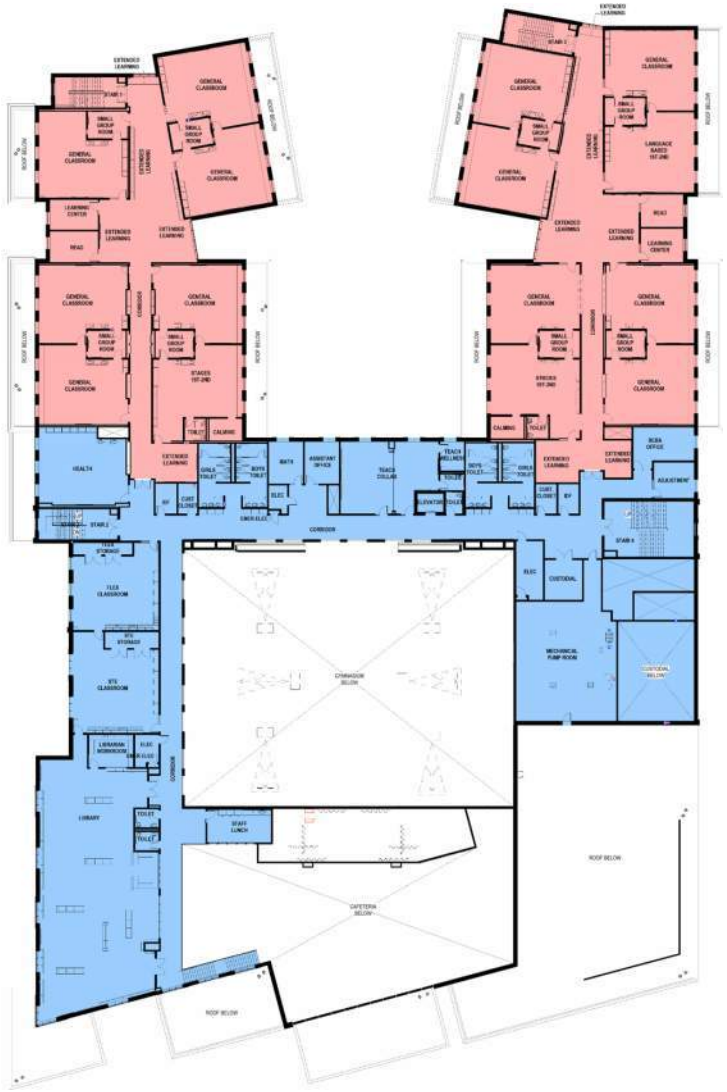
Floor Plan Review



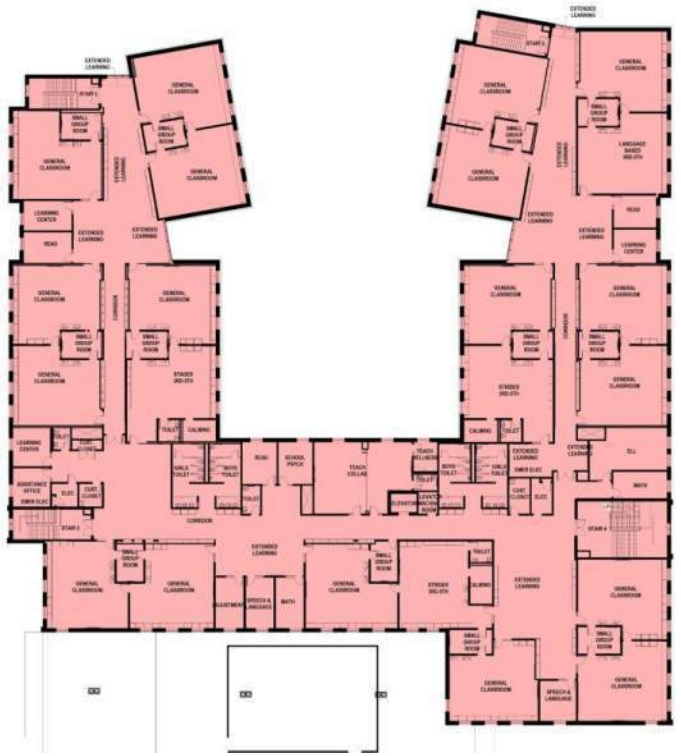
Floor Plan Review



First Floor



Second Floor



Third Floor

Public

Private

Cost Overview



Click the "W" to watch the video



Preliminary Design Program

Estimated Project Cost Range

$194.0M – $214.5M
(March 2024)

$1,156 - $1,278 /SF

Construction Cost: $936/SF

Preferred Schematic Report

Estimated Project Cost Range

$177.6M - $196.3M
(July 2024)

$1,086 - $1,200 /SF

Construction Cost: $878/SF

Schematic Design

Estimated Project Cost

$173,265,626
(May 2025)

$1,050 /SF

Construction Cost: $835/SF

Within Budget!

Project Budget Detail

Schematic Design (SD)	Amount
Construction Budget	$137,743,666
Soft Costs at 25.8% of Construction	$ 35,521,960
Total Project Budget (SD)	**$173,265,626**
MSBA Approved Maximum Grant (54.78%)	$ (62,134,793)
Town Share	**$111,130,833**

Notes:

- ✓ MSBA increased grant rate in SD to 49.11 reimbursement rate points + 5.67 incentive points
- ✓ Soft costs increased to 25.8% of Construction to include additional contingencies

Wilmington Elementary School Finances at a Glance

Total Project Cost to be voted upon	**$173,265,626**
MSBA Approved Maximum Reimbursement	**$62,134,793**
Proposed Town Stabilization Fund Allocation	***$15,000,000***
Estimated Taxpayer Share	**$96,130,833**
Estimated Taxpayer Impact on $702,889 Home – 1st Year	**$422**
Estimated Taxpayer Impact on $702,889 Home - 30th Year	**$422**
Estimated Taxpayer Monthly Impact on $702,889 Home	**$35.17**

(1) Please note these are estimates and subject to change. The average assessed home value in Wilmington is currently $702,889 and changes annually.

(2) Project cost estimates based on a fixed payment 30-year bond.

(3) The Town's financial advisor has recommended we assume a **conservative** 4.5% interest rate.

(4) The tax impact is $0.60 per $1,000 of assessed value.

Data provided as of June 23, 2025 for informational purposes only.

Educational Impacts of Failed Vote

Wildwood School Challenges

- Community remains split between two buildings
- Students crossing streets for specialist classes
- Teacher collaboration remains difficult
- Delay in adding STEM classes at elementary level
- Young learners housed in spaces not designed for their needs

Impact on Middle & West Intermediate Schools

- Reduced instructional space, less program flexibility, and scheduling issues

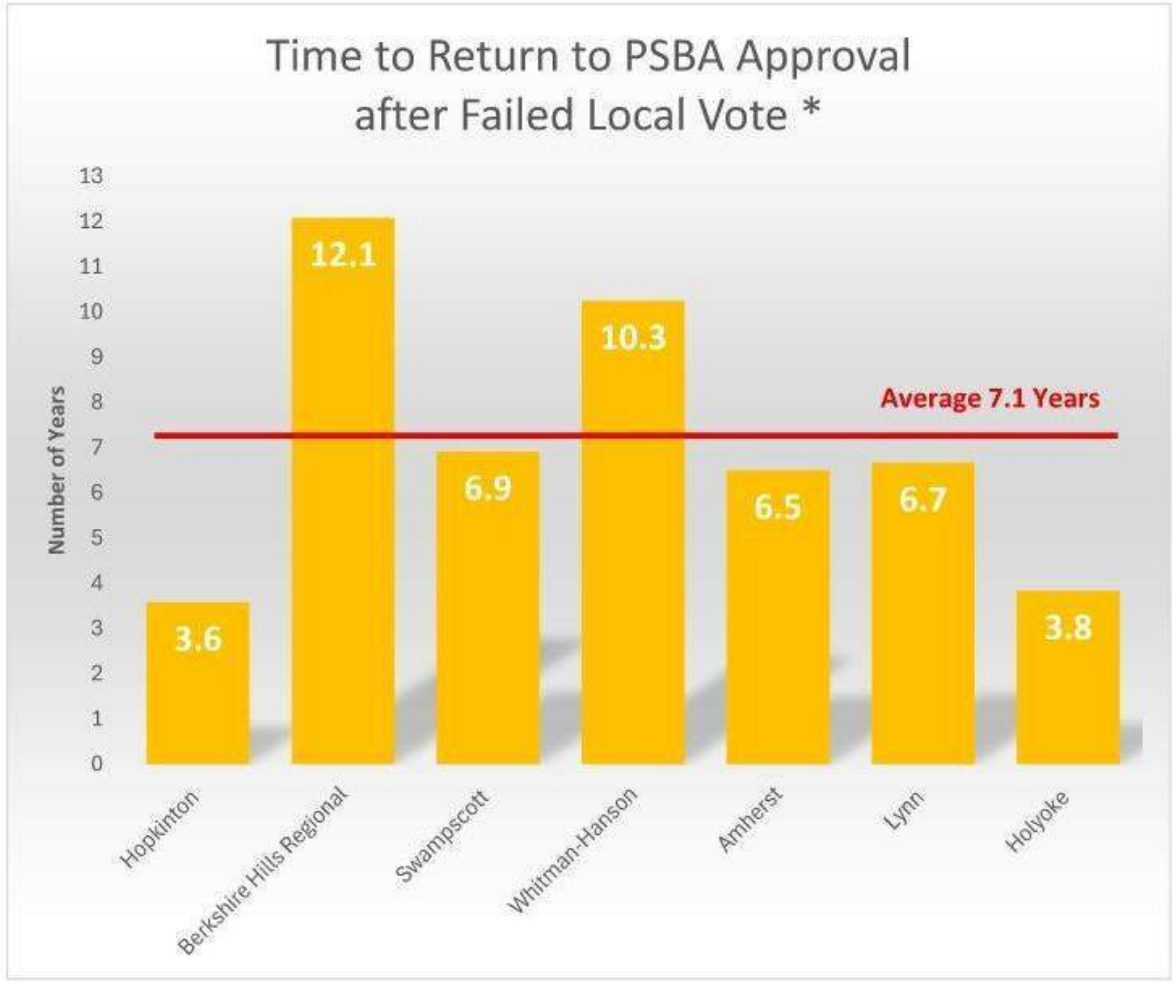
District-Wide Effects

- Delay in consolidating resources and services in one location
- Delay in creating learning spaces for special needs students, limiting ability to keep them in-district

Operational & Financial Implications

- Need for ongoing closures and renovations to address mechanical issues
- Increased disruption to learning and added costs to the town

Timeline for a failed Project to return to the MSBA Capital Pipeline



* All data was collected from the MSBA website.



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Next Steps:

Voting Information:

- Saturday, September 13th, starts at 9 AM Special Town Meeting at Wilmington High School
- Tuesday, September 16th 8 AM 8 PM –Debt Exclusion Vote *early voting available; same day voting at precinct location*

Stay Connected



Stay Connected

Find updates on the District website - click on Wildwood Building Project Updates

Email questions/comments:
wildwoodprojectquestions@wpsk12.com

WCTV WILMINGTON COMMUNITY TELEVISION




Thank
You

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

Finance Committee

September 2, 2025

Massachusetts School Building Authority

DORE + WHITTIER

FONTAINE



Agenda:

Introductions

MSBA Process and Schedule

The Big Picture

The Project Need

Schematic Design Update

Project Cost



Introductions



The Team

Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Program Administrator & Funding Partner

School Committee

School Building Committee

LeftField

*Pending MSBA Approval

Owner's Project Manager (OPM)

DORE + WHITTIER

Designer (Architect)

FONTAINE

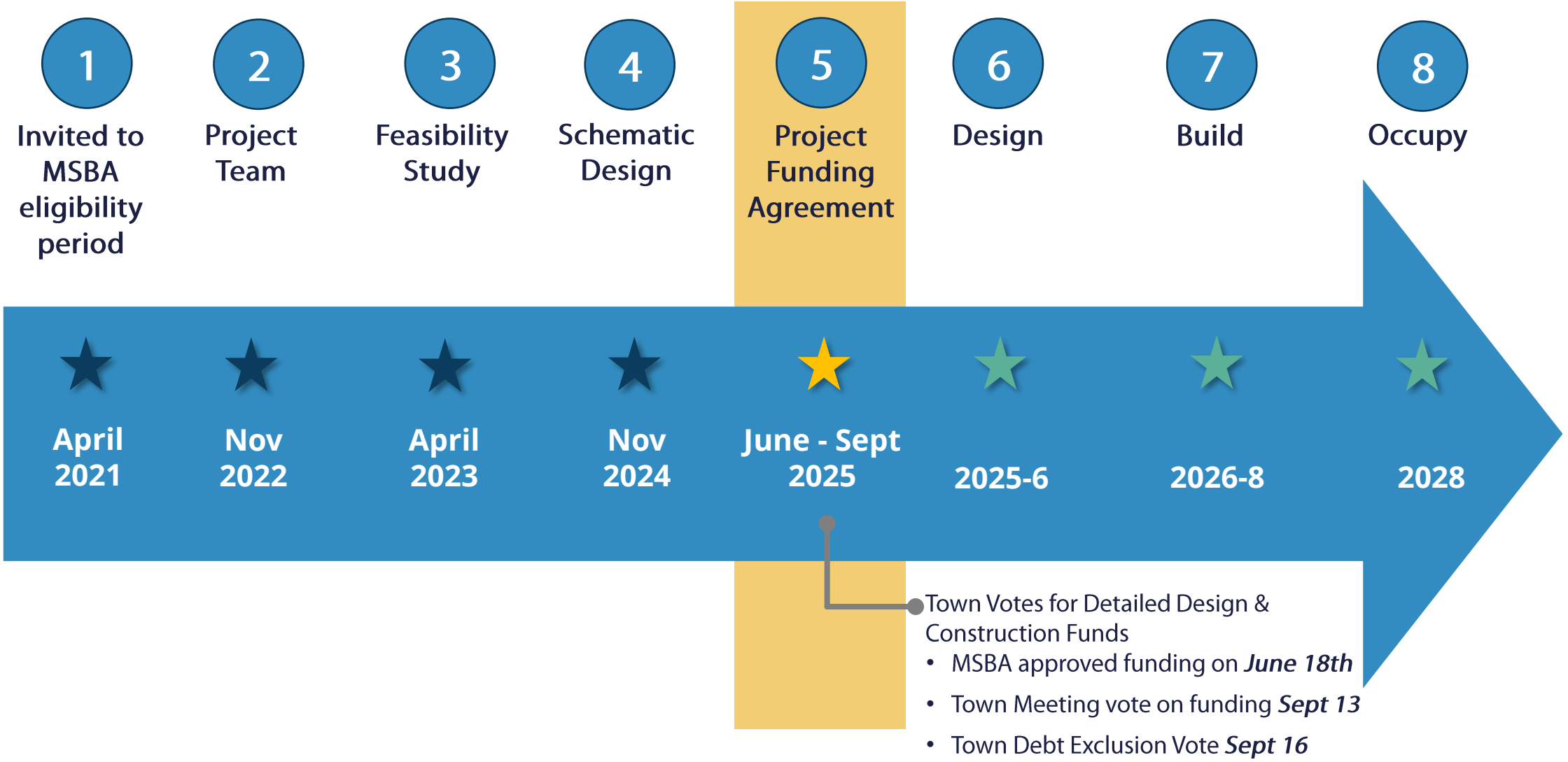
Construction Manager (CM)

MSBA Process and Schedule



MSBA Process

Step-by-Step



How we got here...
Wilmington Elementary Schools

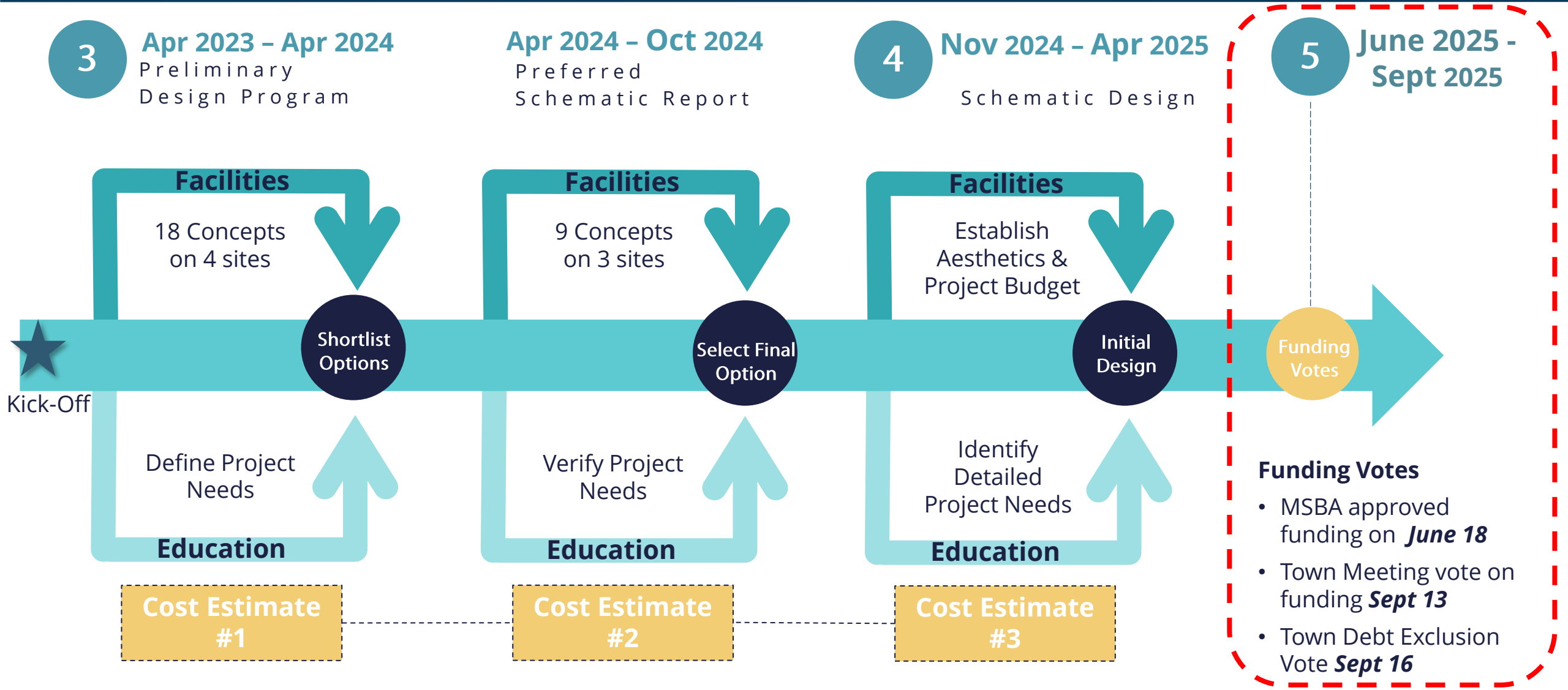
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Wildwood Early Childhood Center
1955 (**68 yrs**)

MSBA Process

Where We're Going: Project Funding

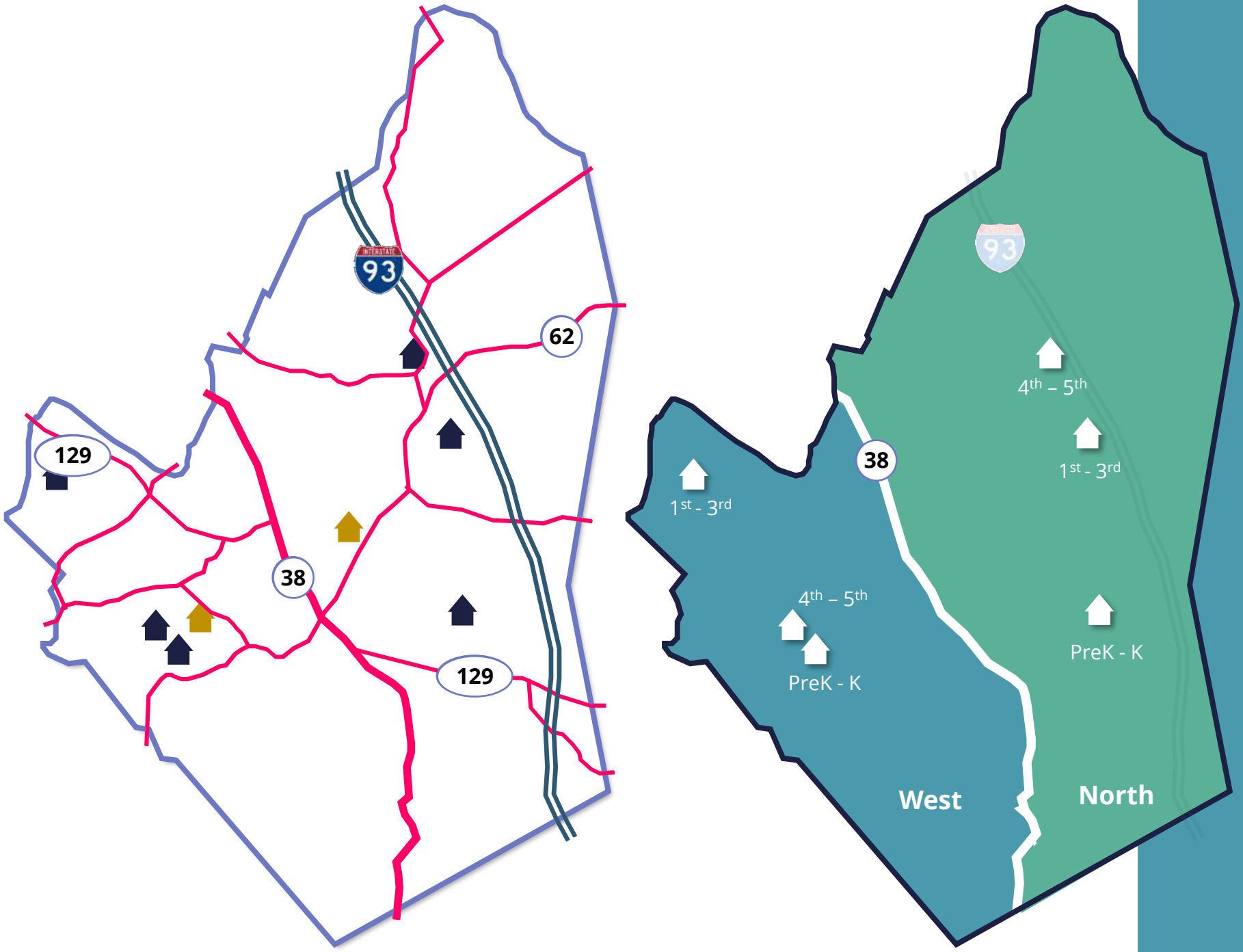


The Big Picture

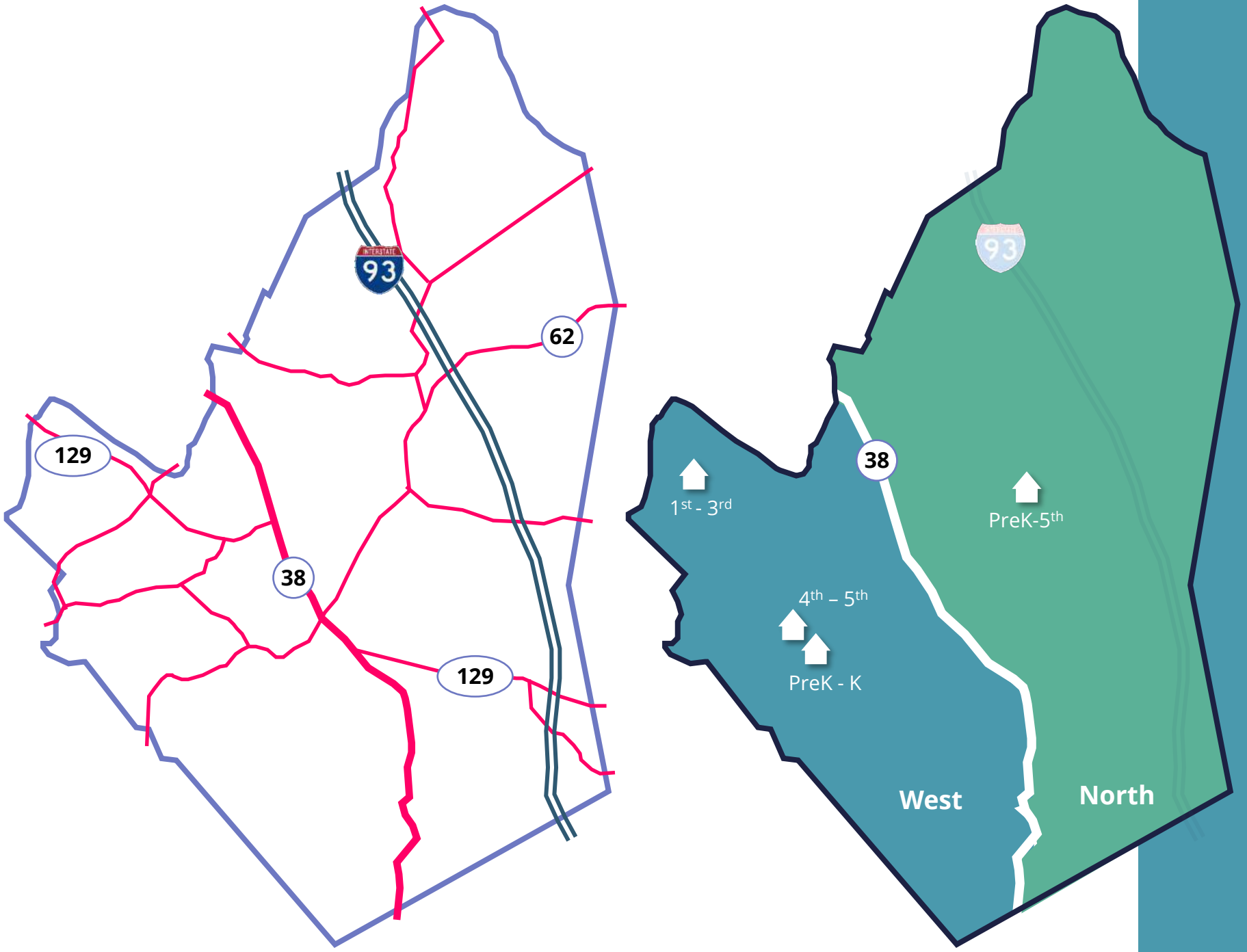


The Big Picture

A District-Wide Solution



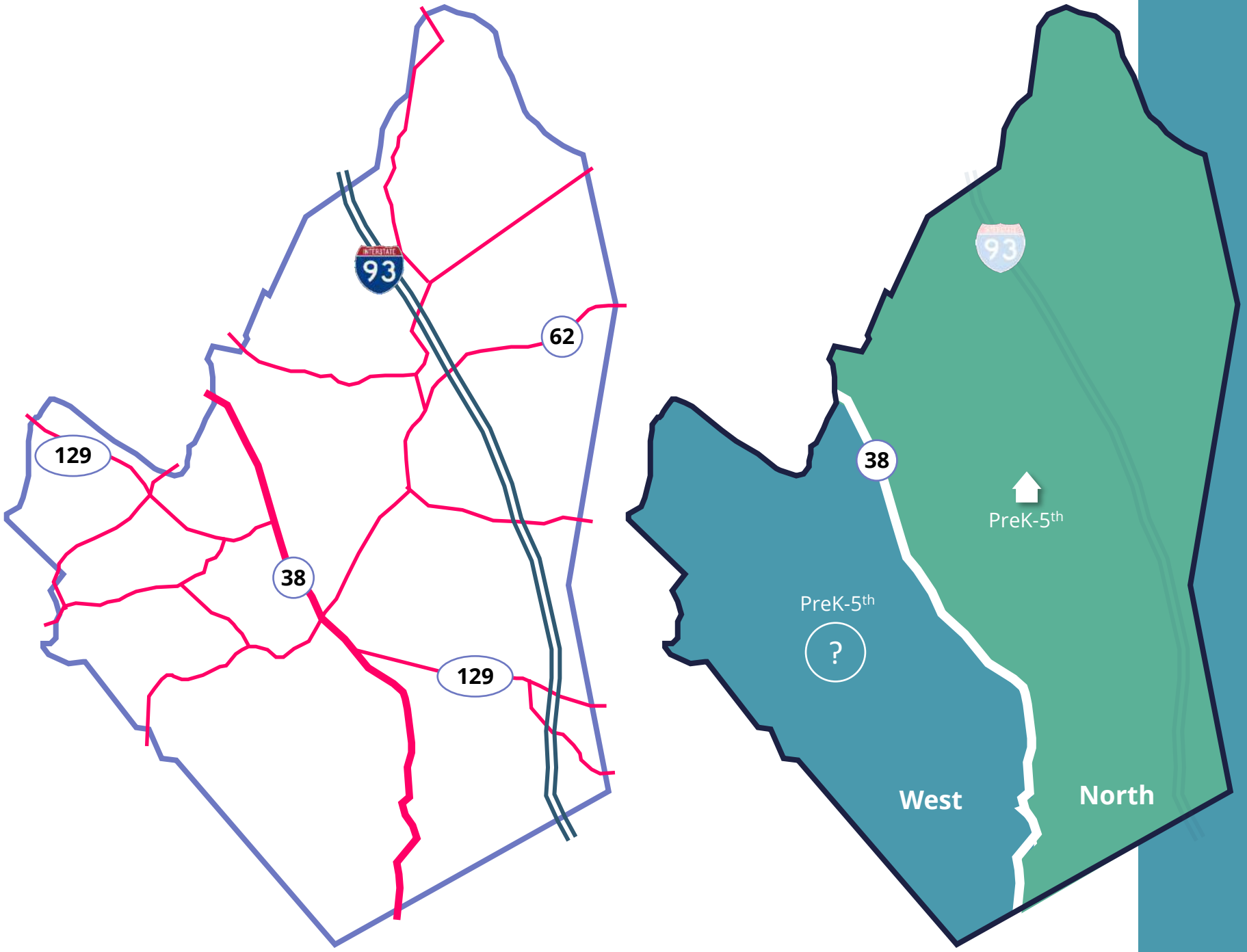
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  - Grade Configuration
- Multiple Elementary Transitions



The Big Picture

A District-Wide Solution
PreK-5

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- Potential Solution:
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The Big Picture

A District-Wide Solution
PreK-5

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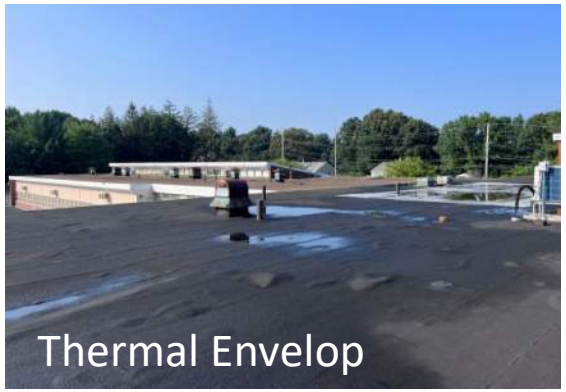
  Step 2: West Elementaries

The Project Need



Existing Conditions Summary


Outdated finishes


Thermal Envelop


Accessibility


Doors/Accessibility


Site


Antiquated contros


Outdated finishes


Windows / Thermal Envelop


Ongoing maintenance


Inefficient MEP


MEP/Finishes


Accessibility


MEP/Finishes


Outdated interiors


Accessibility

Educational Challenges Identified

- Multiple transitions in elementary years
- Schools have different start and end times
- Undersized classrooms as compared to MSBA guidelines
- Need for dedicated classrooms for differentiated instruction
- Limitations of spaces to support wide range of student needs
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Scan me!

Schematic Design Update



Click here to view video.

The Preferred Site

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MOTOR CORTEX (PHYSICAL)
CIRCUITOUS CAMPUS PATH
CONNECTING PROGRAMS



2A OPEN PLAY
MOTOR CORTEX (PHYSICAL)





2B ACTIVE PLAY: PLAYGROUND
MOTOR CORTEX (PHYSICAL)





3 RAISED GARDEN BEDS
SENSORY CORTEX







4 SENSORY GARDEN: EDUCATIONAL
SENSORY CORTEX
STORMWATER MITIGATION
HANDS-ON OBSERVATION





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SENSORY CORTEX



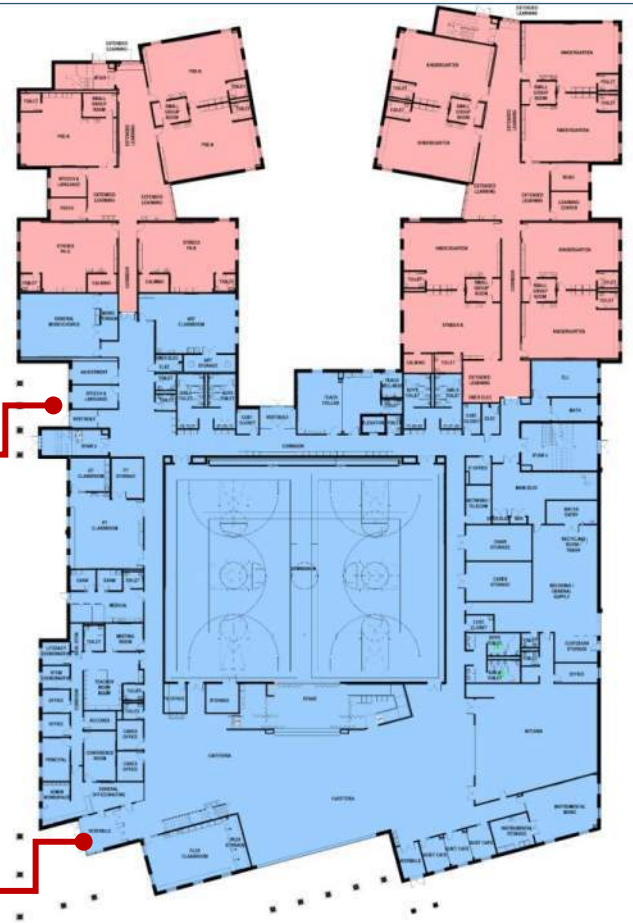


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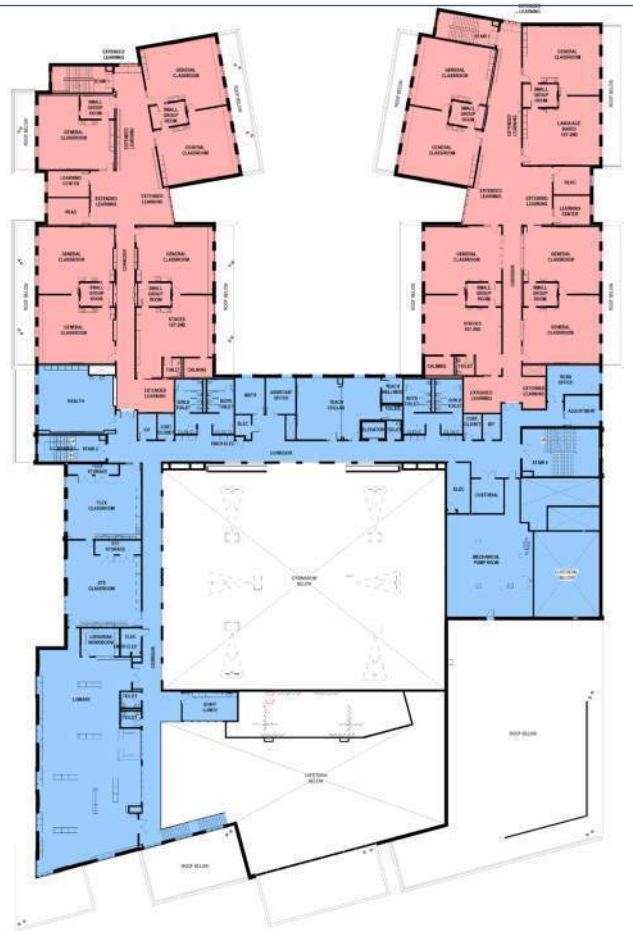




Floor Plan Review



First Floor



Second Floor



Third Floor

Public

Private

Sustainability Goals

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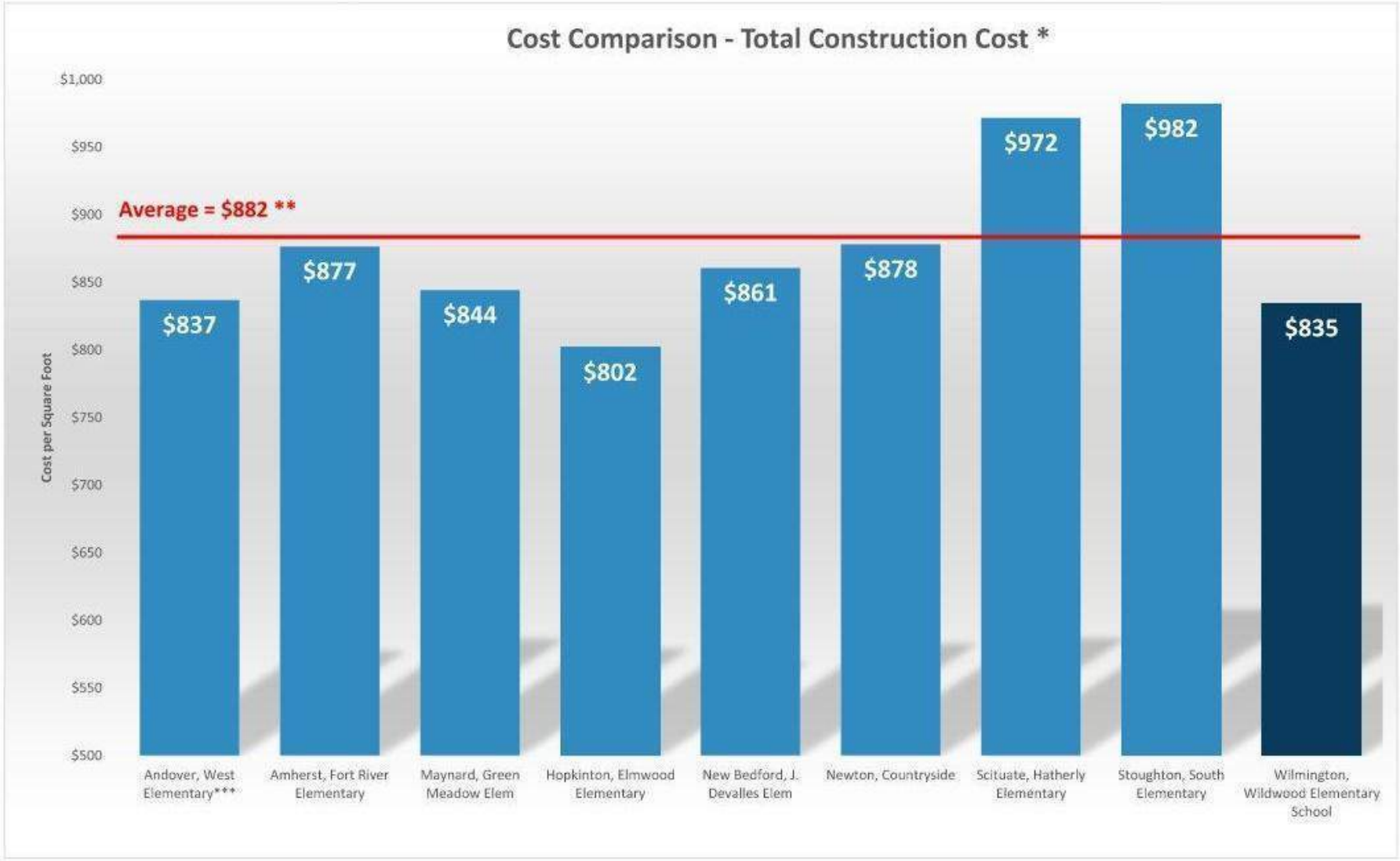
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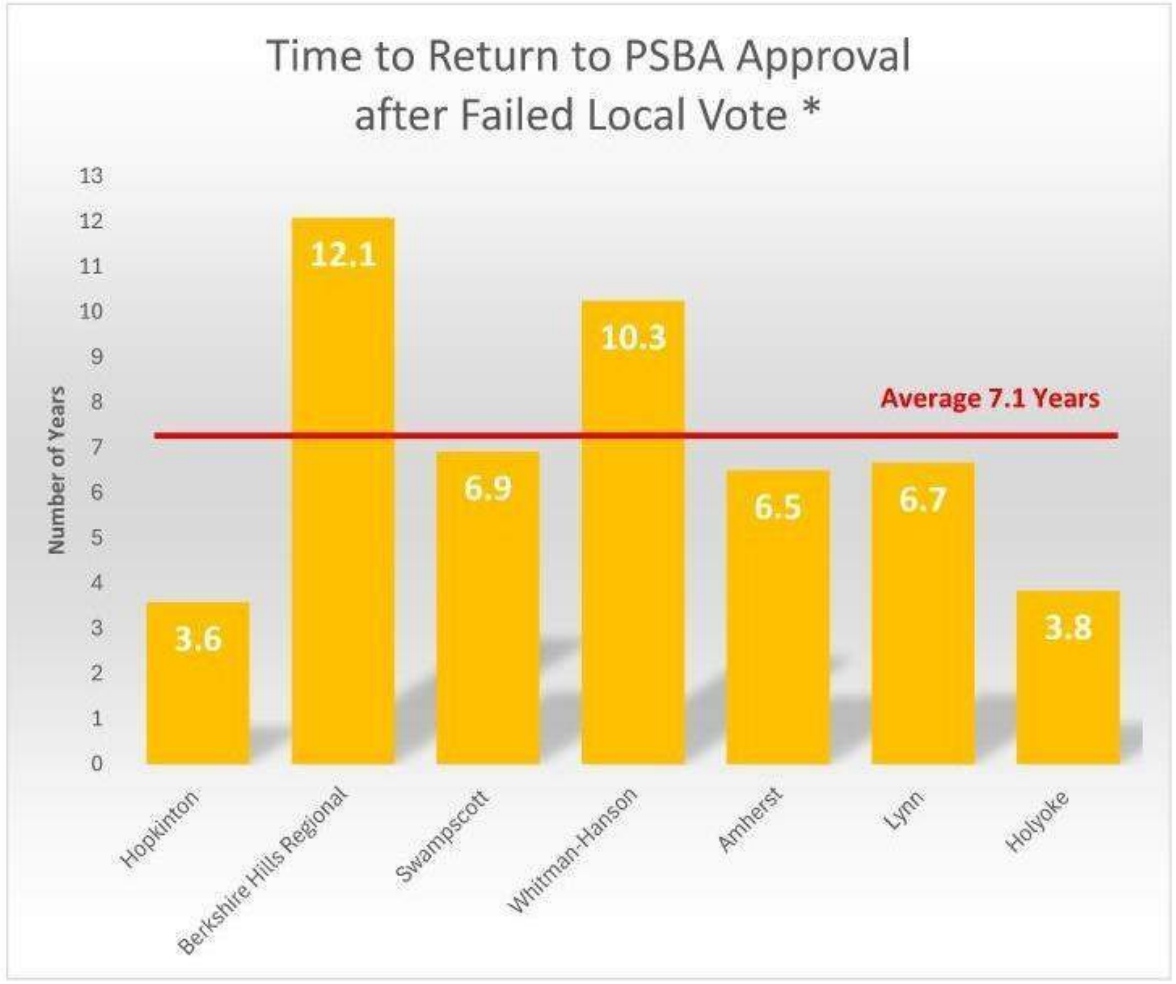
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Timeline for a failed Project to return to the MSBA Capital Pipeline



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Impact on Middle & West Intermediate Schools

- Reduced instructional space, less program flexibility, and scheduling issues

District-Wide Effects

- Delay in consolidating resources and services in one location
- Delay in creating learning spaces for special needs students, limiting ability to keep them in-district

Operational & Financial Implications

- Need for ongoing closures and renovations to address mechanical issues
- Increased disruption to learning and added costs to the town

Next Steps:

Voting Information:

- Saturday, September 13th, starts at 9 AM Special Town Meeting at Wilmington High School
- Tuesday, September 16th 8 AM 8 PM –Debt Exclusion Vote *early voting available; same day voting at precinct location*


Thank
You

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

Town Meeting

September 13, 2025

Massachusetts School Building Authority

DORE + WHITTIER

FONTAINE



Agenda:

Introductions

MSBA Process and Schedule

The Big Picture

The Project Need

Schematic Design Update

Project Cost



Introductions



The Team

Massachusetts School Building Authority

Funding Affordable, Sustainable, and Efficient Schools in Partnership with Local Communities

Program Administrator & Funding Partner

School Committee

School Building Committee

LeftField

*Pending MSBA Approval

Owner's Project Manager (OPM)

DORE + WHITTIER

Designer (Architect)

FONTAINE

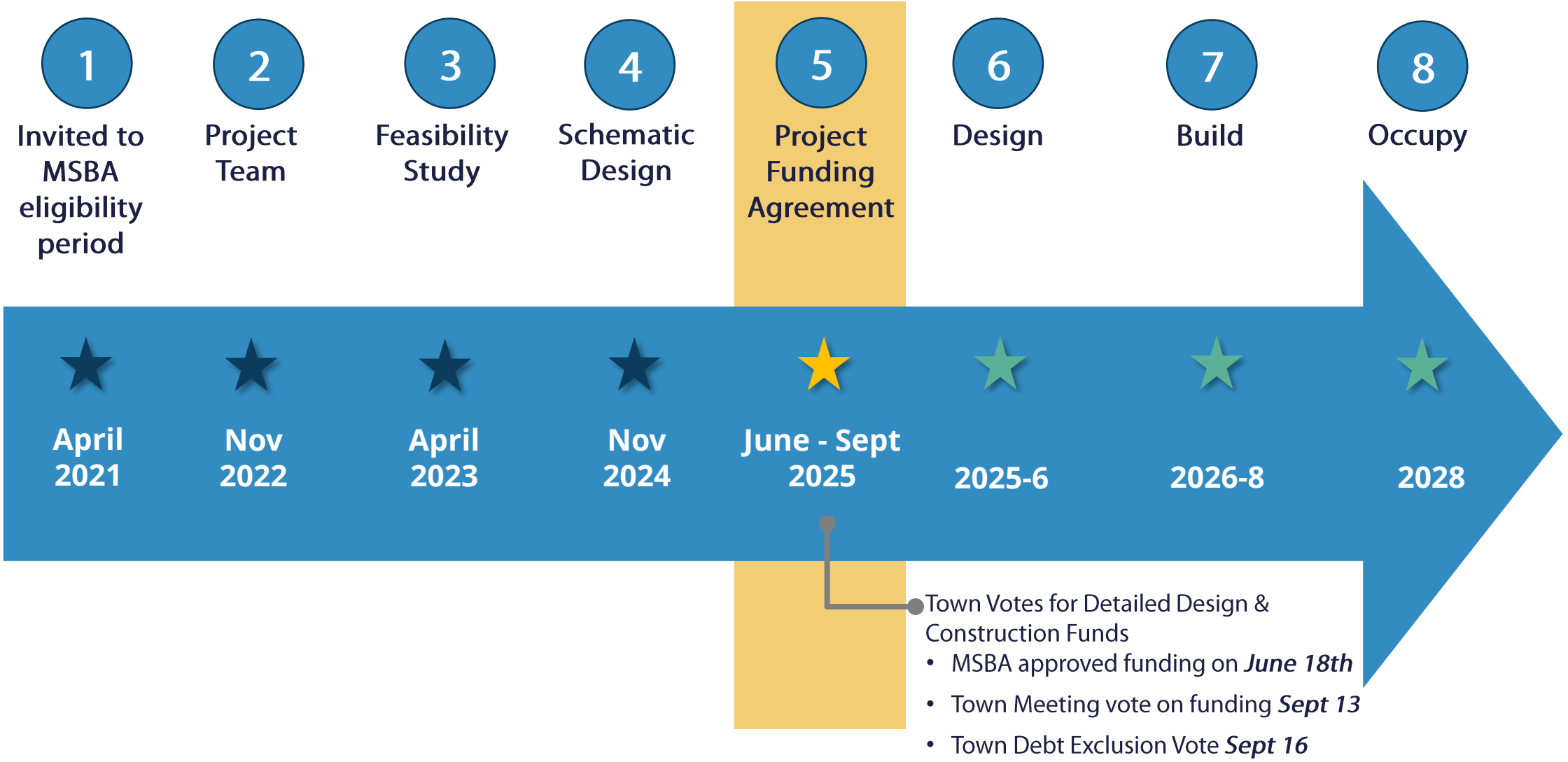
Construction Manager (CM)

MSBA Process and Schedule



MSBA Process

Step-by-Step



How we got here...
Wilmington Elementary Schools

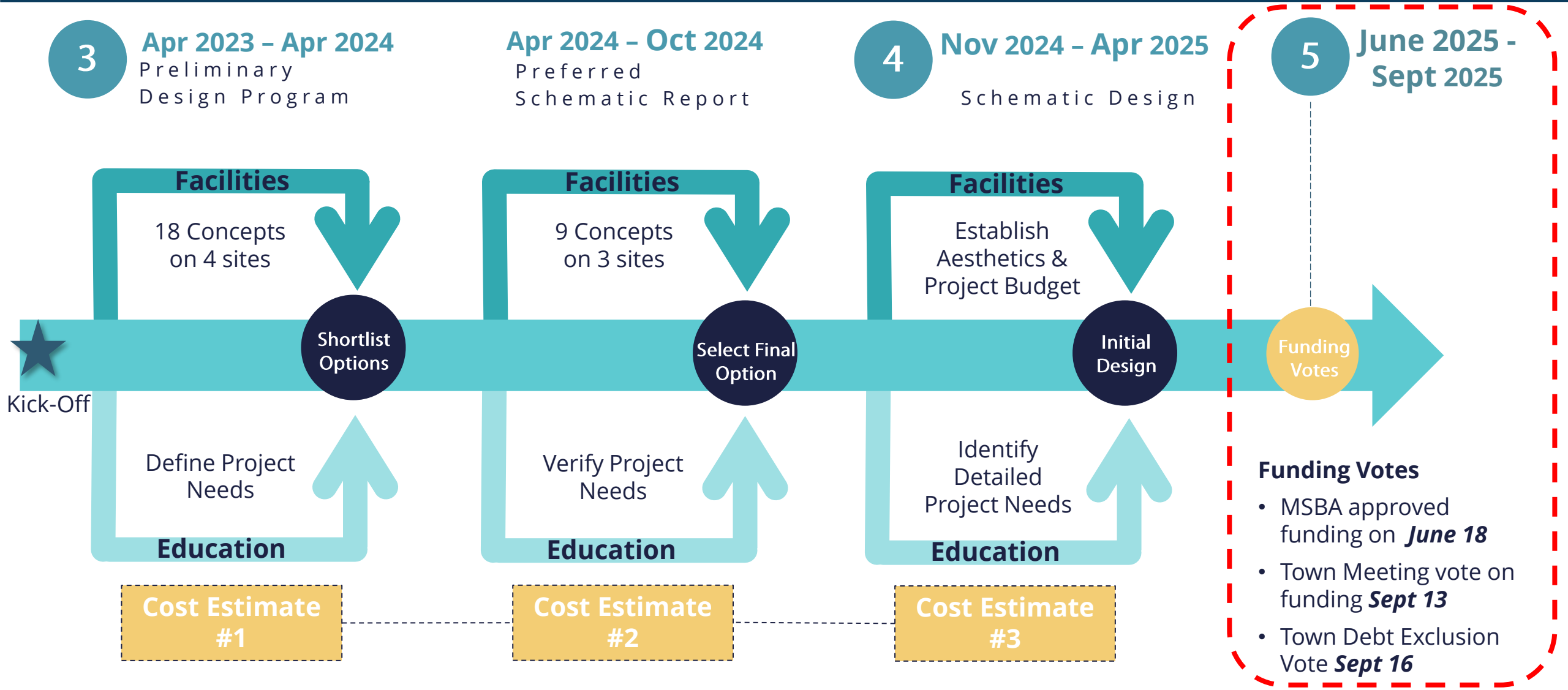
- All six elementary schools are of similar vintage 1950s/1960s and experience space deficiencies in their educational programs
- Each school needs significant upgrades, including HVAC, plumbing, electrical, exterior windows and envelope, accessibility, etc.
- **Wildwood** was determined to be in the most need of the six district elementary schools.



Wildwood Early Childhood Center
1955 (**68 yrs**)

MSBA Process

Where We're Going: Project Funding

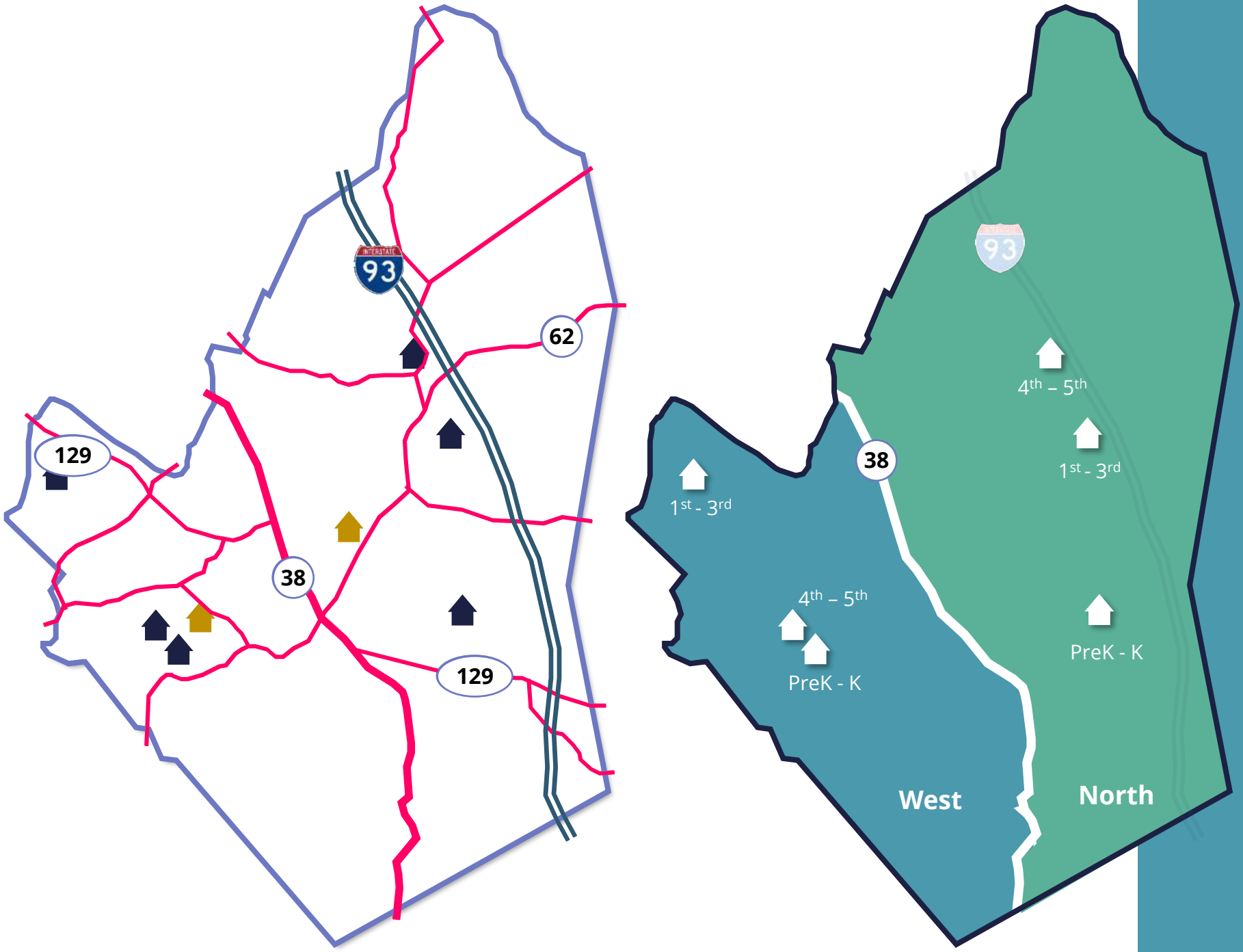


The Big Picture

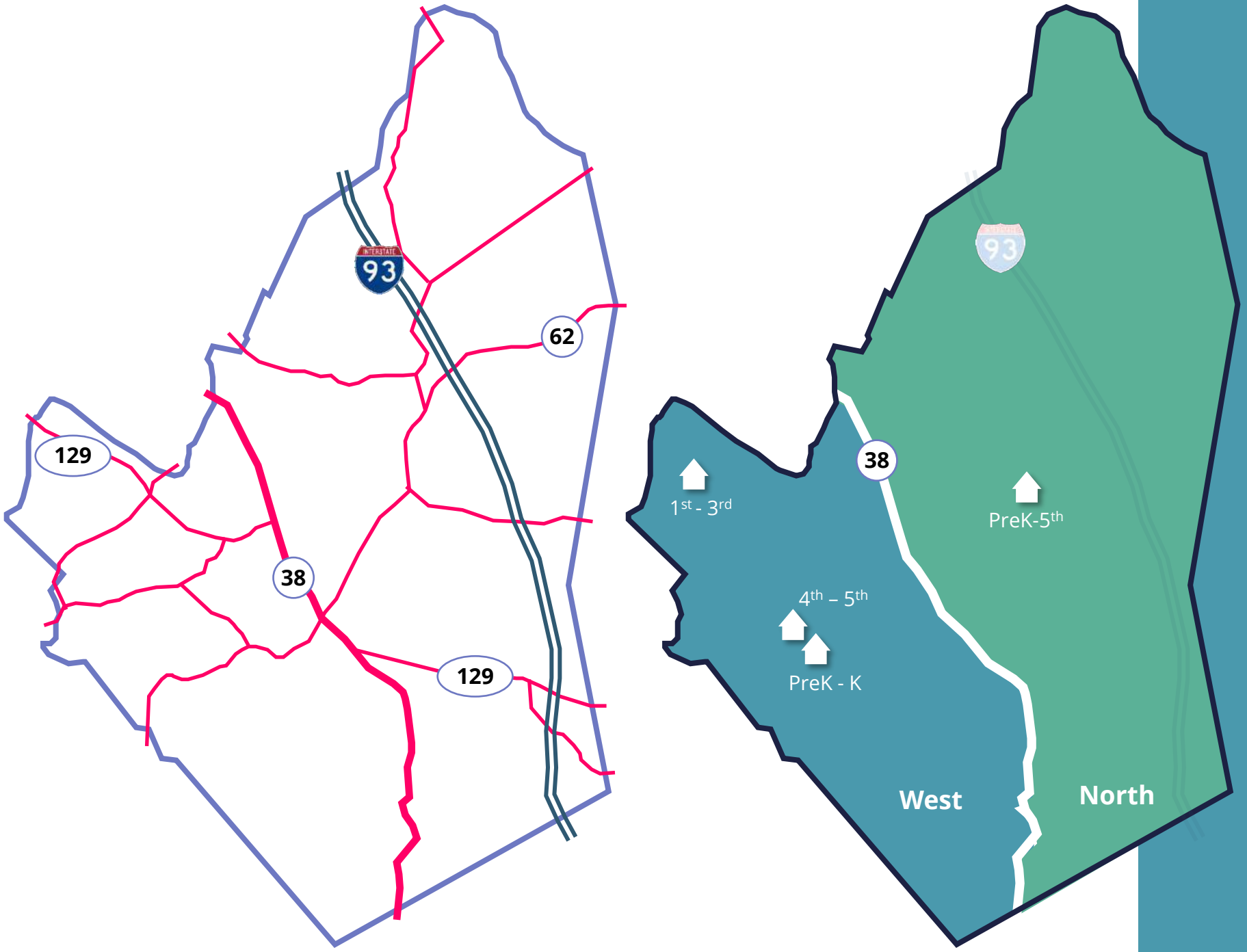


The Big Picture

A District-Wide Solution



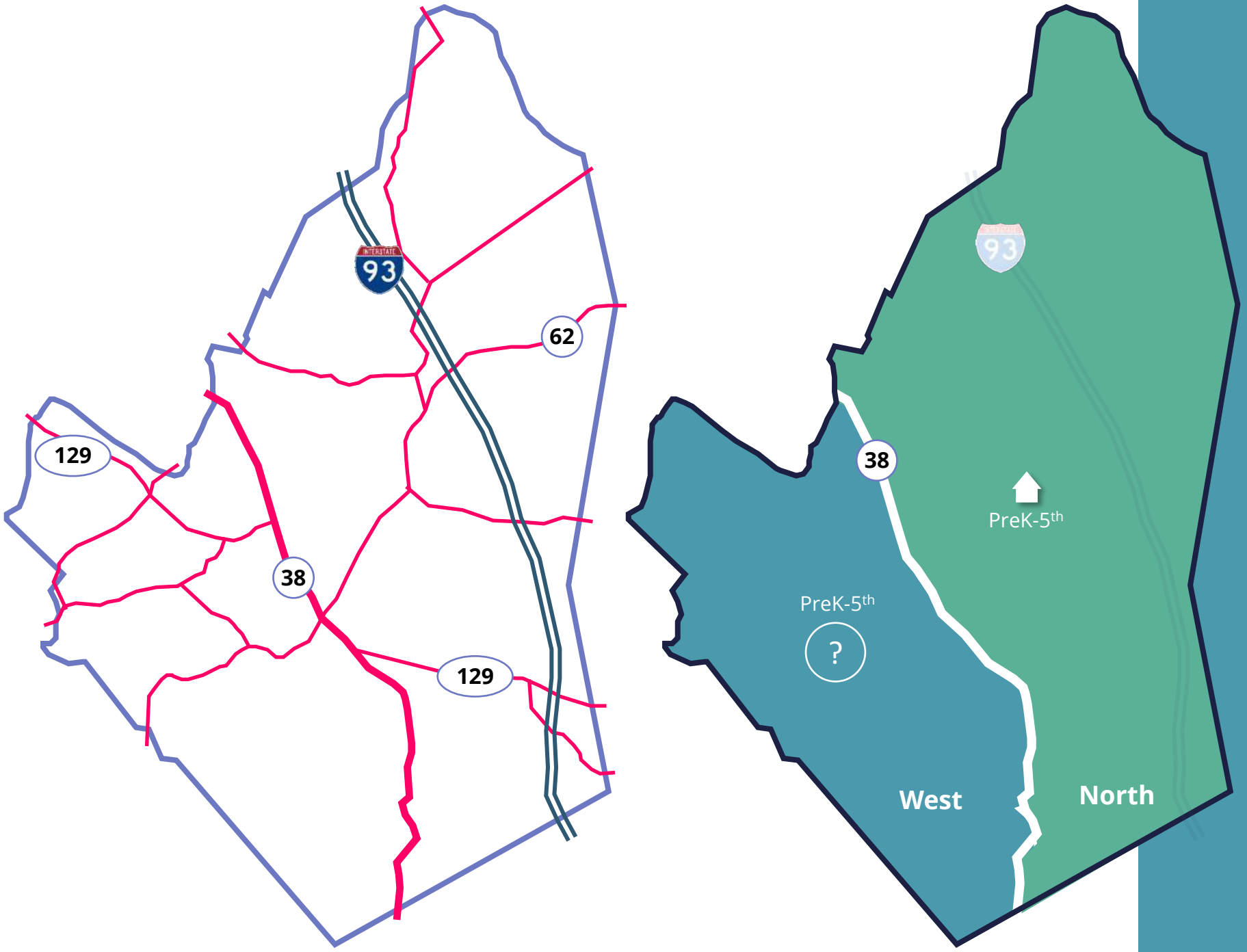
- Capacity Mismatch
  - Number of Facilities
  - Grade Configuration
- Multiple Elementary Transitions



The Big Picture

A District-Wide Solution
PreK-5

- Capacity Mismatch
  - Number of Facilities
  - Grade Configuration
- Multiple Elementary Transitions
- Potential Solution:
  - Consolidate North Elementaries
  - Eliminates elementary transitions on North side



The Big Picture

A District-Wide Solution
PreK-5

- Capacity Mismatch
  - Number of Facilities
  - Grade Configuration
- Multiple Elementary Transitions
- Potential Solution:

  Consolidate Elementaries from 6 to 2 in two steps.

  Step 1: North Elementaries

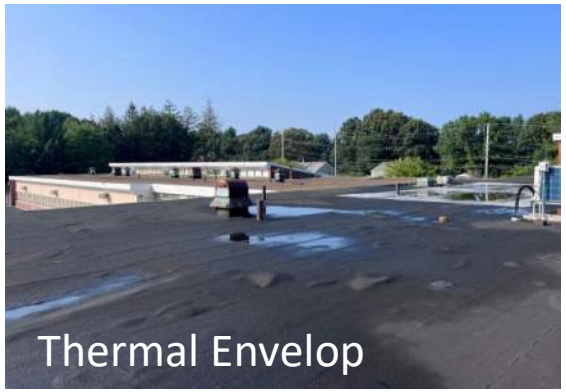
  Step 2: West Elementaries

The Project Need



Existing Conditions Summary































Educational Challenges Identified

- Multiple transitions in elementary years
- Schools have different start and end times
- Undersized classrooms as compared to MSBA guidelines
- Need for dedicated classrooms for differentiated instruction
- Limitations of spaces to support wide range of student needs
- No designated science and computer spaces (STEM)
- Limited dedicated workspaces for service providers to meet with students
- Limited time and spaces for staff collaboration and combined professional development
- Accessibility throughout buildings
- Nurses Suite with separate examination area



Scan me!

Schematic Design Update



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The Preferred Site

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MOTOR CORTEX (PHYSICAL)
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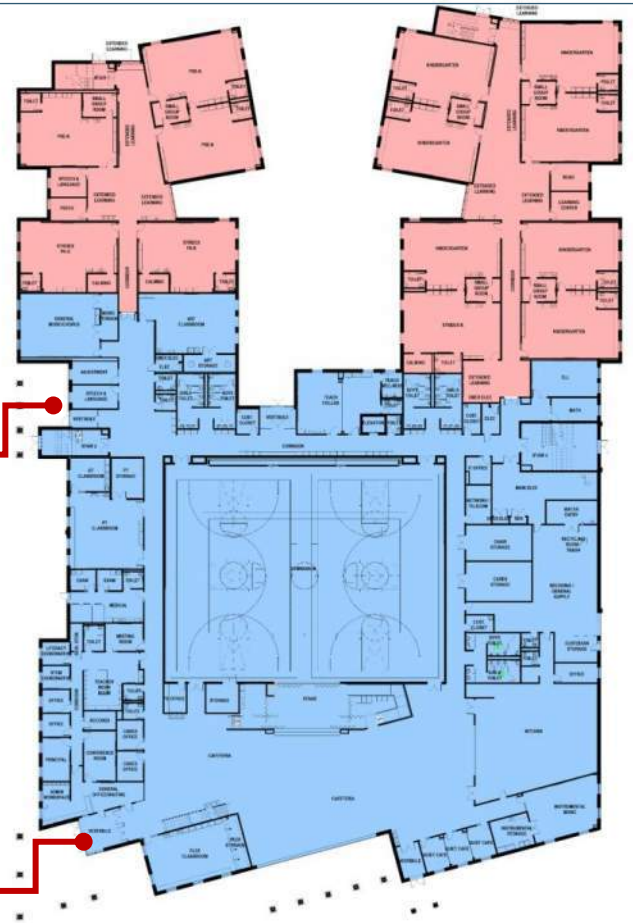


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SOCIAL / EMOTIONAL / INTERACTIVE

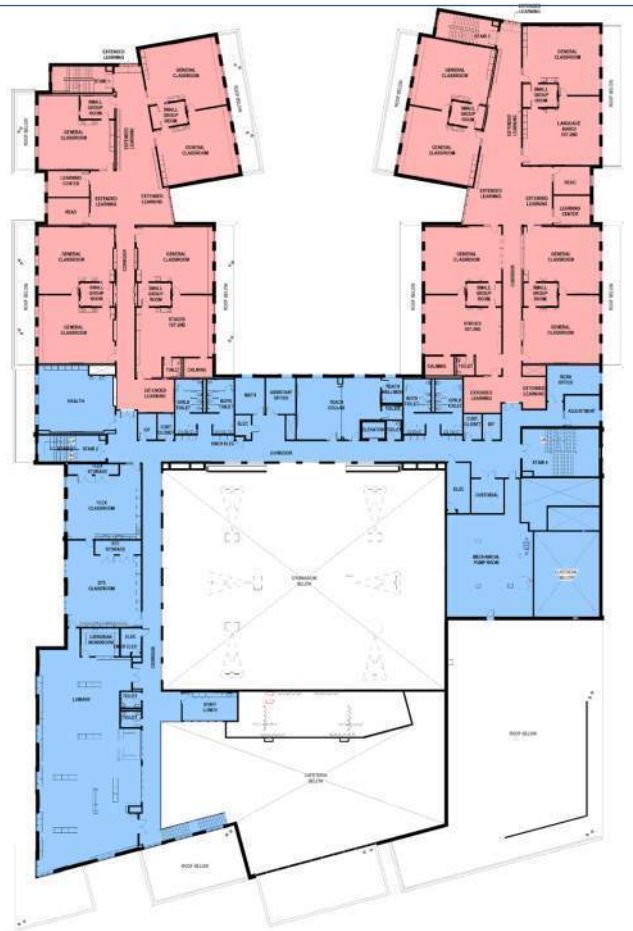




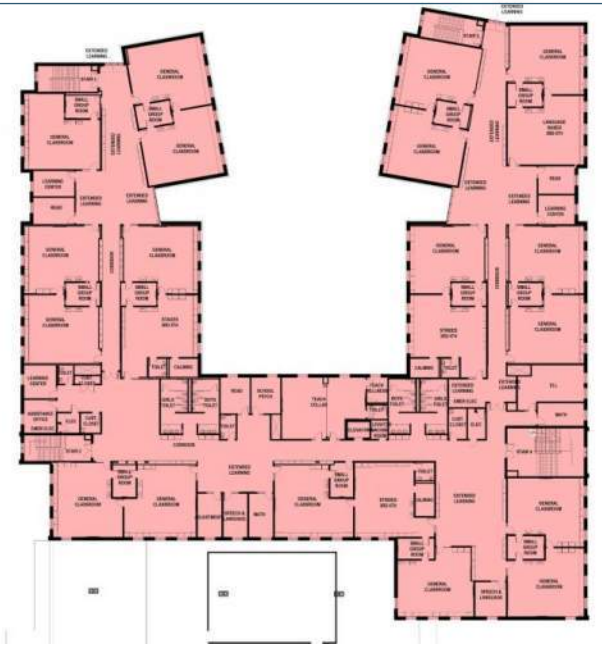
Floor Plan Review Safety



First Floor



Second Floor



Third Floor

Public

Private

Gymnasium From 3 to 1

School District Programs
CARES, Travel Basketball, Youth Soccer, Basketball, WHS Baseball

Recreation Department Programs
Tennis, Kinder Soccer, Pickleball, 35+ Basketball League, Badminton, Open Gym

Existing: 11,189 S

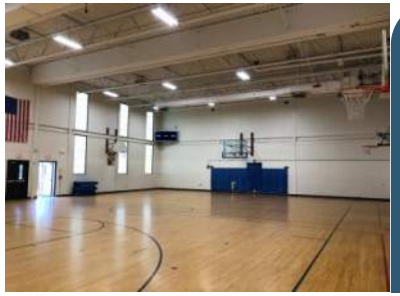
[redacted]

Proposed: 12,000 SF



Wildwood Multipurpose Space

2,647 SF
*Cafeteria/Gym/Auditorium currently not utilized by the community



Woburn Street Gymnasium

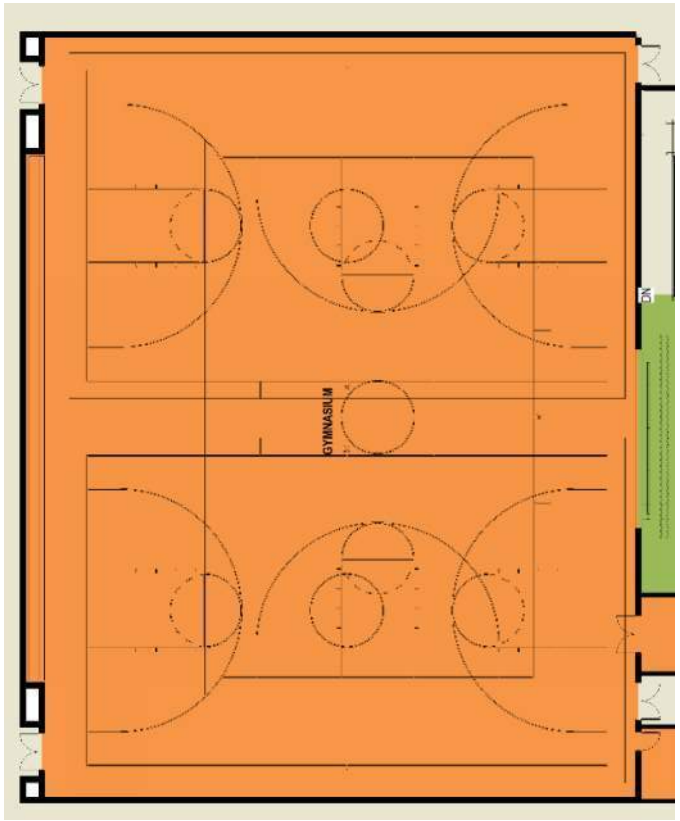
3,751 SF



North Intermediate Gymnasium

4,791 SF

PK-5 Elemntary School Gymnasium



Sustainability Goals

- **LEED Silver minimum, Gold as a Target Goal**
- Pursuing MSBA Green Schools for additional 4% reimbursement
- Consume less energy with an all-electric building
- Improve water efficiency
- Improve indoor environmental quality
- Solar Ready – Design intent is to maximize available roof area



Cost Overview



Preliminary Design Program

Estimated Project Cost Range

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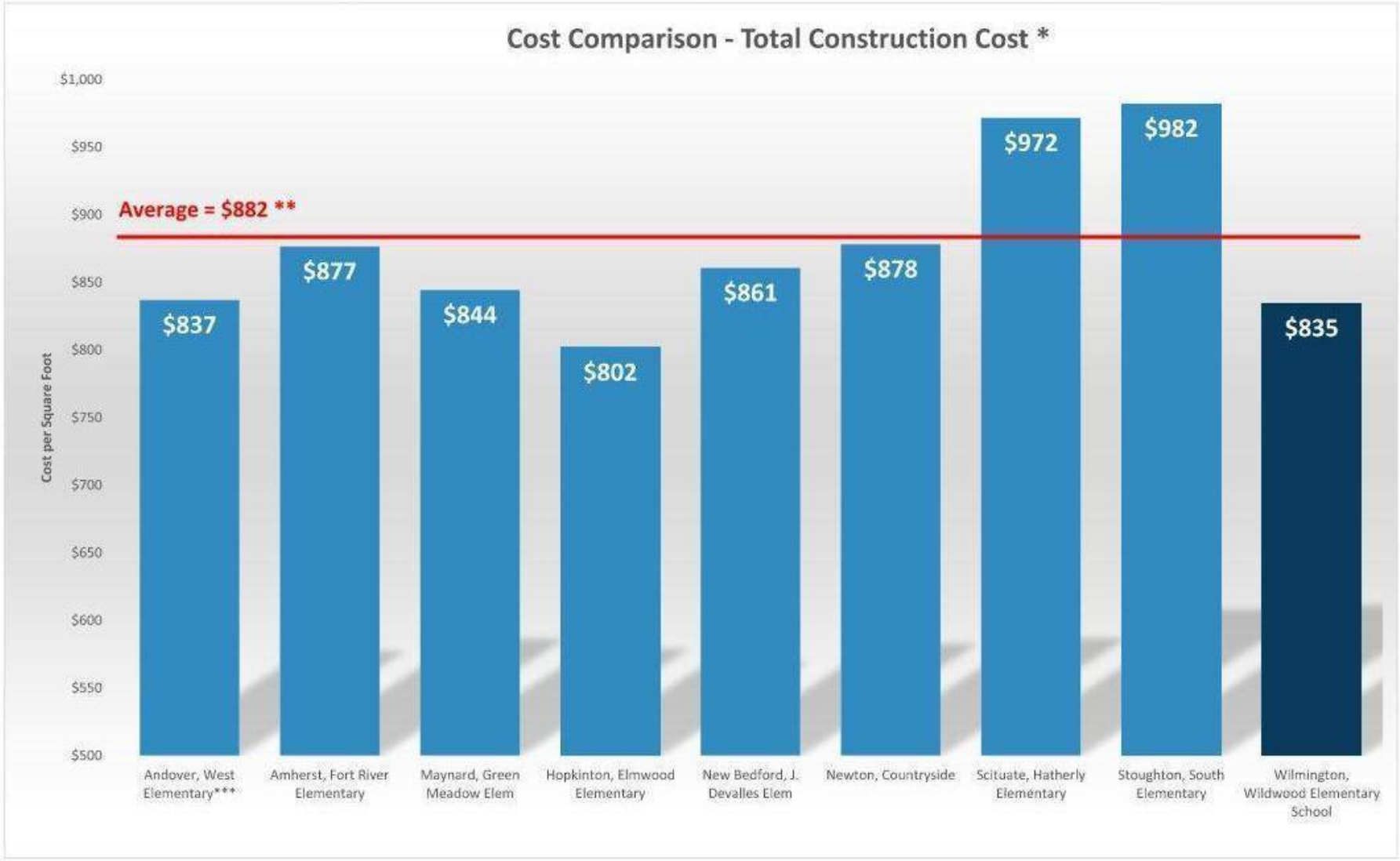
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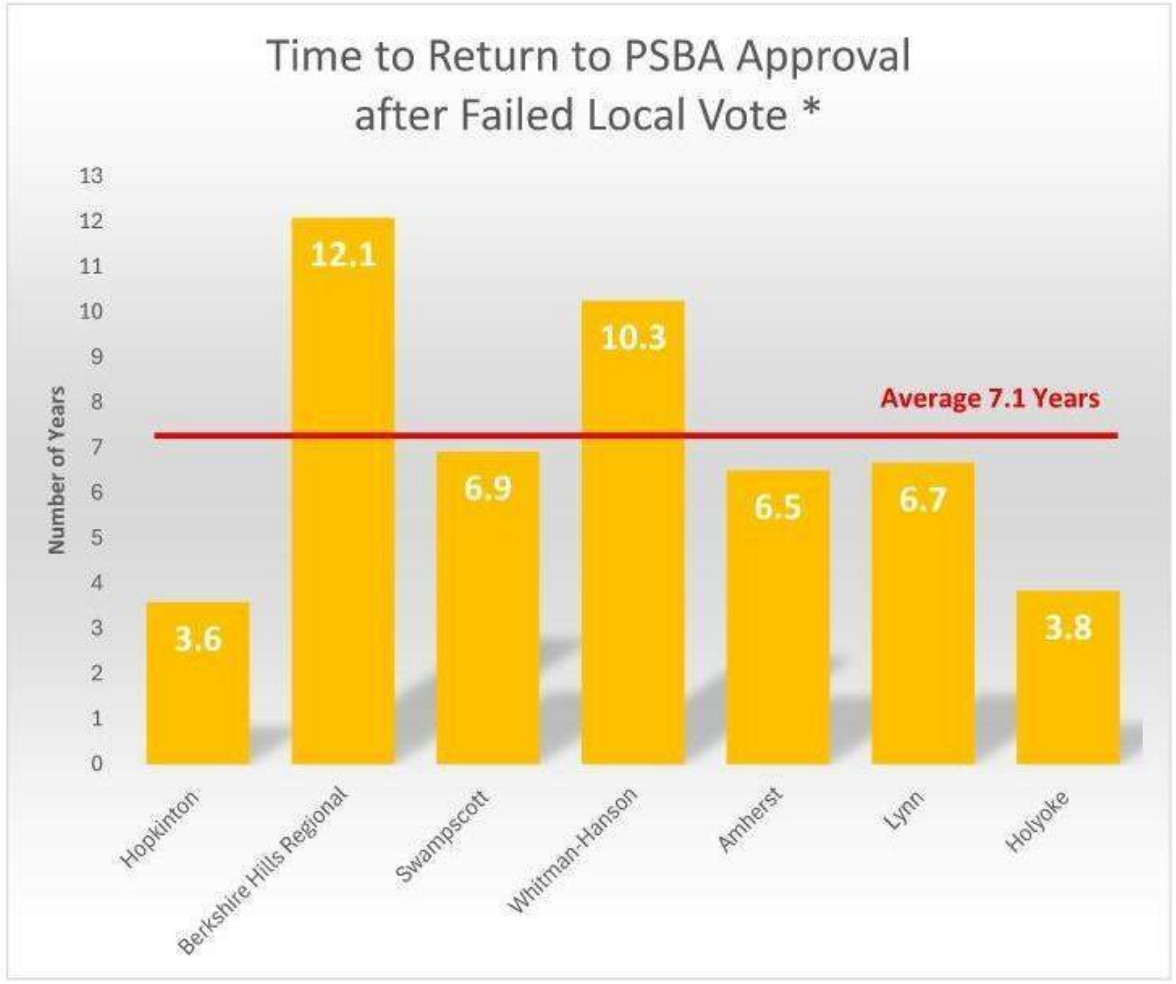
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Thank
You

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

School Building Committee Meeting #36

October 21, 2025

Massachusetts School Building Authority

Left Field

DORE + WHITTIER

FONTAINE



Agenda

1. Call to Order
2. Approval of Minutes – Vote
3. Administrative
   a. Invoice Summary – Vote
   b. Feasibility/Schematic Design Budget Recap/ Expansion of the Project Budget
   c. LeftField (OPM) Contract Update
   d. Dore + Whittier (Designer) Contract Amendment Update
   e. Project Schedule Review/ Recap
   f. School Building Committee Meeting 2025/2026 Schedule
4. Design Update
   a. Update on Design Refinements
5. Advisory Group Update
6. Public Engagement
7. Discussion/Correspondence/New Items
8. Committee Questions
9. Public Comments
10. Next meeting: Tuesday, November 18, 2025, at 6:30 PM
11. Adjournment

Approval of Minutes



Approval of Meeting Minutes | July 22, 2025



LeftField

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #35

Tuesday, July 22, 2025 In-person and Remote 6:30pm

Wilmington High School
Large Group Instruction Room
159 Church Street, Wilmington, MA

Zoom Webinar
https://wpsk12.zoom.us/j/83577025187?pwd=cAMI4Rs4IYqPdh4DoHQTNSnWq5XMom.1

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagel	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	X	Permanent Building Committee
Gregory B. Bendel	Partial, Remote	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	Remote	Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	Remote	Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran		Wildwood School, Teacher
John C. Holloway		Permanent Building Committee

Wildwood School Building Committee Meeting Minutes
Page 1 of 10

Invoices and Warrants



Invoice Summary #20

Wildwood Elementary School (Wilmington)

MSBA Data Entry Sheet

Date 10/8/2025

Period Ending: 9/30/2025

MSBA Reimbursement Package #: ***Invoice Summary #20***

Included GC/CM Requisition: ***N/A***

Invoice #	*Invoice Date*	*Vendor*	*Cost Code*	*Value*	
26	9/30/2025	Dore & Whittier - Amend #3 - FSA Reimbursables - Traffic Study (Nitsch)	0003 0000	$1,650.00	
26	9/30/2025	Dore & Whittier - Amend #3 - FSA Reimbursables - Standard Energy Modeling (GGD)	0003 0000	$11,550.00	
					Invoice Total $13,200.00
			Subtotal:	**$13,200.00**	
166	7/21/2025	kartoon EDU - MSBA Pillar Video	0004 0000	$1,080.00	
					Invoice Total $1,080.00
			Subtotal:	**$1,080.00**	

Total of Invoices Submitted Eligible + Ineligible **$14,280.00**

Feasibility/Schematic Design Budget Recap

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015

Wildwood Elementary School Feasibility Study

Project Director / Manager: David Saindon / Craig DiCarlo

Period Ending 9/30/2025

MSBA Reimbursement Package 20

Includes GC/CM Requisition N/A

Current Budget

Savings from Other category, which can be sent to fund project core contingency in future BRR

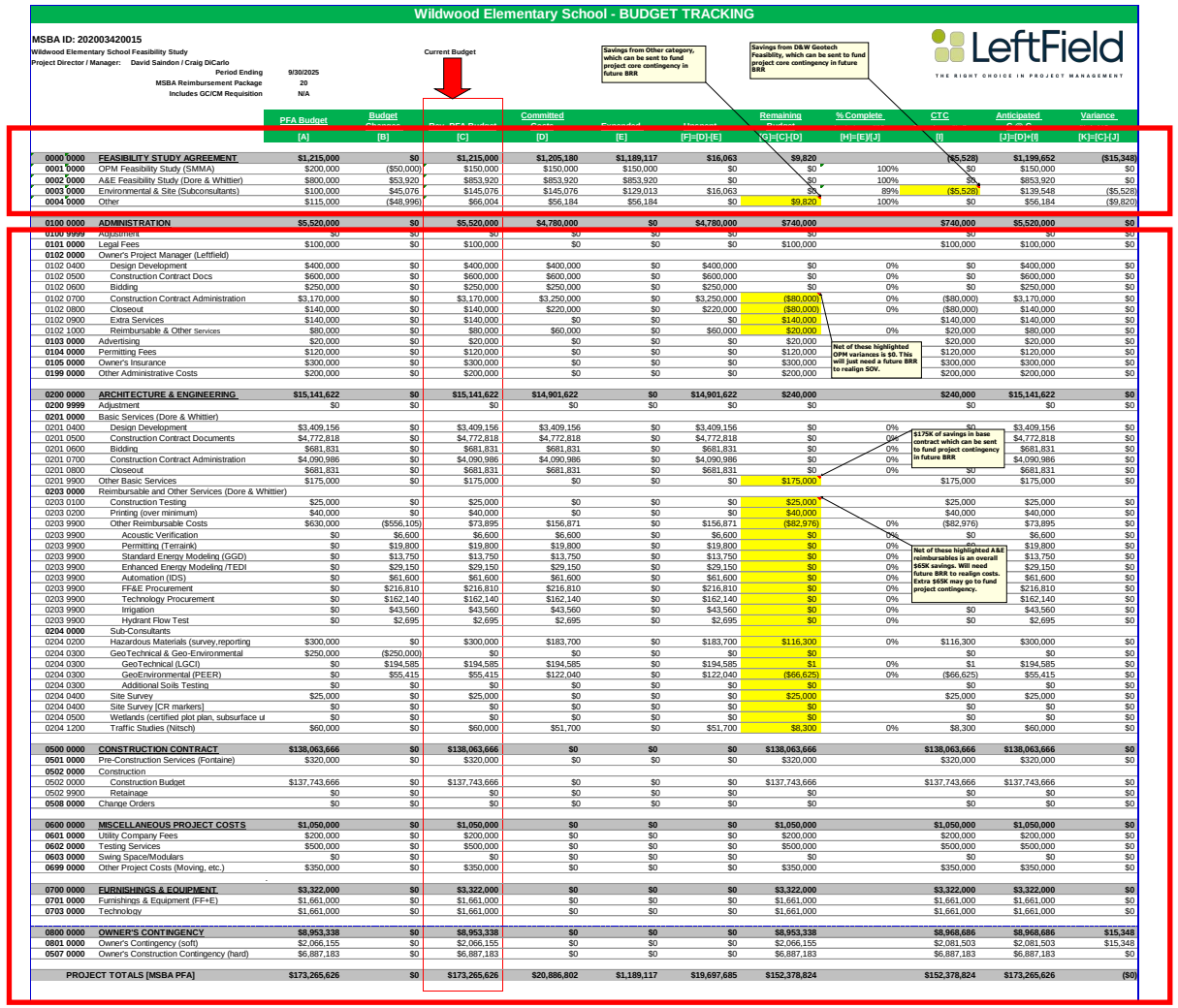
Savings from D&W Geotech Feasiblity, which can be sent to fund project core contingency in future BRR

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0000 0000	**FEASIBILITY STUDY AGREEMENT**	**$1,215,000**	**$0**	**$1,215,000**	**$1,205,180**	**$1,189,117**	**$16,063**	**$9,820**		**($5,528)**	**$1,199,652**	**($15,348)**
0001 0000	OPM Feasibility Study (SMMA)	$200,000	($50,000)	$150,000	$150,000	$150,000	$0	$0	100%	$0	$150,000	$0
0002 0000	A&E Feasibility Study (Dore & Whittier)	$800,000	$53,920	$853,920	$853,920	$853,920	$0	$0	100%	$0	$853,920	$0
0003 0000	Environmental & Site (Subconsultants)	$100,000	$45,076	$145,076	$145,076	$129,013	$16,063	$0	89%	($5,528)	$139,548	($5,528)
0004 0000	Other	$115,000	($48,996)	$66,004	$56,184	$56,184	$0	$9,820	100%	$0	$56,184	($9,820)

Feasibility Study Budget	$1,215,000
Spent to Date (Inv summary 20)	$1,189,117 (anticipated to expend $10,535; invoice forthcoming)
Forthcoming Invoice	$10,535
Anticipated Cost at Completion	$1,199,652
Anticipated Variance	**$15,348 (Savings to be reclassed to Owners Contingency)**

Expansion of Project Budget



Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015

Wildwood Elementary School Feasibility Study
Project Director / Manager: David Saindon / Craig DiCarlo
Period Ending 9/30/2025
MSBA Reimbursement Package 20
Includes GC/CM Requisition N/A

Current Budget

Savings from Other category, which can be sent to fund project core contingency in future BRR

Savings from D&W Geotech Feasibility, which can be sent to fund project core contingency in future BRR

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

		PFA Budget [A]	Budget Changes [B]	Base PFA Budget [C]	Committed Costs [D]	Expended [E]	Unexpended [F]=[D]-[E]	Remaining Balance [G]=[C]-[D]	% Complete [H]=[E]/[J]	CTC [I]	Anticipated Total Cost [J]=[D]+[I]	Variance [K]=[C]-[J]
0000 0000	FEASIBILITY STUDY AGREEMENT	$1,215,000	$0	$1,215,000	$1,205,180	$1,189,117	$16,063	$9,820		($5,528)	$1,199,652	($15,348)
0001 0000	OPM Feasibility Study (SMMA)	$200,000	($50,000)	$150,000	$150,000	$150,000	$0	$0	100%	$0	$150,000	$0
0002 0000	A&E Feasibility Study (Dore & Whittier)	$800,000	$53,920	$853,920	$853,920	$853,920	$0	$0	100%	$0	$853,920	$0
0003 0000	Environmental & Site (Subconsultants)	$100,000	$45,076	$145,076	$145,076	$129,013	$16,063	$0	89%	($5,528)	$139,548	($5,528)
0004 0000	Other	$115,000	($48,996)	$66,004	$56,184	$56,184	$0	$9,820	100%	$0	$56,184	($9,820)
0100 0000	ADMINISTRATION	$5,520,000	$0	$5,520,000	$4,780,000	$0	$4,780,000	$740,000		$740,000	$5,520,000	$0
0100 9999	Adjustment	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0101 0000	Legal Fees	$100,000	$0	$100,000	$0	$0	$0	$100,000		$100,000	$100,000	$0
0102 0000	Owner's Project Manager (Leftfield)											
0102 0400	Design Development	$400,000	$0	$400,000	$400,000	$0	$400,000	$0	0%	$0	$400,000	$0
0102 0500	Construction Contract Docs	$600,000	$0	$600,000	$600,000	$0	$600,000	$0	0%	$0	$600,000	$0
0102 0600	Bidding	$250,000	$0	$250,000	$250,000	$0	$250,000	$0	0%	$0	$250,000	$0
0102 0700	Construction Contract Administration	$3,170,000	$0	$3,170,000	$3,250,000	$0	$3,250,000	($80,000)	0%	($80,000)	$3,170,000	$0
0102 0800	Closeout	$140,000	$0	$140,000	$220,000	$0	$220,000	($80,000)	0%	($80,000)	$140,000	$0
0102 0900	Extra Services	$140,000	$0	$140,000	$0	$0	$0	$140,000		$140,000	$140,000	$0
0102 1000	Reimbursable & Other Services	$80,000	$0	$80,000	$60,000	$0	$60,000	$20,000	0%	$20,000	$80,000	$0
0103 0000	Advertising	$20,000	$0	$20,000	$0	$0	$0	$20,000		$20,000	$20,000	$0
0104 0000	Permitting Fees	$120,000	$0	$120,000	$0	$0	$0	$120,000		$120,000	$120,000	$0
0105 0000	Owner's Insurance	$300,000	$0	$300,000	$0	$0	$0	$300,000		$300,000	$300,000	$0
0199 0000	Other Administrative Costs	$200,000	$0	$200,000	$0	$0	$0	$200,000		$200,000	$200,000	$0
0200 0000	ARCHITECTURE & ENGINEERING	$15,141,622	$0	$15,141,622	$14,901,622	$0	$14,901,622	$240,000		$240,000	$15,141,622	$0
0200 9999	Adjustment	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0201 0000	Basic Services (Dore & Whittier)											
0201 0400	Design Development	$3,409,156	$0	$3,409,156	$3,409,156	$0	$3,409,156	$0	0%	$0	$3,409,156	$0
0201 0500	Construction Contract Documents	$4,772,818	$0	$4,772,818	$4,772,818	$0	$4,772,818	$0	0%	$0	$4,772,818	$0
0201 0600	Bidding	$681,831	$0	$681,831	$681,831	$0	$681,831	$0	0%	$0	$681,831	$0
0201 0700	Construction Contract Administration	$4,090,986	$0	$4,090,986	$4,090,986	$0	$4,090,986	$0	0%	$0	$4,090,986	$0
0201 0800	Closeout	$681,831	$0	$681,831	$681,831	$0	$681,831	$0	0%	$0	$681,831	$0
0201 9900	Other Basic Services	$175,000	$0	$175,000	$0	$0	$0	$175,000		$175,000	$175,000	$0
0203 0000	Reimbursable and Other Services (Dore & Whittier)											
0203 0100	Construction Testing	$25,000	$0	$25,000	$0	$0	$0	$25,000		$25,000	$25,000	$0
0203 0200	Printing (over minimum)	$40,000	$0	$40,000	$0	$0	$0	$40,000		$40,000	$40,000	$0
0203 9900	Other Reimbursable Costs	$630,000	($556,105)	$73,895	$156,871	$0	$156,871	($82,976)	0%	($82,976)	$73,895	$0
0203 9900	Acoustic Verification	$0	$6,600	$6,600	$6,600	$0	$6,600	$0	0%	$0	$6,600	$0
0203 9900	Permitting (Terrain)	$0	$19,800	$19,800	$19,800	$0	$19,800	$0	0%	$0	$19,800	$0
0203 9900	Standard Energy Modeling (GGD)	$0	$13,750	$13,750	$13,750	$0	$13,750	$0	0%	$0	$13,750	$0
0203 9900	Enhanced Energy Modeling /TEDI	$0	$29,150	$29,150	$29,150	$0	$29,150	$0	0%	$0	$29,150	$0
0203 9900	Automation (IDS)	$0	$61,600	$61,600	$61,600	$0	$61,600	$0	0%	$0	$61,600	$0
0203 9900	FF&E Procurement	$0	$216,810	$216,810	$216,810	$0	$216,810	$0	0%	$0	$216,810	$0
0203 9900	Technology Procurement	$0	$162,140	$162,140	$162,140	$0	$162,140	$0	0%	$0	$162,140	$0
0203 9900	Irrigation	$0	$43,560	$43,560	$43,560	$0	$43,560	$0	0%	$0	$43,560	$0
0203 9900	Hydrant Flow Test	$0	$2,695	$2,695	$2,695	$0	$2,695	$0	0%	$0	$2,695	$0
0204 0000	Sub-Consultants											
0204 0200	Hazardous Materials (survey,reporting	$300,000	$0	$300,000	$183,700	$0	$183,700	$116,300	0%	$116,300	$300,000	$0
0204 0300	GeoTechnical & Geo-Environmental	$250,000	($250,000)	$0	$0	$0	$0	$0		$0	$0	$0
0204 0300	GeoTechnical (LGCI)	$0	$194,585	$194,585	$194,585	$0	$194,585	$1	0%	$1	$194,585	$0
0204 0300	GeoEnvironmental (PEER)	$0	$55,415	$55,415	$122,040	$0	$122,040	($66,625)	0%	($66,625)	$55,415	$0
0204 0300	Additional Soils Testing	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0204 0400	Site Survey	$25,000	$0	$25,000	$0	$0	$0	$25,000		$25,000	$25,000	$0
0204 0400	Site Survey [CR markers]	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0204 0500	Wetlands (certified plot plan, subsurface ut	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0204 1200	Traffic Studies (Nitsch)	$60,000	$0	$60,000	$51,700	$0	$51,700	$8,300	0%	$8,300	$60,000	$0
0500 0000	CONSTRUCTION CONTRACT	$138,063,666	$0	$138,063,666	$0	$0	$0	$138,063,666		$138,063,666	$138,063,666	$0
0501 0000	Pre-Construction Services (Fontaine)	$320,000	$0	$320,000	$0	$0	$0	$320,000		$320,000	$320,000	$0
0502 0000	Construction											
0502 0000	Construction Budget	$137,743,666	$0	$137,743,666	$0	$0	$0	$137,743,666		$137,743,666	$137,743,666	$0
0502 9900	Retainage	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0508 0000	Change Orders	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0600 0000	MISCELLANEOUS PROJECT COSTS	$1,050,000	$0	$1,050,000	$0	$0	$0	$1,050,000		$1,050,000	$1,050,000	$0
0601 0000	Utility Company Fees	$200,000	$0	$200,000	$0	$0	$0	$200,000		$200,000	$200,000	$0
0602 0000	Testing Services	$500,000	$0	$500,000	$0	$0	$0	$500,000		$500,000	$500,000	$0
0603 0000	Swing Space/Modulars	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0699 0000	Other Project Costs (Moving, etc.)	$350,000	$0	$350,000	$0	$0	$0	$350,000		$350,000	$350,000	$0
0700 0000	FURNISHINGS & EQUIPMENT	$3,322,000	$0	$3,322,000	$0	$0	$0	$3,322,000		$3,322,000	$3,322,000	$0
0701 0000	Furnishings & Equipment (FF+E)	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0703 0000	Technology	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0800 0000	OWNER'S CONTINGENCY	$8,953,338	$0	$8,953,338	$0	$0	$0	$8,953,338		$8,968,686	$8,968,686	$15,348
0801 0000	Owner's Contingency (soft)	$2,066,155	$0	$2,066,155	$0	$0	$0	$2,066,155		$2,081,503	$2,081,503	$15,348
0507 0000	Owner's Construction Contingency (hard)	$6,887,183	$0	$6,887,183	$0	$0	$0	$6,887,183		$6,887,183	$6,887,183	$0
	PROJECT TOTALS [MSBA PFA]	$173,265,626	$0	$173,265,626	$20,886,802	$1,189,117	$19,697,685	$152,378,824		$152,378,824	$173,265,626	($0)

Net of these highlighted OPM variances is $0. This will just need a future BRR to realign SOV.

$175K of savings in base contract which can be sent to fund project contingency in future BRR

Net of these highlighted A&E reimbursables is an overall $65K savings. Will need future BRR to realign costs. Extra $65K may go to fund project contingency.

Feasibility Study Budget of $1,125,000 “rolled” up showing the variance (savings) of $15,348

Project budget expanded to reflect the Total Project Budget (MSBA 3011) of $173,265,626

Key Take-A-Ways:

- Savings of $15,348 will be reclassed to Owners Contingency
- LeftField Contract total is the same value from the 3011 budget. However, certain values vary between cost categories from the 3011
- Dore & Whittier contract amendment #4 results in an underrun of $240,000. Said savings will be reclassed to Owners Contingency.

Expansion of Project Budget

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015

Wildwood Elementary School Feasibility Study

Project Director / Manager: David Saindon / Craig DiCarlo

Period Ending 9/30/2025

MSBA Reimbursement Package 20

Includes GC/CM Requisition N/A

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

Current Budget

Savings from Other category, which can be sent to fund project core contingency in future BRR

Savings from D&W Geotech Feasiblity, which can be sent to fund project core contingency in future BRR

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0000 0000	**FEASIBILITY STUDY AGREEMENT**	**$1,215,000**	**$0**	**$1,215,000**	**$1,205,180**	**$1,189,117**	**$16,063**	**$9,820**		**($5,528)**	**$1,199,652**	**($15,348)**
0001 0000	OPM Feasibility Study (SMMA)	$200,000	($50,000)	$150,000	$150,000	$150,000	$0	$0	100%	$0	$150,000	$0
0002 0000	A&E Feasibility Study (Dore & Whittier)	$800,000	$53,920	$853,920	$853,920	$853,920	$0	$0	100%	$0	$853,920	$0
0003 0000	Environmental & Site (Subconsultants)	$100,000	$45,076	$145,076	$145,076	$129,013	$16,063	$0	89%	($5,528)	$139,548	($5,528)
0004 0000	Other	$115,000	($48,996)	$66,004	$56,184	$56,184	$0	$9,820	100%	$0	$56,184	($9,820)
0100 0000	**ADMINISTRATION**	**$5,520,000**	**$0**	**$5,520,000**	**$4,780,000**	**$0**	**$4,780,000**	**$740,000**		**$740,000**	**$5,520,000**	**$0**
0100 9999	Adjustment	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0101 0000	Legal Fees	$100,000	$0	$100,000	$0	$0	$0	$100,000		$100,000	$100,000	$0
0102 0000	Owner's Project Manager (Leftfield)											
0102 0400	Design Development	$400,000	$0	$400,000	$400,000	$0	$400,000	$0	0%	$0	$400,000	$0
0102 0500	Construction Contract Docs	$600,000	$0	$600,000	$600,000	$0	$600,000	$0	0%	$0	$600,000	$0
0102 0600	Bidding	$250,000	$0	$250,000	$250,000	$0	$250,000	$0	0%	$0	$250,000	$0
0102 0700	Construction Contract Administration	$3,170,000	$0	$3,170,000	$3,250,000	$0	$3,250,000	($80,000)	0%	($80,000)	$3,170,000	$0
0102 0800	Closeout	$140,000	$0	$140,000	$220,000	$0	$220,000	($80,000)	0%	($80,000)	$140,000	$0
0102 0900	Extra Services	$140,000	$0	$140,000	$0	$0	$0	$140,000		$140,000	$140,000	$0
0102 1000	Reimbursable & Other Services	$80,000	$0	$80,000	$60,000	$0	$60,000	$20,000	0%	$20,000	$80,000	$0
0103 0000	Advertising	$20,000	$0	$20,000	$0	$0	$0	$20,000		$20,000	$20,000	$0
0104 0000	Permitting Fees	$120,000	$0	$120,000	$0	$0	$0	$120,000		$120,000	$120,000	$0
0105 0000	Owner's Insurance	$300,000	$0	$300,000	$0	$0	$0	$300,000		$300,000	$300,000	$0
0199 0000	Other Administrative Costs	$200,000	$0	$200,000	$0	$0	$0	$200,000		$200,000	$200,000	$0

Net of these highlighted OPM variances is $0. This will just need a future BRR to realign SOV.

Expansion of Project Budget

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015
Wildwood Elementary School Feasibility Study
Project Director / Manager: David Saindon / Craig DiCarlo
Period Ending 9/30/2025
MSBA Reimbursement Package 20
Includes GC/CM Requisition N/A

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

Current Budget

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0200 0000	**ARCHITECTURE & ENGINEERING**	**$15,141,622**	**$0**	**$15,141,622**	**$14,901,622**	**$0**	**$14,901,622**	**$240,000**		**$240,000**	**$15,141,622**	**$0**
0200 9999	Adjustment	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0201 0000	Basic Services (Dore & Whittier)											
0201 0400	Design Development	$3,409,156	$0	$3,409,156	$3,409,156	$0	$3,409,156	$0	0%	$0	$3,409,156	$0
0201 0500	Construction Contract Documents	$4,772,818	$0	$4,772,818	$4,772,818	$0	$4,772,818	$0	0%	$0	$4,772,818	$0
0201 0600	Bidding	$681,831	$0	$681,831	$681,831	$0	$681,831	$0	0%	$0	$681,831	$0
0201 0700	Construction Contract Administration	$4,090,986	$0	$4,090,986	$4,090,986	$0	$4,090,986	$0	0%	$0	$4,090,986	$0
0201 0800	Closeout	$681,831	$0	$681,831	$681,831	$0	$681,831	$0	0%	$0	$681,831	$0
0201 9900	Other Basic Services	$175,000	$0	$175,000	$0	$0	$0	$175,000		$175,000	$175,000	$0
0203 0000	Reimbursable and Other Services (Dore & Whittier)											
0203 0100	Construction Testing	$25,000	$0	$25,000	$0	$0	$0	$25,000		$25,000	$25,000	$0
0203 0200	Printing (over minimum)	$40,000	$0	$40,000	$0	$0	$0	$40,000		$40,000	$40,000	$0
0203 9900	Other Reimbursable Costs	$630,000	($556,105)	$73,895	$156,871	$0	$156,871	($82,976)	0%	($82,976)	$73,895	$0
0203 9900	Acoustic Verification	$0	$6,600	$6,600	$6,600	$0	$6,600	$0	0%	$0	$6,600	$0
0203 9900	Permitting (Terraink)	$0	$19,800	$19,800	$19,800	$0	$19,800	$0	0%	$0	$19,800	$0
0203 9900	Standard Energy Modeling (GGD)	$0	$13,750	$13,750	$13,750	$0	$13,750	$0	0%	$0	$13,750	$0
0203 9900	Enhanced Energy Modeling /TEDI	$0	$29,150	$29,150	$29,150	$0	$29,150	$0	0%	$0	$29,150	$0
0203 9900	Automation (IDS)	$0	$61,600	$61,600	$61,600	$0	$61,600	$0	0%	$0	$61,600	$0
0203 9900	FF&E Procurement	$0	$216,810	$216,810	$216,810	$0	$216,810	$0	0%	$0	$216,810	$0
0203 9900	Technology Procurement	$0	$162,140	$162,140	$162,140	$0	$162,140	$0	0%	$0	$162,140	$0
0203 9900	Irrigation	$0	$43,560	$43,560	$43,560	$0	$43,560	$0	0%	$0	$43,560	$0
0203 9900	Hydrant Flow Test	$0	$2,695	$2,695	$2,695	$0	$2,695	$0	0%	$0	$2,695	$0
0204 0000	Sub-Consultants											
0204 0200	Hazardous Materials (survey,reporting	$300,000	$0	$300,000	$183,700	$0	$183,700	$116,300	0%	$116,300	$300,000	$0
0204 0300	GeoTechnical & Geo-Environmental	$250,000	($250,000)	$0	$0	$0	$0	$0		$0	$0	$0
0204 0300	GeoTechnical (LGCI)	$0	$194,585	$194,585	$194,585	$0	$194,585	$1	0%	$1	$194,585	$0
0204 0300	GeoEnvironmental (PEER)	$0	$55,415	$55,415	$122,040	$0	$122,040	($66,625)	0%	($66,625)	$55,415	$0
0204 0300	Additional Soils Testing	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0204 0400	Site Survey	$25,000	$0	$25,000	$0	$0	$0	$25,000		$25,000	$25,000	$0
0204 0400	Site Survey [CR markers]	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0204 0500	Wetlands (certified plot plan, subsurface u	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0204 1200	Traffic Studies (Nitsch)	$60,000	$0	$60,000	$51,700	$0	$51,700	$8,300	0%	$8,300	$60,000	$0
0500 0000	**CONSTRUCTION CONTRACT**	**$138,063,666**	**$0**	**$138,063,666**	**$0**	**$0**	**$0**	**$138,063,666**		**$138,063,666**	**$138,063,666**	**$0**

$175K of savings in base contract which can be sent to fund project contingency in future BRR

Net of these highlighted A&E reimbursables is an overall $65K savings. Will need future BRR to realign costs. Extra $65K may go to fund project contingency.

Expansion of Project Budget

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015

Wildwood Elementary School Feasibility Study
Project Director / Manager: David Saindon / Craig DiCarlo
Period Ending 9/30/2025
MSBA Reimbursement Package 20
Includes GC/CM Requisition N/A

Current Budget

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0500 0000	**CONSTRUCTION CONTRACT**	**$138,063,666**	**$0**	**$138,063,666**	**$0**	**$0**	**$0**	**$138,063,666**		**$138,063,666**	**$138,063,666**	**$0**
0501 0000	Pre-Construction Services (Fontaine)	$320,000	$0	$320,000	$0	$0	$0	$320,000		$320,000	$320,000	$0
0502 0000	Construction											
0502 0000	Construction Budget	$137,743,666	$0	$137,743,666	$0	$0	$0	$137,743,666		$137,743,666	$137,743,666	$0
0502 9900	Retainage	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0508 0000	Change Orders	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0600 0000	**MISCELLANEOUS PROJECT COSTS**	**$1,050,000**	**$0**	**$1,050,000**	**$0**	**$0**	**$0**	**$1,050,000**		**$1,050,000**	**$1,050,000**	**$0**
0601 0000	Utility Company Fees	$200,000	$0	$200,000	$0	$0	$0	$200,000		$200,000	$200,000	$0
0602 0000	Testing Services	$500,000	$0	$500,000	$0	$0	$0	$500,000		$500,000	$500,000	$0
0603 0000	Swing Space/Modulars	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0699 0000	Other Project Costs (Moving, etc.)	$350,000	$0	$350,000	$0	$0	$0	$350,000		$350,000	$350,000	$0
0700 0000	**FURNISHINGS & EQUIPMENT**	**$3,322,000**	**$0**	**$3,322,000**	**$0**	**$0**	**$0**	**$3,322,000**		**$3,322,000**	**$3,322,000**	**$0**
0701 0000	Furnishings & Equipment (FF+E)	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0703 0000	Technology	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0800 0000	**OWNER'S CONTINGENCY**	**$8,953,338**	**$0**	**$8,953,338**	**$0**	**$0**	**$0**	**$8,953,338**		**$8,968,686**	**$8,968,686**	**$15,348**
0801 0000	Owner's Contingency (soft)	$2,066,155	$0	$2,066,155	$0	$0	$0	$2,066,155		$2,081,503	$2,081,503	$15,348
0507 0000	Owner's Construction Contingency (hard)	$6,887,183	$0	$6,887,183	$0	$0	$0	$6,887,183		$6,887,183	$6,887,183	$0
	PROJECT TOTALS [MSBA PFA]	**$173,265,626**	**$0**	**$173,265,626**	**$20,886,802**	**$1,189,117**	**$19,697,685**	**$152,378,824**		**$152,378,824**	**$173,265,626**	**($0)**

Project Budget – Next Steps

At our next scheduled meeting, a Budget Revision Request (BRR) will be presented to the School Building Committee for formal approval. These are essentially an accounting document, utilized between the District/ Town and the MSBA to coordinate funds being reclassed from one MSBA propay cost code to another MSBA propay cost code. To date, the Committee has already approved one previous BRR.

BRR #2 will:

- Reclass savings from the Feasibility Study cost codes to the Owners' Contingency cost code,
- Reclass propay cost codes to align with the OPM (LeftField) contract values,
- Reclass propay cost codes to align with the Designer (Dore + Whittier) contract amendment #4 values. The resulting savings will be reclassed to the Owners Contingency cost code.

LeftField Contract Update

With the successful passage of the Town Meeting vote and ballot measure, the Town executed the LeftField contract/ proposal from earlier this summer. The building committee approved the selection of LeftField on June 10, 2025, and the MSBA approved LeftField at their OPM review/ approval meeting held on July 7, 2025.

To Note:

- The LeftField contract value is for $4,780,000
- The value for OPM services identified in the total project budget (the 3011) is for $4,780,000
- Cost code values from the 3011 for OPM services will be aligned with the LeftField contract via a future BRR.

Designer Contract Amendment Update

With the successful passage of the Town Meeting vote and ballot measure, the Town executed the Dore + Whittier contract amendment #4, which is for services related to design development, permitting, construction documentation, bidding, construction admin., and project closeout. The development of this contract amendment included an audit of the designer's services related to the feasibility study, which resulted in a savings of $5,528.

To Note:

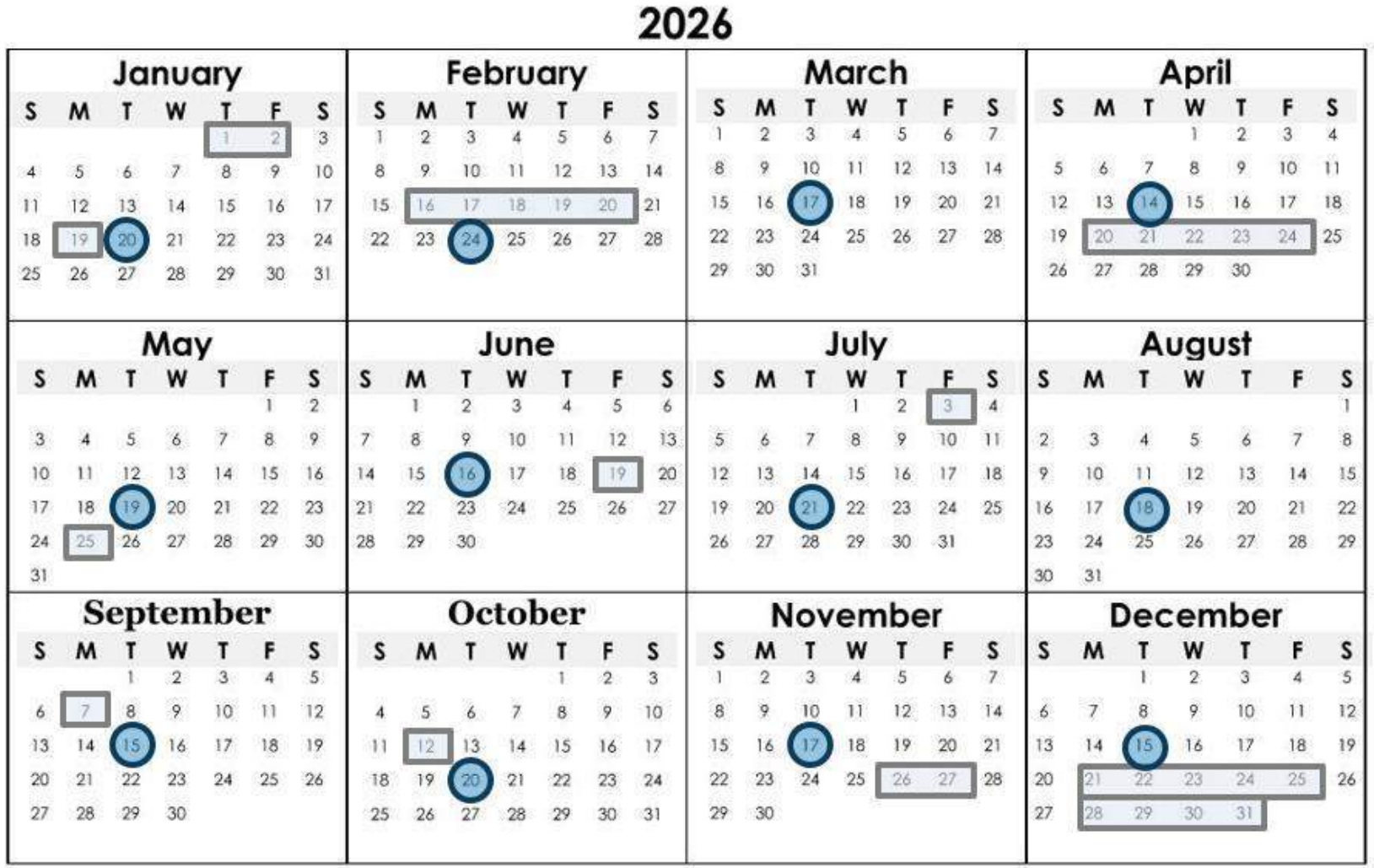
- The D+W contract amend. #4 value is for an increase of $14,901,622, which brings the total contract value for D+W to $15,900,618.
- The D+W contract amend. value as compared to the 3011 designer cost values, resulted in a savings of $240,000.
- Cost code values from the 3011 for Designers' services will be aligned with the D+W contract amendment #4 via a future BRR.

SBC Meeting Schedule 2025/ 2026

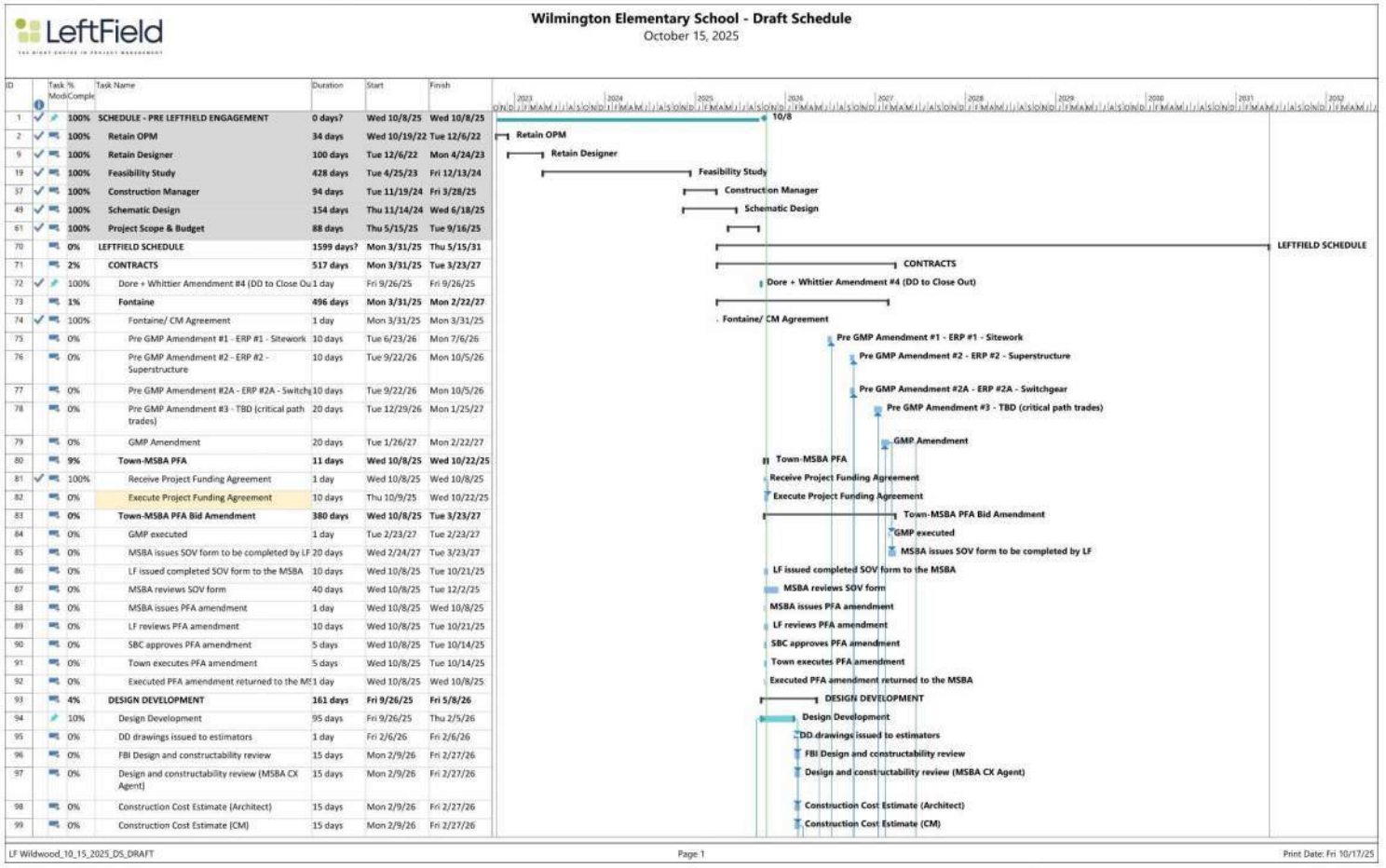
To assist with the planning of Wildwood School Building Committee (WSBC) meetings, and in consideration of other established meetings within the Town of Wilmington, we recommend that WSBC meetings be scheduled for the dates below. Please note that meetings may be canceled if deemed unnecessary. **Based on the progress of the project and timing of certain committee actions, meeting dates are subject to change, and additional instances may be required. Unless otherwise noted, meetings will start at 6:30 PM and be held in-person at the Wilmington High School Large Group Instruction Room (LGIR).**



SBC Meeting Schedule 2025/ 2026



Project Schedule



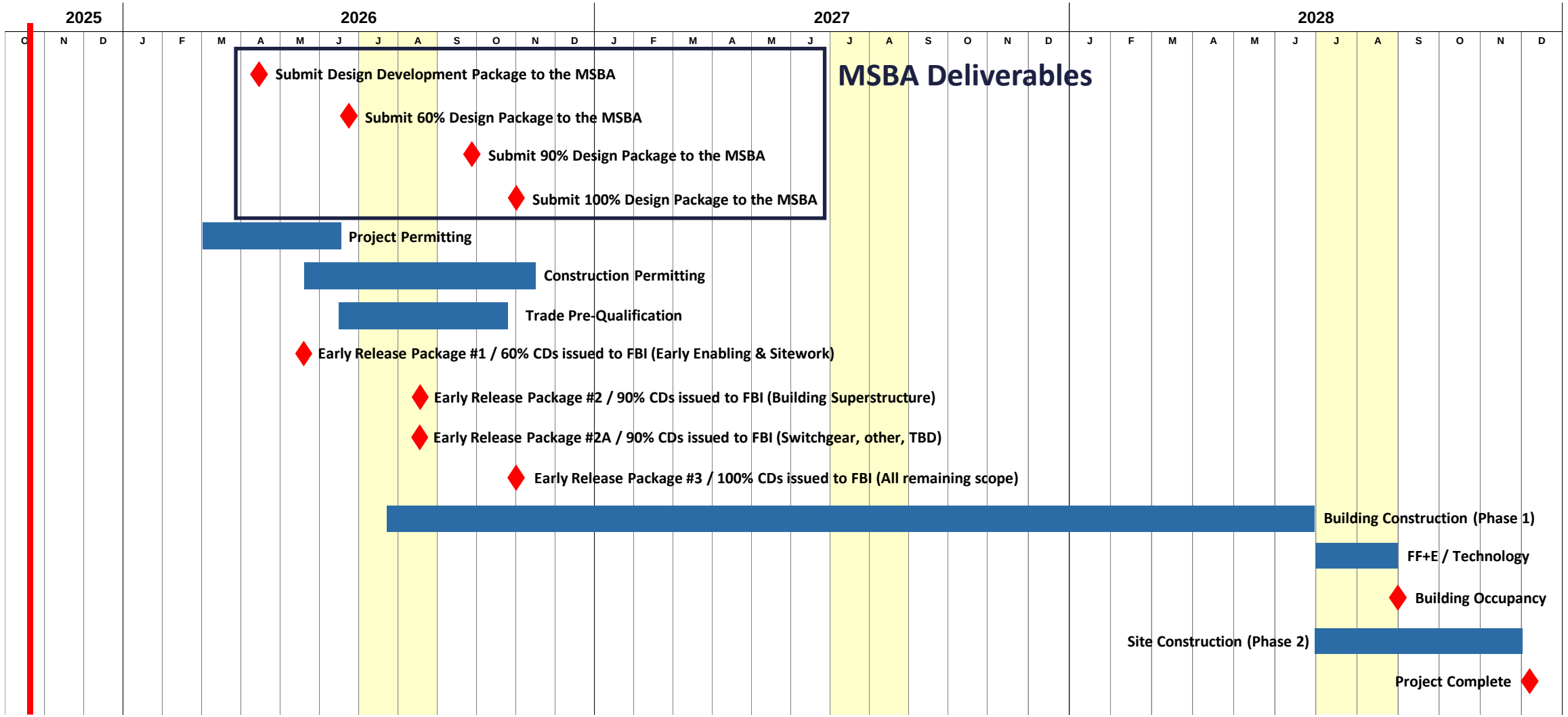
LeftField

Wilmington Elementary School - Draft Schedule

October 15, 2025

ID	Task Mode	% Complete	Task Name	Duration	Start	Finish
1	✓	100%	**SCHEDULE - PRE LEFTFIELD ENGAGEMENT**	**0 days?**	**Wed 10/8/25**	**Wed 10/8/25**
2	✓	100%	**Retain OPM**	**34 days**	**Wed 10/19/22**	**Tue 12/6/22**
9	✓	100%	**Retain Designer**	**100 days**	**Tue 12/6/22**	**Mon 4/24/23**
19	✓	100%	**Feasibility Study**	**428 days**	**Tue 4/25/23**	**Fri 12/13/24**
37	✓	100%	**Construction Manager**	**94 days**	**Tue 11/19/24**	**Fri 3/28/25**
49	✓	100%	**Schematic Design**	**154 days**	**Thu 11/14/24**	**Wed 6/18/25**
61	✓	100%	**Project Scope & Budget**	**88 days**	**Thu 5/15/25**	**Tue 9/16/25**
70		0%	**LEFTFIELD SCHEDULE**	**1599 days?**	**Mon 3/31/25**	**Thu 5/15/31**
71		2%	**CONTRACTS**	**517 days**	**Mon 3/31/25**	**Tue 3/23/27**
72	✓	100%	Dore + Whittier Amendment #4 (DD to Close Ou	1 day	Fri 9/26/25	Fri 9/26/25
73		1%	**Fontaine**	**496 days**	**Mon 3/31/25**	**Mon 2/22/27**
74	✓	100%	Fontaine/ CM Agreement	1 day	Mon 3/31/25	Mon 3/31/25
75		0%	Pre GMP Amendment #1 - ERP #1 - Sitework	10 days	Tue 6/23/26	Mon 7/6/26
76		0%	Pre GMP Amendment #2 - ERP #2 - Superstructure	10 days	Tue 9/22/26	Mon 10/5/26
77		0%	Pre GMP Amendment #2A - ERP #2A - Switchg	10 days	Tue 9/22/26	Mon 10/5/26
78		0%	Pre GMP Amendment #3 - TBD (critical path trades)	20 days	Tue 12/29/26	Mon 1/25/27
79		0%	GMP Amendment	20 days	Tue 1/26/27	Mon 2/22/27
80		9%	**Town-MSBA PFA**	**11 days**	**Wed 10/8/25**	**Wed 10/22/25**
81	✓	100%	Receive Project Funding Agreement	1 day	Wed 10/8/25	Wed 10/8/25
82		0%	Execute Project Funding Agreement	10 days	Thu 10/9/25	Wed 10/22/25
83		0%	**Town-MSBA PFA Bid Amendment**	**380 days**	**Wed 10/8/25**	**Tue 3/23/27**
84		0%	GMP executed	1 day	Tue 2/23/27	Tue 2/23/27
85		0%	MSBA issues SOV form to be completed by LF	20 days	Wed 2/24/27	Tue 3/23/27
86		0%	LF issued completed SOV form to the MSBA	10 days	Wed 10/8/25	Tue 10/21/25
87		0%	MSBA reviews SOV form	40 days	Wed 10/8/25	Tue 12/2/25
88		0%	MSBA issues PFA amendment	1 day	Wed 10/8/25	Wed 10/8/25
89		0%	LF reviews PFA amendment	10 days	Wed 10/8/25	Tue 10/21/25
90		0%	SBC approves PFA amendment	5 days	Wed 10/8/25	Tue 10/14/25
91		0%	Town executes PFA amendment	5 days	Wed 10/8/25	Tue 10/14/25
92		0%	Executed PFA amendment returned to the MS	1 day	Wed 10/8/25	Wed 10/8/25
93		4%	**DESIGN DEVELOPMENT**	**161 days**	**Fri 9/26/25**	**Fri 5/8/26**
94		10%	Design Development	95 days	Fri 9/26/25	Thu 2/5/26
95		0%	DD drawings issued to estimators	1 day	Fri 2/6/26	Fri 2/6/26
96		0%	FBI Design and constructability review	15 days	Mon 2/9/26	Fri 2/27/26
97		0%	Design and constructability review (MSBA CX Agent)	15 days	Mon 2/9/26	Fri 2/27/26
98		0%	Construction Cost Estimate (Architect)	15 days	Mon 2/9/26	Fri 2/27/26
99		0%	Construction Cost Estimate (CM)	15 days	Mon 2/9/26	Fri 2/27/26

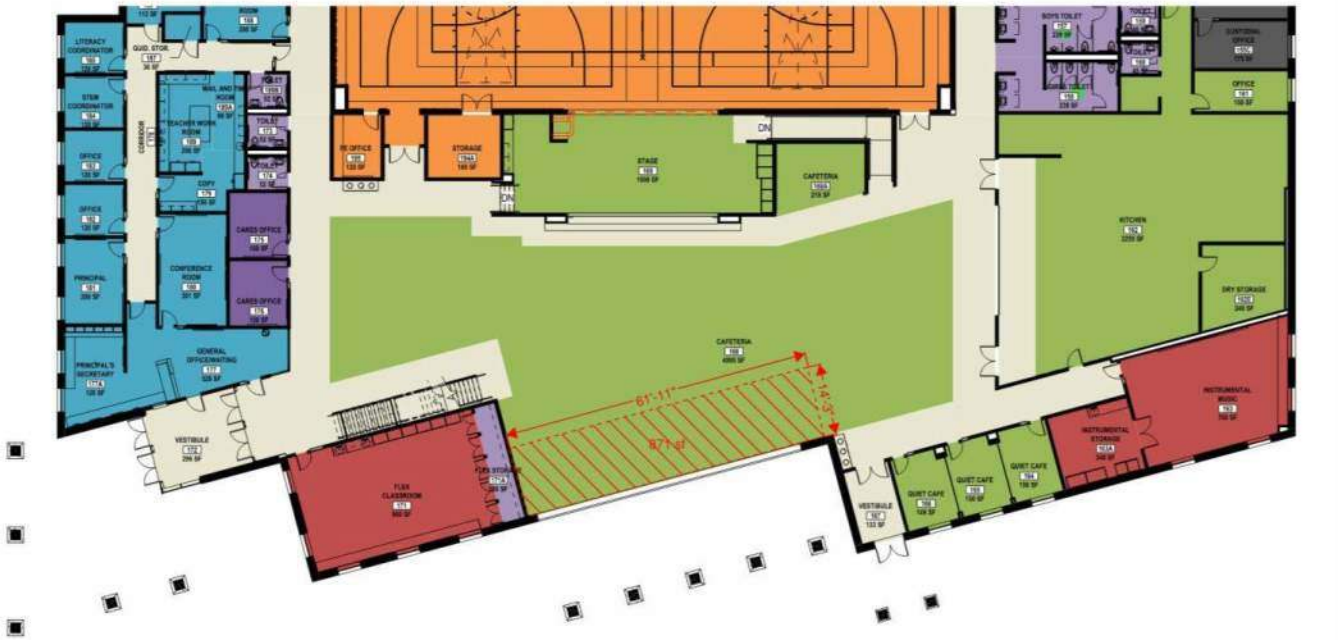
Project Schedule Review/ Recap



Design Update



First Floor
SD Plan



DD Study

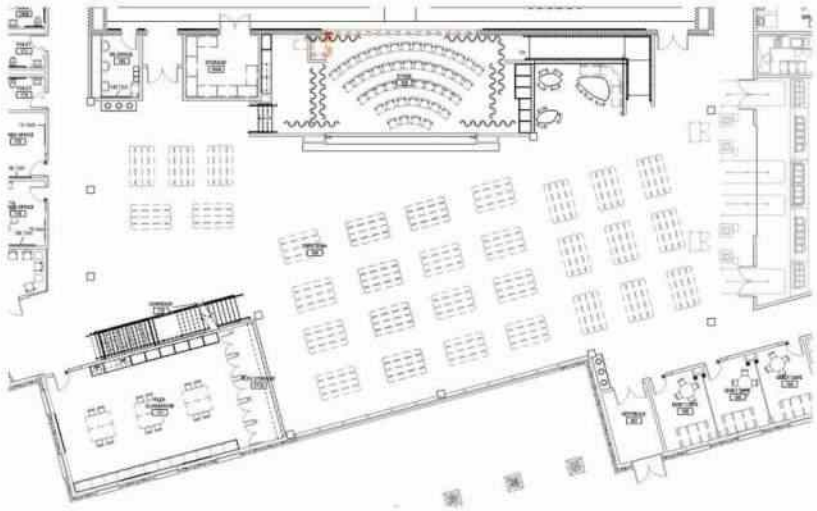
- Entry Orientation
- Admin Configuration
- Music Flex Classroom Adjacency to Instrumental Rooms
- Align Circulation
- Proscenium opening



Furniture Layout

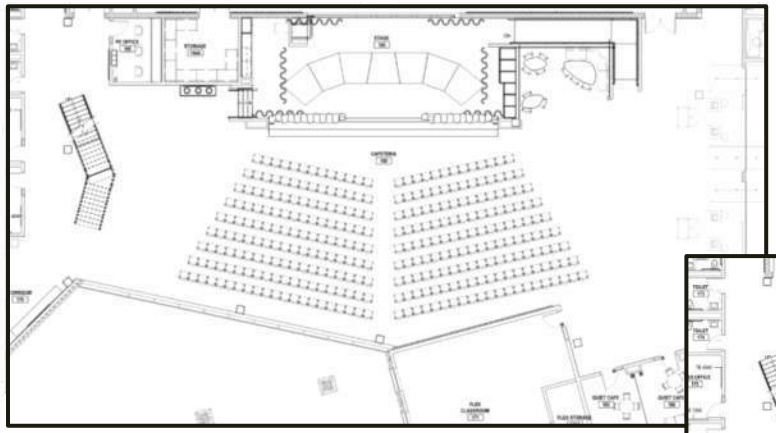
FURNITURE CAFETERIA & CONCERT

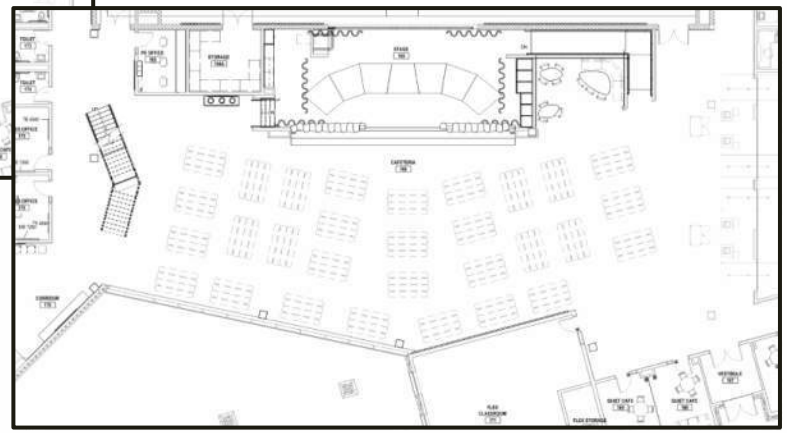
SD



CONCERT - 140 CHORUS
(7) 4-STEP SIGNATURE RISERS
306 LOOSE CHAIRS

LUNCH
30 TABLES

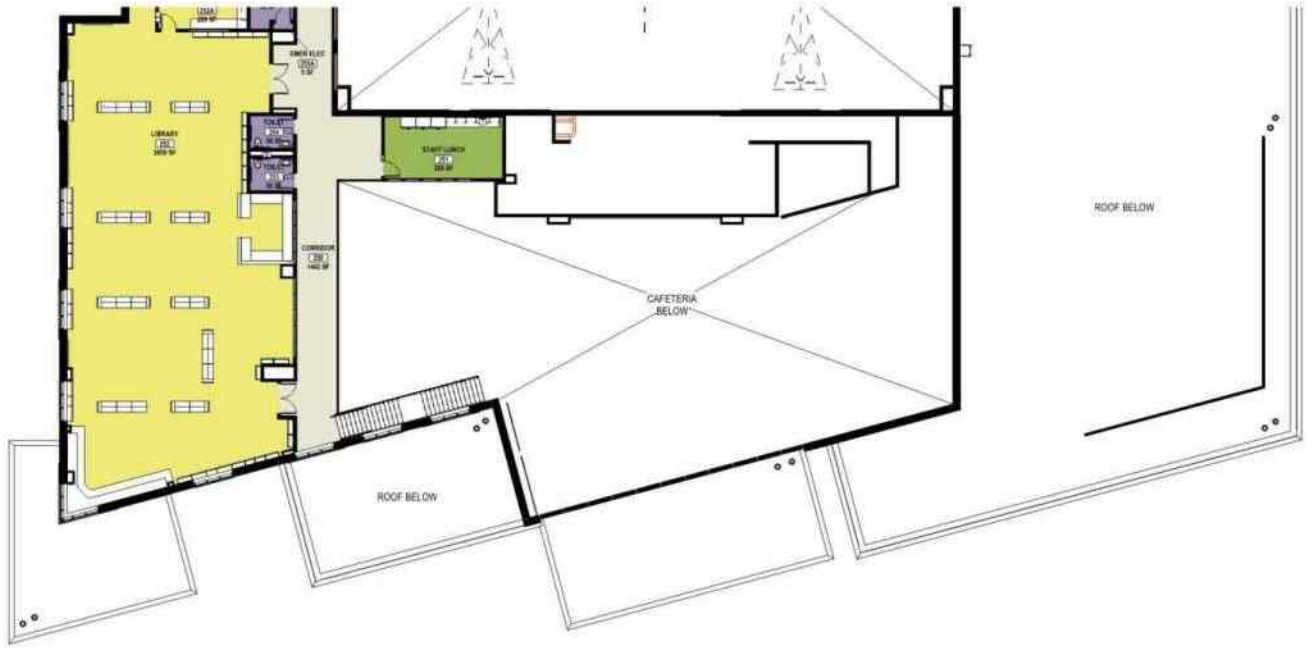




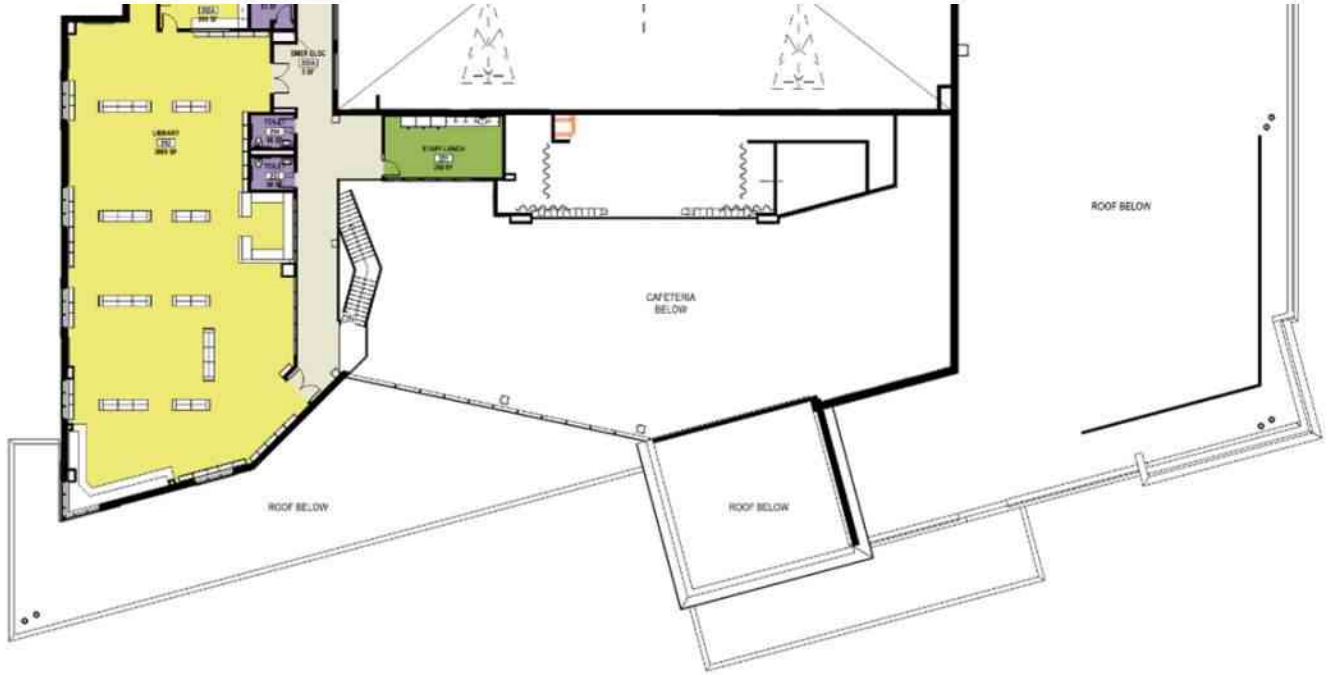
DD STUDY

Second Floor

SD Plan



DD Study



Exterior

SD





DD Study

Exterior

SD





DD Study

Exterior
DD Study







Exterior
Design Development Study



Interior Design Development Study



Interior Design Development Study



Interior Design Development Study



Interior Design Development Study

One Month Look Ahead

Task	Status
Update Traffic Study	In progress
Hydrant Flow Test	10/20/25
Environmental Site Assessment	10/29/25
User Group Meetings	10/30/25 – 11/10/25
Borings/Test Pits	Dates to be confirmed
Existing Ambient Noise Level Measurements	Dates to be confirmed

Advisory Group Update



Public Engagement



Agenda

1. Call to Order
2. Approval of Minutes – Vote
3. Administrative
   a. Invoice Summary – Vote
   b. Feasibility/Schematic Design Budget Recap/ Expansion of the Project Budget
   c. LeftField (OPM) Contract Update
   d. Dore + Whittier (Designer) Contract Amendment Update
   e. Project Schedule Review/ Recap
   f. School Building Committee Meeting 2025/2026 Schedule
4. Design Update
   a. Update on Design Refinements
5. Advisory Group Update
6. Public Engagement
7. **Discussion/Correspondence/New Items**
8. **Committee Questions**
9. **Public Comments**
10. **Next meeting: Tuesday, November 18, 2025, at 6:30 PM**
11. **Adjournment**

Discussion/ Correspondence/ New Items



Committee Questions



Public Comment



THANK YOU!

Massachusetts School Building Authority

WILMINGTON, MASS. INCORPORATED 1730

Left Field
PROJECT MANAGEMENT

dw
DORE + WHITTIER

FONTAINE

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

School Building Committee Meeting #37

November 18, 2025

Massachusetts School Building Authority

Left Field

DORE + WHITTIER

FONTAINE



Agenda

1. Call to Order
2. Approval of Minutes – Vote
3. Administrative
    a. Invoice Summary – Vote
    b. Total Project Budget Update
    c. Budget Revision Request #2 – Vote
    d. Access to Meeting Packets
4. Design Update
    a. Update on User Group Meetings
    b. Existing Conditions Investigations
5. Public Engagement
    a. Abutter Meeting in December
6. Discussion/Correspondence/New Items
7. Committee Questions
8. Public Comments
9. Next Meeting
10. Adjournment

Approval of Minutes



Approval of Meeting Minutes | October 21, 2025



LeftField

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #36

Tuesday, October 21, 2025 In-person 6:30pm

Wilmington High School
Large Group Instruction Room
159 Church Street, Wilmington, MA

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	Remote	Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	X	Wildwood School, Principal
Kevin A. Caira		Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo		Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	

Wildwood School Building Committee Meeting Minutes
Page 1 of 12

Invoices and Warrants



Invoice Summary #21

Wildwood Elementary School (Wilmington)

MSBA Data Entry Sheet

Date	11/10/2025
Period Ending:	10/31/2025
MSBA Reimbursement Package #:	***Invoice Summary #21***
Included GC/CM Requisition:	***N/A***

Invoice #	*Invoice Date*	*Vendor*	*Cost Code*	*Value*	
27	10/31/2025	Dore & Whittier - Design Development	0201 0400	$681,831.20	
27	10/31/2025	Dore & Whittier - Other Reimbursables - Hydrant Flow Test (AKAL Engineering)	0203 9900	$2,695.00	
			Subtotal:	**$684,526.20**	Invoice Total $684,526.20
2	10/31/2025	Fontaine Bros., Inc. - Preconstruction Services	0501 0000	$26,666.00	
			Subtotal:	**$26,666.00**	Invoice Total $26,666.00
1	9/30/2025	Leftfield - September OPM Services	0102 0400	$96,000.00	
2	10/31/2025	Leftfield - October OPM Services	0102 0400	$30,400.00	
			Subtotal:	**$126,400.00**	Invoice Total $126,400.00

Total of Invoices Submitted Eligible + Ineligible $837,592.20

Payment and Reimbursement Flowchart

Step 1
Invoices are collected throughout the month. They are reviewed and approved by the LeftField team, then added to the budget and monthly invoice summary.

Step 2.1
Invoices are presented to the finance review group, who will make a recommendation to the Wildwood School Building Committee (WSBC).

Step 2.2
Invoices are presented to the Wildwood School Building Committee (WSBC). The WSBC votes to approve payment. The invoices are then put on the next town warrant for payment.

Typically, the 3rd Tues of each month

Step 3
Invoices are paid by the town. The warrant number and check dates are sent to Dan McSweeney (LeftField). Costs will then be entered into the MSBA ProPay System. Reimbursement forms will be generated by the system. They are issued to the OPM, Architect, CM, and Town for signatures.

1 to 2 weeks

Step 4
Signed reimbursement forms are returned to Dan McSweeney. He will then assemble a full audit package and send it to the MSBA for their review.

1 week

Step 5
The MSBA will begin an audit of the costs (Audit, Construction, and Finance Departments).

2 weeks

Step 6
The MSBA finishes their audit and officially approves and signs off on the reimbursement request.

3 weeks

Step 7
The Town receives their reimbursement from the MSBA.

TOTAL: Approximately 8 weeks after WSBC approval

Total Project Budget – Rolled Up

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015
Wildwood Elementary School
Project Director / Manager: David Saindon / Craig DiCarlo

Period Ending 9/30/2025
MSBA Reimbursement Package 20
Includes GC/CM Requisition N/A

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

Current Budget

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0000 0000	**FEASIBILITY STUDY AGREEMENT**	**$1,215,000**	**$0**	**$1,215,000**	**$1,205,180**	**$1,189,117**	**$16,063**	**$9,820**	99%	**($5,528)**	**$1,199,652**	**($15,348)**
0100 0000	**ADMINISTRATION**	**$5,520,000**	**$0**	**$5,520,000**	**$4,780,000**	**$126,400**	**$4,653,600**	**$740,000**		**$740,000**	**$5,520,000**	**$0**
0101 0000	Legal Fees	$100,000	$0	$100,000	$0	$0	$0	$100,000		$100,000	$100,000	$0
0102 0000	Owner's Project Manager (Leftfield)	$4,780,000	$0	$4,780,000	$4,780,000	$126,400	$4,653,600	$0	3%	$0	$4,780,000	$0
0103 0000	Aministration/ Misc Costs	$640,000	$0	$640,000	$0	$0	$0	$640,000		$640,000	$640,000	$0
0200 0000	**ARCHITECTURE & ENGINEERING**	**$15,141,622**	**($240,000)**	**$14,901,622**	**$14,901,622**	**$684,526**	**$14,217,096**	**$0**		**$0**	**$14,901,622**	**$0**
0201 0000	Basic Services (Dore & Whittier)	$13,811,622	($175,000)	$13,636,622	$13,636,622	$681,831	$12,954,791	$0	5%	$0	$13,636,622	$0
0203 0000	Reimbursable and Other Services (Dore & Whittier)	$1,330,000	($65,000)	$1,265,000	$1,265,000	$2,695	$1,262,305	$0	0%	$0	$1,265,000	$0
0500 0000	**CONSTRUCTION CONTRACT**	**$138,063,666**	**$0**	**$138,063,666**	**$320,000**	**$26,666**	**$293,334**	**$137,743,666**		**$137,743,666**	**$138,063,666**	**$0**
0501 0000	Pre-Construction Services (Fontaine)	$320,000	$0	$320,000	$320,000	$26,666	$293,334	$0	8%	$0	$320,000	$0
0502 0000	Construction											
0502 0000	Construction Budget	$137,743,666	$0	$137,743,666	$0	$0	$0	$137,743,666		$137,743,666	$137,743,666	$0
0502 9900	Retainage	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0508 0000	Change Orders	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0600 0000	**MISCELLANEOUS PROJECT COSTS**	**$1,050,000**	**$0**	**$1,050,000**	**$0**	**$0**	**$0**	**$1,050,000**		**$1,050,000**	**$1,050,000**	**$0**
0700 0000	**FURNISHINGS & EQUIPMENT**	**$3,322,000**	**$0**	**$3,322,000**	**$0**	**$0**	**$0**	**$3,322,000**		**$3,322,000**	**$3,322,000**	**$0**
0701 0000	Furnishings & Equipment (FF+E)	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0703 0000	Technology	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0800 0000	**OWNER'S CONTINGENCY**	**$8,953,338**	**$240,000**	**$9,193,338**	**$0**	**$0**	**$0**	**$9,193,338**		**$9,208,686**	**$9,208,686**	**$15,348**
0801 0000	Owner's Contingency (soft)	$2,066,155	$240,000	$2,306,155	$0	$0	$0	$2,306,155		$2,321,503	$2,321,503	$15,348
0507 0000	Owner's Construction Contingency (hard)	$6,887,183	$0	$6,887,183	$0	$0	$0	$6,887,183		$6,887,183	$6,887,183	$0
	PROJECT TOTALS [MSBA PFA]	**$173,265,626**	**$0**	**$173,265,626**	**$21,206,802**	**$2,026,709**	**$19,180,093**	**$152,058,824**		**$152,058,824**	**$173,265,626**	**($0)**

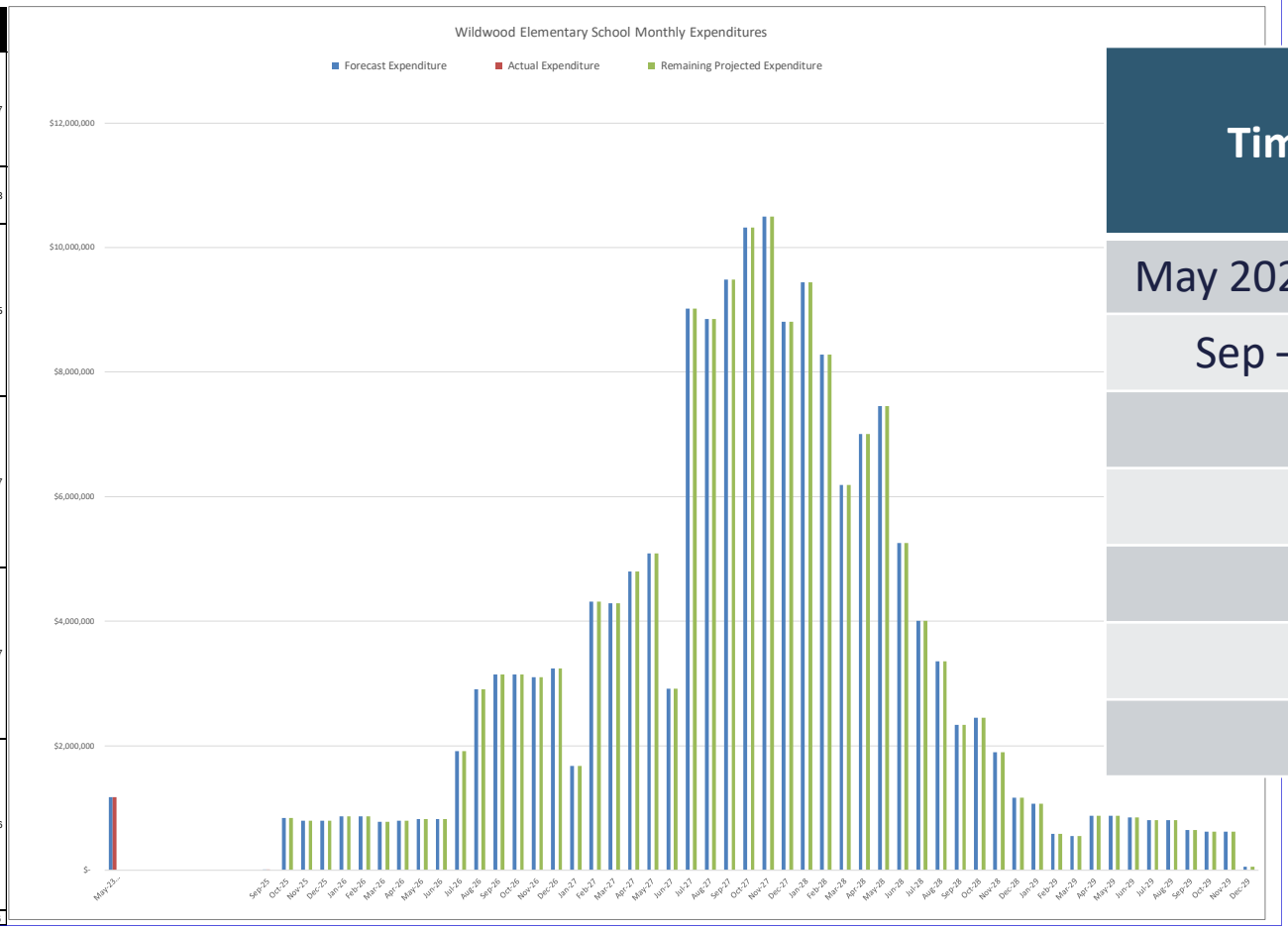
Cash Flow

LeftField

Wildwood Elementary School - Wilmington, MA

Monthly Cash Flow - Total Project — Thursday, November 13, 2025

Year	Month	Forecast Expenditure	Actual Expenditure	Remaining Projected Expenditure	Estimated Expenditure / year
May 2023 - Aug 2025	May-23 thru Aug-25	$ 1,174,837	$ 1,174,837	$ -	$ 1,174,837
Sep - Dec 2025	Sep-25	$ 14,280	$ 14,280	$ -	
	Oct-25	$ 841,949		$ 841,949	
	Nov-25	$ 796,212		$ 796,212	$ 2,448,653
	Dec-25	$ 796,212		$ 796,212	
2026	Jan-26	$ 865,623		$ 865,623	
	Feb-26	$ 865,623		$ 865,623	
	Mar-26	$ 780,394		$ 780,394	
	Apr-26	$ 794,594		$ 794,594	
	May-26	$ 819,594		$ 819,594	
	Jun-26	$ 819,594		$ 819,594	$ 22,407,025
	Jul-26	$ 1,910,502		$ 1,910,502	
	Aug-26	$ 2,910,502		$ 2,910,502	
	Sep-26	$ 3,147,999		$ 3,147,999	
	Oct-26	$ 3,145,769		$ 3,145,769	
	Nov-26	$ 3,103,224		$ 3,103,224	
	Dec-26	$ 3,243,607		$ 3,243,607	
2027	Jan-27	$ 1,674,127		$ 1,674,127	
	Feb-27	$ 4,312,053		$ 4,312,053	
	Mar-27	$ 4,287,053		$ 4,287,053	
	Apr-27	$ 4,794,770		$ 4,794,770	
	May-27	$ 5,090,417		$ 5,090,417	
	Jun-27	$ 2,917,520		$ 2,917,520	$ 80,065,037
	Jul-27	$ 9,015,708		$ 9,015,708	
	Aug-27	$ 8,848,847		$ 8,848,847	
	Sep-27	$ 9,485,870		$ 9,485,870	
	Oct-27	$ 10,324,502		$ 10,324,502	
	Nov-27	$ 10,501,079		$ 10,501,079	
	Dec-27	$ 8,813,086		$ 8,813,086	
2028	Jan-28	$ 9,442,510		$ 9,442,510	
	Feb-28	$ 8,280,971		$ 8,280,971	
	Mar-28	$ 6,184,780		$ 6,184,780	
	Apr-28	$ 7,002,539		$ 7,002,539	
	May-28	$ 7,452,844		$ 7,452,844	
	Jun-28	$ 5,257,897		$ 5,257,897	$ 58,825,177
	Jul-28	$ 4,003,271		$ 4,003,271	
	Aug-28	$ 3,358,809		$ 3,358,809	
	Sep-28	$ 2,338,728		$ 2,338,728	
	Oct-28	$ 2,447,865		$ 2,447,865	
	Nov-28	$ 1,891,305		$ 1,891,305	
	Dec-28	$ 1,163,653		$ 1,163,653	
2029	Jan-29	$ 1,065,605		$ 1,065,605	
	Feb-29	$ 588,116		$ 588,116	
	Mar-29	$ 544,409		$ 544,409	
	Apr-29	$ 877,457		$ 877,457	
	May-29	$ 877,457		$ 877,457	
	Jun-29	$ 848,075		$ 848,075	$ 8,344,896
	Jul-29	$ 808,075		$ 808,075	
	Aug-29	$ 808,074		$ 808,074	
	Sep-29	$ 641,155		$ 641,155	
	Oct-29	$ 616,711		$ 616,711	
	Nov-29	$ 616,715		$ 616,715	
	Dec-29	$ 53,045		$ 53,045	
	TOTALS	$ 173,265,626	$ 1,189,117	$ 172,076,509	$ 173,265,626



Time Frame	Estimated Expenditure / Year (In Millions)
May 2023 – Aug 2025	$1.2 (expended)
Sep – Dec 2025	$2.5
2026	$22.4
2027	$80.1
2028	$58.8
2029	$8.3
TOTAL	**$173.3**

Budget Revision Request (BRR) #2

Budget Revision Request (BRR) #2 is presented to the School Building Committee for formal approval. This is essentially an accounting document, utilized between the District/ Town and the MSBA to coordinate funds being reclassified from one MSBA ProPay cost code to another. Prior to LeftField's involvement in the project, the Committee approved BRR #1.

<u>BRR #2 will:</u>

- Reclassify ProPay cost codes to align with the OPM (LeftField) contract values,
- Reclassify ProPay cost codes to align with the Designer (Dore + Whittier) contract amendment #4 values. The resulting savings will be reclassified to the Owners Contingency cost code.

Approval of Budget Revision Request (BRR) #2

TO: Director of Capital Planning

FROM: Eric Slagle, Town Manager

Town of Wilmington

Wildwood Elementary School

MSBA Project ID Number: 202003420015

DATE: 11/3/2025

RE: Project Funding Agreement Budget Revision Request, NUMBER: 2

Pursuant to Section 3.6 of the Project Funding Agreement between the Town of Wilmington (the "District") and the MASSACHUSETTS SCHOOL BUILDING AUTHORITY (the "Authority"), the District hereby requests a revision to the Total Project Budget, Exhibit A, dated 11/3/25, for the Wilwood Elementary School Project. As required, the District has provided the information outlined in the table below to indicate the Total Project Budget categories (line items) affected, the amounts needed and the reasons for the proposed revision.

The District acknowledges and agrees that it will not seek reimbursement from the Authority for any costs that exceed the already approved line item limits set forth in Exhibit A until after the Authority has accepted this Total Project Budget Revision Request, and the Authority's ProPay system has been adjusted accordingly.

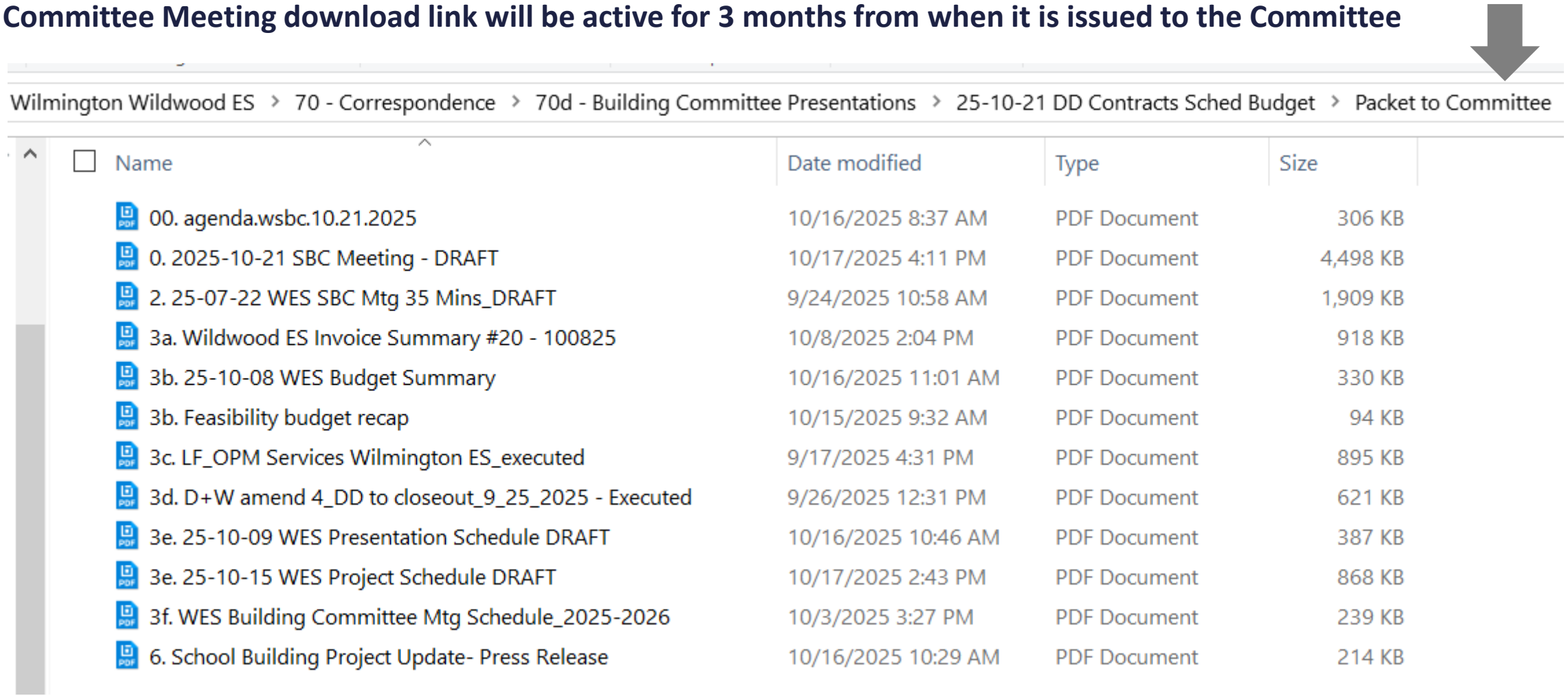
The District further acknowledges and agrees that in accordance with Sections 3.6 and 3.7 of the Project Funding Agreement, any revisions to the Total Project Budget will not result in an increase to the Total Facilities Grant amount set forth in Section 2.1 of the Project Funding Agreement.

The District further acknowledges and agrees that the need for these revisions to the Total Project Budget have been identified in the OPM monthly report as required pursuant to the Contract for Owner's Project Management Services between the District and the OPM.

The District further acknowledges and agrees that all of the information contained in this Total Project Budget Revision Request has been reviewed and approved by the Town of Wilmington's School Building Committee, and it further certifies and acknowledges that the funds to pay for the costs associated with these proposed revisions are available as indicated by the signatures noted below.

Access to Meeting Packets

The Committee Meeting download link will be active for 3 months from when it is issued to the Committee



Design Update



User Group Meetings

October 30th

Admin Suite

Guidance/Counseling

Building Operations & Maintenance

Kitchen/Food Service

CARES

November 5th

Music/Stage Design/Cafeteria

Art

Gym

Language-Based Programs

Strides/Stages/BCBA

November 7th

ELL

OT/PT/SLP

Learning Centers

Reading and Math Specialists

Media/Technology/STEM

November 10th

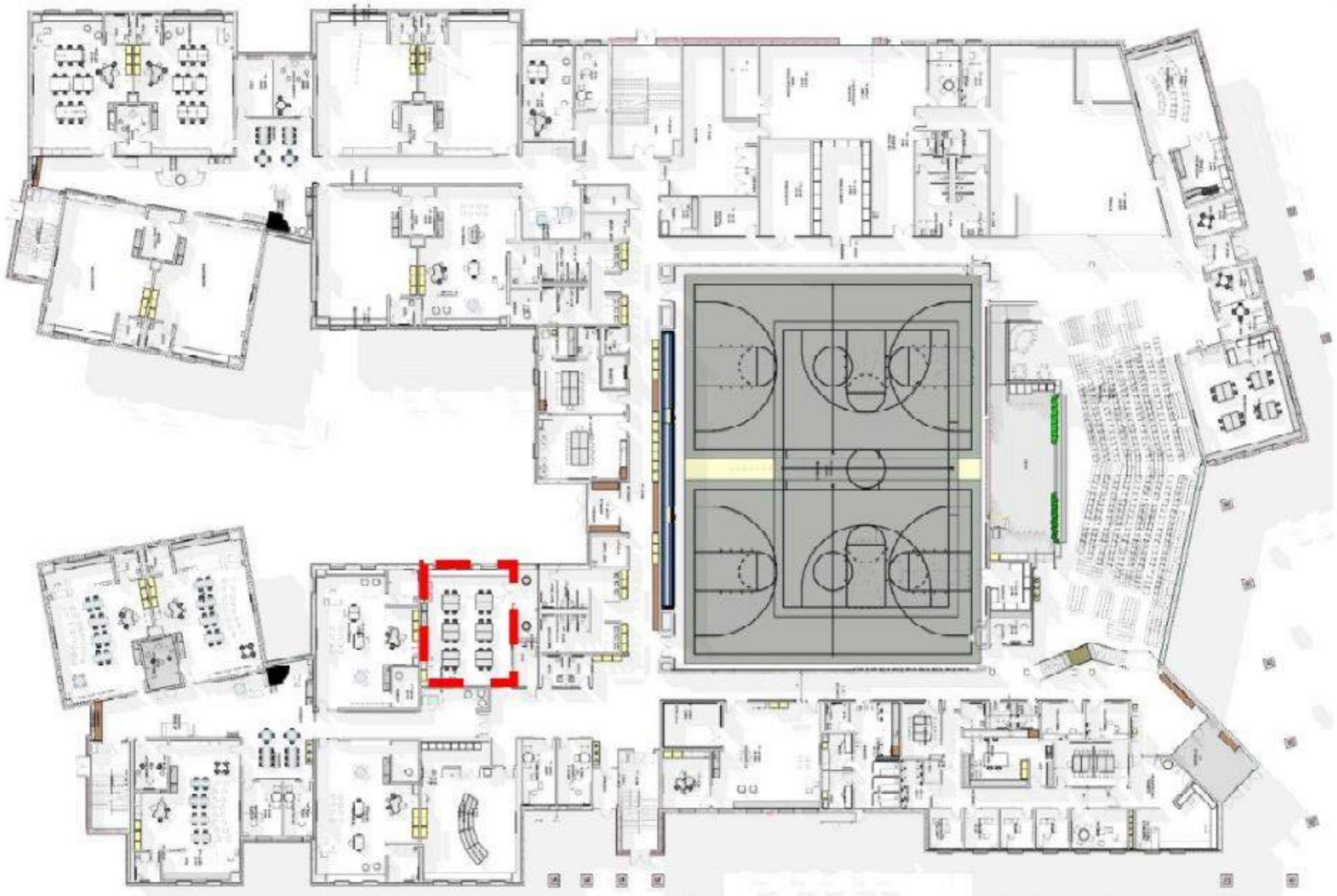
PK-K Classrooms and XLAs

Gr. 1-2 Classrooms and XLAs

Gr. 3-4-5 Classrooms and XLAs

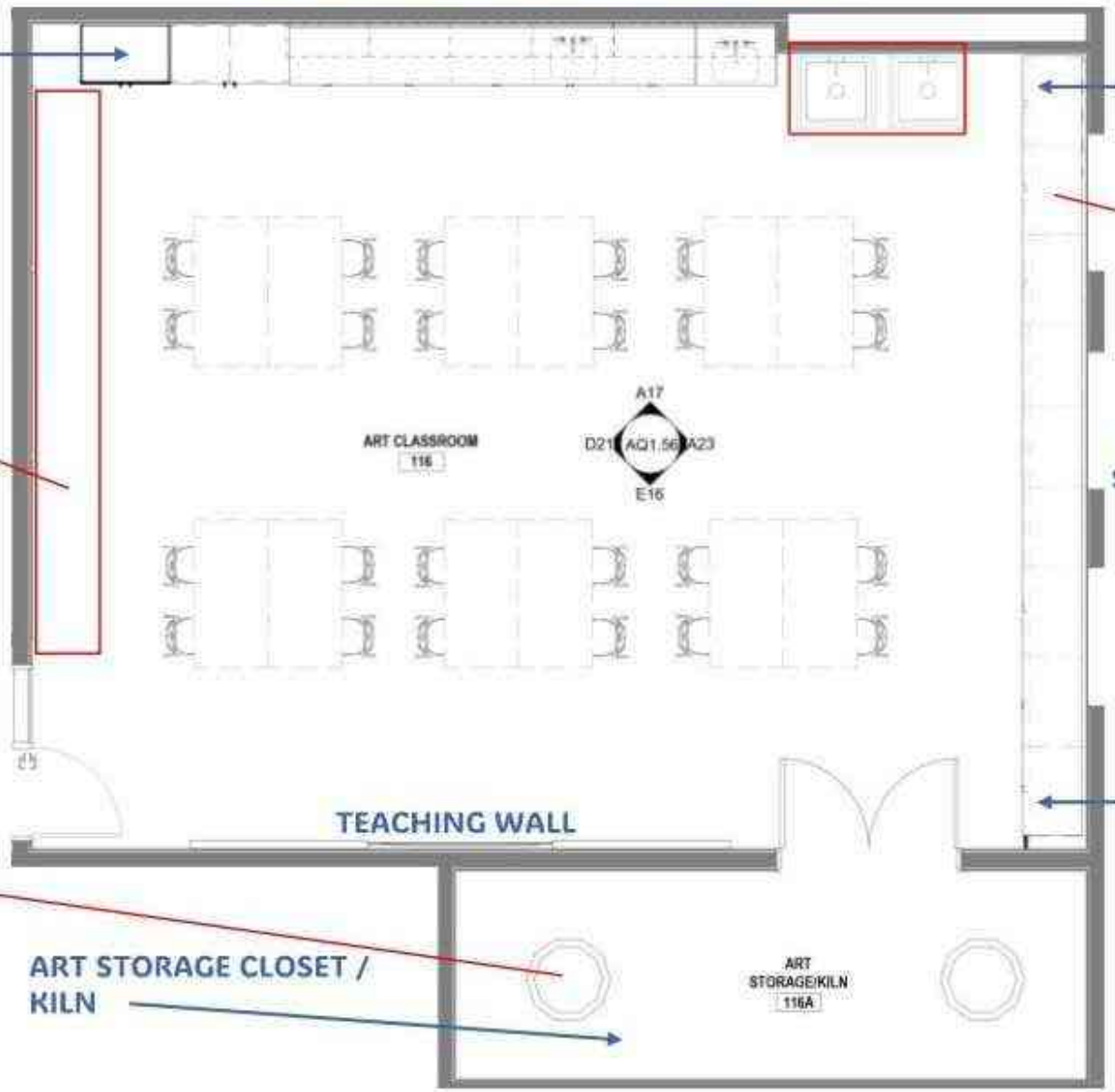
Art Classroom – 1st Floor

Sample



Art Classroom (1st Floor)

Sample



SINK AREA WITH CABINETS FOR STORAGE

TALL STORAGE CABINETS

MAKE (1) DOUBLE BASIN SINK

MORE DRAWER BASED

STORAGE FOR 18 X 24 PAPER

MORE STORAGE AND POTENTIAL COUNTER SPACE FOR STUDENTS TO WORK

COUNTERTOP WITH STORAGE CABINETS & SHELVES UNDERNEATH

36 - 40 DRAWERS FOR CLASS SET OF ART WORK

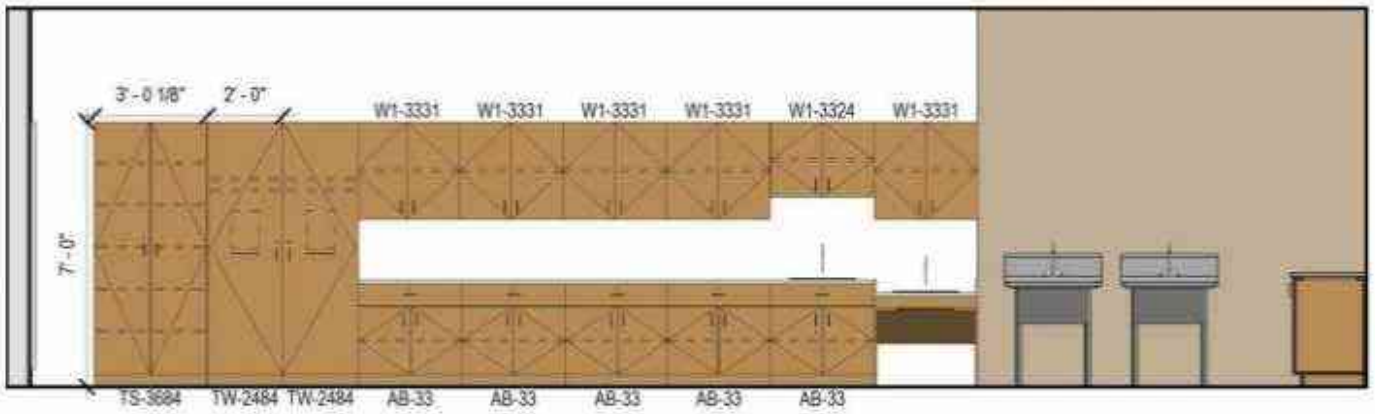
CONFIRM 36" CLEARANCE AROUND THE KILN

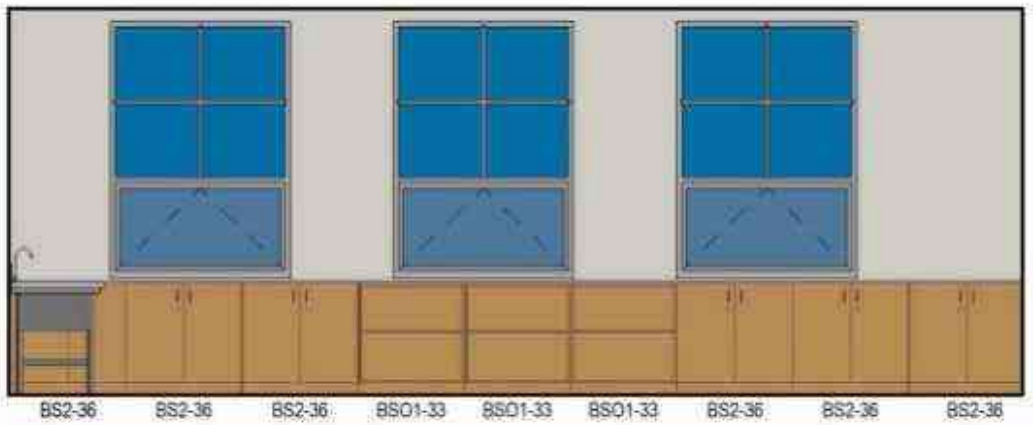
ART STORAGE CLOSET / KILN

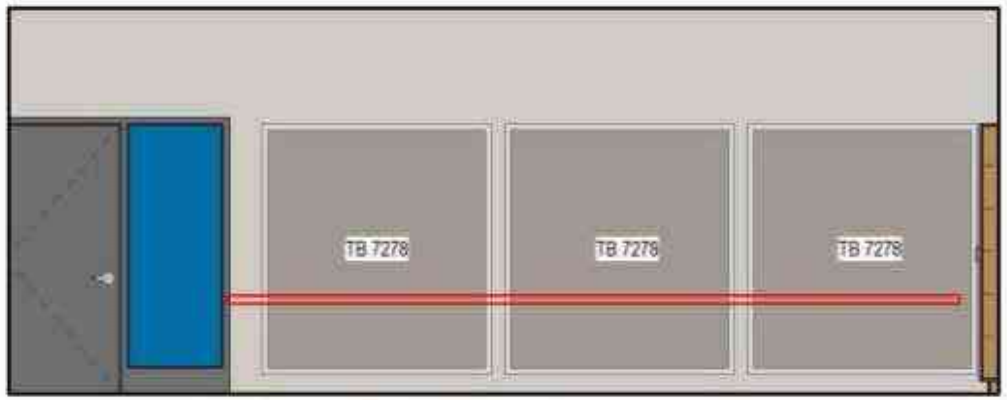
POTENTIONAL NEED FOR AN AREA FOR ADDITIONAL SEATING / SOFT SEATING OR RUG FOR LOWER GRADE LEVELS

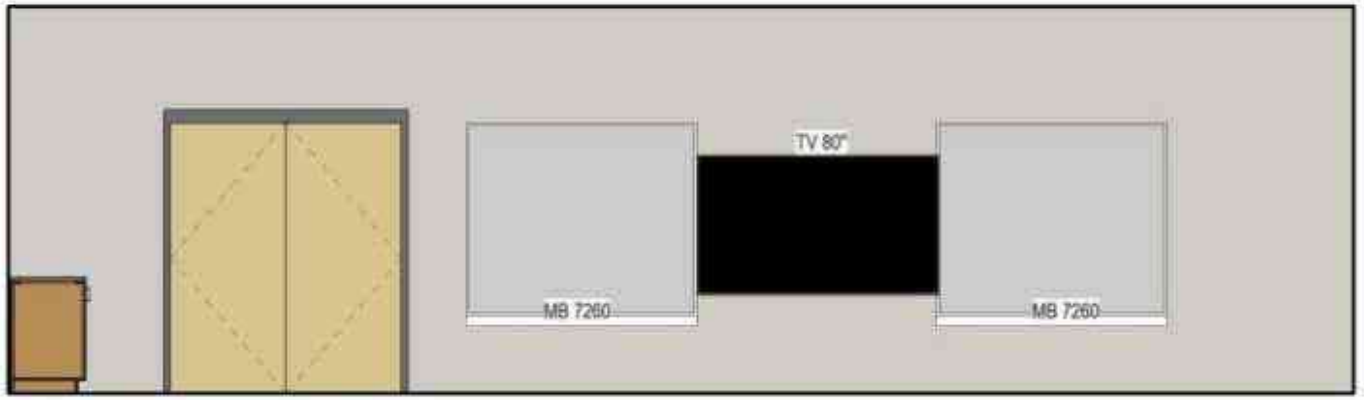
Sample

Art Classroom (1st Floor)









MORE STORAGE AND POTENTIAL COUNTER SPACE FOR STUDENTS TO WORK

STUDENT ART DISPLAYS? CORRIDOR AND/OR IN CLASSROOM

AND WALL PROTECTION FOR ART DISPLAYS

Sample

Art Classroom – Specialty Equipment



Damp-Proof Cabinet



Large Drying Cabinet

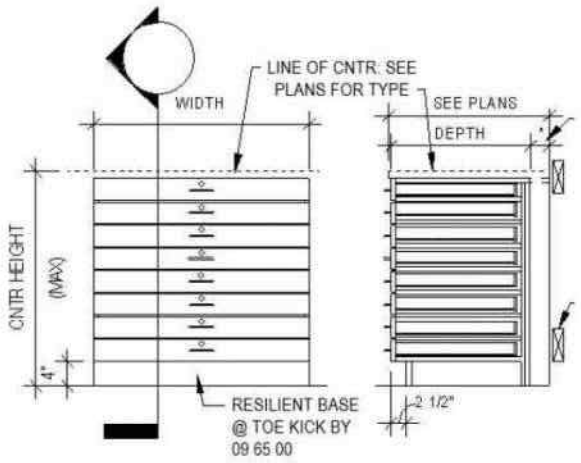


Typical Kiln



Large Art Sink (ADA)

Art Classroom – Specialty Equipment



BD8 / ABD8 - DRAWER BASE CABINET

1/2" = 1'-0"

STORAGE FOR 18 X 24 PAPER

36 - 40 QTY DRAWERS FOR
(TO HOLD A CLASS SET OF ART PROJECTS)

Design Activities | One Month Look Ahead

Task	Status
Update Traffic Study	Completed Nov 7; awaiting final report.
Hydrant Flow Test	Completed. No fire pump required.
Environmental Site Assessment	Ongoing…
Material Testing	Commenced on 11-11; ongoing.
User Group Meetings	Design Development User Group mtgs. completed. Future mtgs to continue in subsequent phases.
Borings/Test Pits	In progress/ ongoing…
Existing Ambient Noise Level Measurements	Scheduled for first week of December.

Public Engagement



Agenda

1. Call to Order
2. Approval of Minutes – Vote
3. Administrative
    a. Invoice Summary – Vote
    b. Total Project Budget Update
    c. Budget Revision Request #2 – Vote
    d. Access to Meeting Packets
4. Design Update
    a. Update on User Group Meetings
    b. Existing Conditions Investigations
5. Public Engagement
    a. Abutter Meeting in December
6. **Discussion/Correspondence/New Items**
7. **Committee Questions**
8. **Public Comments**
9. **Next Meeting**
10. **Adjournment**

Discussion/ Correspondence/ New Items



Committee Questions



Public Comment



THANK YOU!

Massachusetts School Building Authority

WILMINGTON, MASS. INCORPORATED 1730

Left Field
PROJECT MANAGEMENT

dw
DORE + WHITTIER

FONTAINE

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

School Building Committee Meeting #38

December 16, 2025

Massachusetts School Building Authority

Left Field

DORE + WHITTIER

FONTAINE



Agenda

1. Call to Order
2. Approval of Minutes – November 18, 2025 – Vote
3. Administrative
    a. Invoice Summary – Vote
    b. Total Project Budget Update
    c. Access to Meeting Packets
    d. Designated Individual for Interior Design – Vote
4. Design Update
    a. Interior Design Concepts / Themes
5. Public Engagement
6. Discussion/Correspondence/New Items
7. Committee Questions
8. Public Comments
9. Next Meeting Date and Time - Tuesday, January 20, 2026, at 6:30pm
10. Adjournment

Approval of Minutes



Approval of Meeting Minutes – November 18, 2025



LeftField

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #37

Tuesday, November 18, 2025 In-person 6:30pm

Wilmington High School
Large Group Instruction Room
159 Church Street, Wilmington, MA

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	X	Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	X	Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	X	Finance Committee
Nicholas Golden	Remote	School Committee
Christine Holloran	X	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	

Wildwood School Building Committee Meeting Minutes
Page 1 of 11

Approval of Invoices



Invoice Summary #22

Wildwood Elementary School (Wilmington)

MSBA Data Entry Sheet

Date	12/8/2025
Period Ending:	11/30/2025
MSBA Reimbursement Package #:	***Invoice Summary #22***
Included GC/CM Requisition:	***Precon #3***

Invoice #	*Invoice Date*	*Vendor*	*Cost Code*	*Value*	
28	11/30/2025	Dore & Whittier - Design Development	0201 0400	$681,831.20	
28	11/30/2025	Dore & Whittier - Geotech (LGCI)	0204 0300	$39,938.80	
28	11/30/2025	Dore & Whittier - Traffic Study (Nitsch)	0204 1200	$13,145.00	
28	11/30/2025	Dore & Whittier - Other Reimbursables - Enhanced Energy Modeling (Green Engineer)	0203 9900	$852.50	
					Invoice Total
			Subtotal:	**$735,767.50**	**$735,767.50**
App #3	11/30/2025	Fontaine Bros., Inc. - Preconstruction Services	0501 0000	$26,666.00	
					Invoice Total
			Subtotal:	**$26,666.00**	**$26,666.00**
3	11/30/2025	Leftfield - November OPM Services	0102 0400	$30,400.00	
					Invoice Total
			Subtotal:	**$30,400.00**	**$30,400.00**

Total of Invoices Submitted Eligible + Ineligible **$792,833.50**

Total Project Budget – Rolled Up

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015
Wildwood Elementary School
Project Director / Manager: David Saindon / Craig DiCarlo

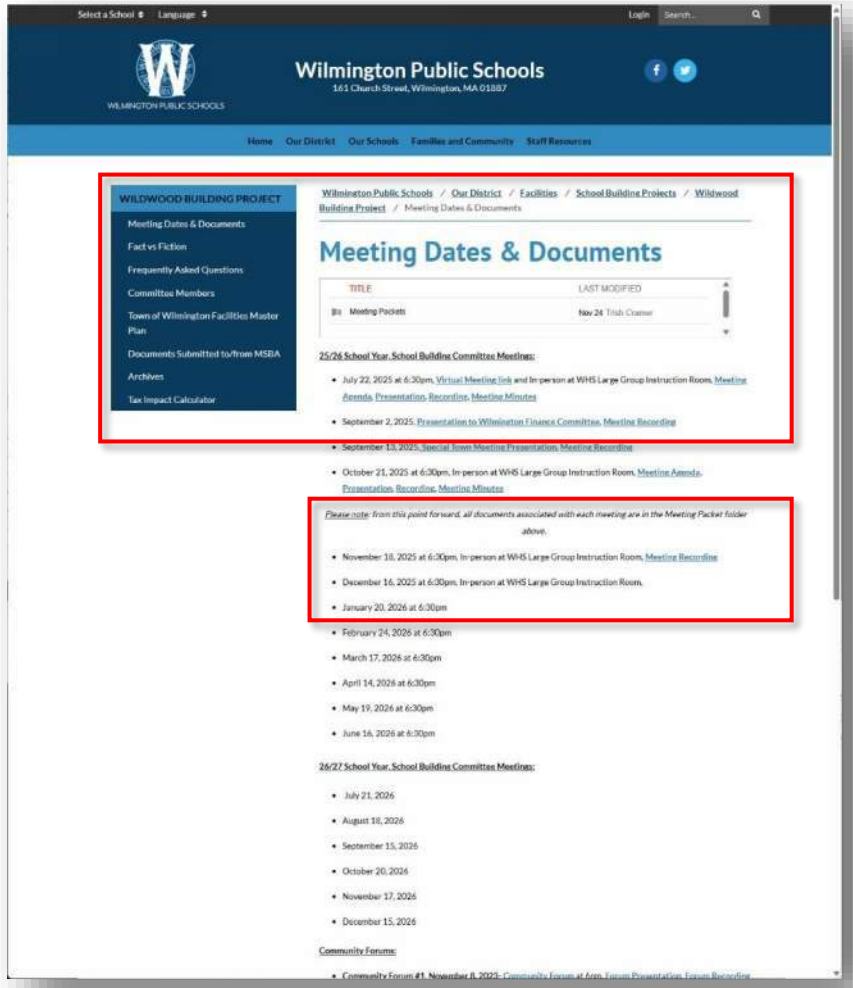
Period Ending	11/30/2025
MSBA Reimbursement Package	22
Includes GC/CM Requisition	N/A

Current Budget

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

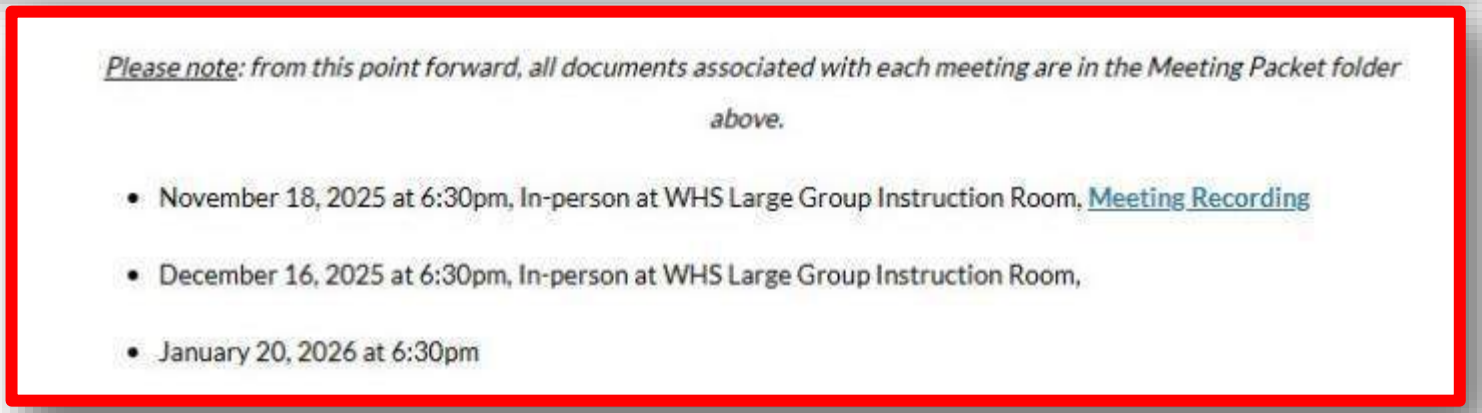
		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0000 0000	**FEASIBILITY STUDY AGREEMENT**	**$1,215,000**	**$0**	**$1,215,000**	**$1,205,180**	**$1,189,117**	**$16,063**	**$9,820**	99%	**($5,528)**	**$1,199,652**	**($15,348)**
0100 0000	**ADMINISTRATION**	**$5,520,000**	**$0**	**$5,520,000**	**$4,780,000**	**$156,800**	**$4,623,200**	**$740,000**		**$740,000**	**$5,520,000**	**$0**
0101 0000	Legal Fees	$100,000	$0	$100,000	$0	$0	$0	$100,000		$100,000	$100,000	$0
0102 0000	Owner's Project Manager (Leftfield)	$4,780,000	$0	$4,780,000	$4,780,000	$156,800	$4,623,200	$0	3%	$0	$4,780,000	$0
0103 0000	Aministration/ Misc Costs	$640,000	$0	$640,000	$0	$0	$0	$640,000		$640,000	$640,000	$0
0200 0000	**ARCHITECTURE & ENGINEERING**	**$15,141,622**	**($240,000)**	**$14,901,622**	**$14,901,622**	**$1,420,294**	**$13,481,329**	**$0**		**$6**	**$14,901,628**	**$6**
0201 0000	Basic Services (Dore & Whittier)	$13,811,622	($175,000)	$13,636,622	$13,636,622	$1,363,662	$12,272,960	$0	10%	$0	$13,636,622	$0
0203 0000	Reimbursable and Other Services (Dore & Whittier)	$1,330,000	($65,000)	$1,265,000	$1,265,000	$56,631	$1,208,369	$0	4%	$6	$1,265,006	$6
0500 0000	**CONSTRUCTION CONTRACT**	**$138,063,666**	**$0**	**$138,063,666**	**$320,000**	**$53,332**	**$266,668**	**$137,743,666**		**$137,743,666**	**$138,063,666**	**$0**
0501 0000	Pre-Construction Services (Fontaine)	$320,000	$0	$320,000	$320,000	$53,332	$266,668	$0	17%	$0	$320,000	$0
0502 0000	Construction											
0502 0000	Construction Budget	$137,743,666	$0	$137,743,666	$0	$0	$0	$137,743,666		$137,743,666	$137,743,666	$0
0502 9900	Retainage	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0508 0000	Change Orders	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0600 0000	**MISCELLANEOUS PROJECT COSTS**	**$1,050,000**	**$0**	**$1,050,000**	**$0**	**$0**	**$0**	**$1,050,000**		**$1,050,000**	**$1,050,000**	**$0**
0700 0000	**FURNISHINGS & EQUIPMENT**	**$3,322,000**	**$0**	**$3,322,000**	**$0**	**$0**	**$0**	**$3,322,000**		**$3,322,000**	**$3,322,000**	**$0**
0701 0000	Furnishings & Equipment (FF+E)	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0703 0000	Technology	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0800 0000	**OWNER'S CONTINGENCY**	**$8,953,338**	**$240,000**	**$9,193,338**	**$0**	**$0**	**$0**	**$9,193,338**		**$9,208,686**	**$9,208,686**	**$15,348**
0801 0000	Owner's Contingency (soft)	$2,066,155	$240,000	$2,306,155	$0	$0	$0	$2,306,155		$2,321,503	$2,321,503	$15,348
0507 0000	Owner's Construction Contingency (hard)	$6,887,183	$0	$6,887,183	$0	$0	$0	$6,887,183		$6,887,183	$6,887,183	$0
	PROJECT TOTALS [MSBA PFA]	**$173,265,626**	**$0**	**$173,265,626**	**$21,206,802**	**$2,819,543**	**$18,387,259**	**$152,058,824**		**$152,058,830**	**$173,265,632**	**$6**

Access to Meeting Packets

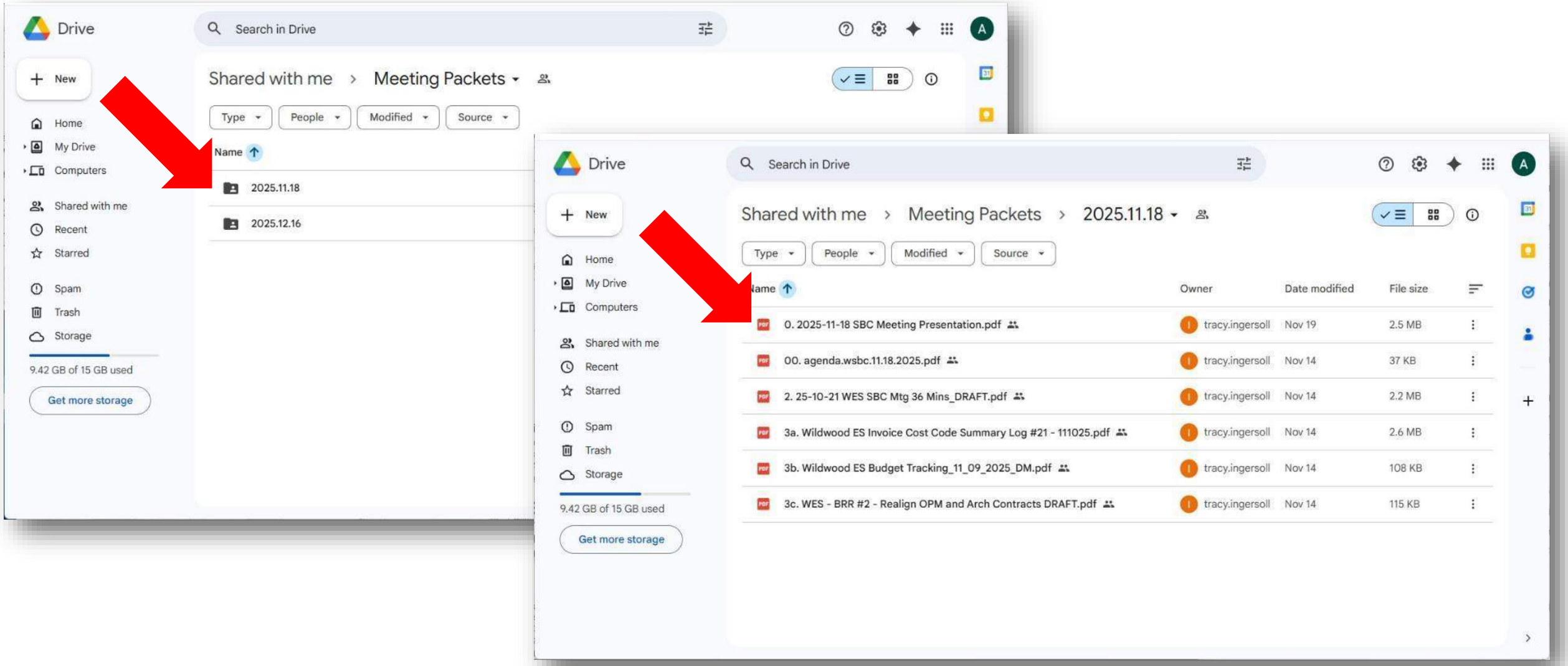


Wildwood School Building Committee Packets will be posted to the project website.





Access to Meeting Packets



Design Update



A Reflection of Community, Culture & Growth

Wilmington Town Common



community & connection



Established in 1730, Town Common is the historic center of the town. Served as a gathering space for the community—social, civic and educational activities.

Railroad & Industry



Original North Wilmington railroad station

The original railroad station in North Wilmington, which was erected in 1855. It burned down in 1912.
The "telephone pole" is for the telegraph wires used by the Boston & Maine Railroad. There were no electric lights in Wilmington at the time the picture was taken. Notice

movement



interaction

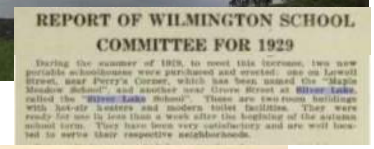


Wilmington's railroads in the 19th century connected the town to regional markets, fostering growth and innovation. Industrial activity brought technological progress and new ideas.

Silver Lake



exploration



REPORT OF WILMINGTON SCHOOL COMMITTEE FOR 1929

During the summer of 1929, to meet this increase, two new portable schoolrooms were purchased and erected: one on Lowell Street, near Perry's Corner, which has been named the "Maple Meadow School", and another near Grove Street at Silver Lake, called the "Silver Lake School". These are two-room buildings with hot-air heaters and modern toilet facilities. They were ready for use in less than a week after the beginning of the autumn school term. They have been very satisfactory and are well located to serve their respective neighborhoods.



In 1939 - Silver Lake School!
(renamed Mildred Rogers School in 1944)

expanded learning

Silver Lake is a natural area supporting ecology and recreation. Historically, a school was located near the lake, embedding education within the local landscape.

Growth has always defined how this town learns, gathers and evolves...

Nature and Growth Inspiration

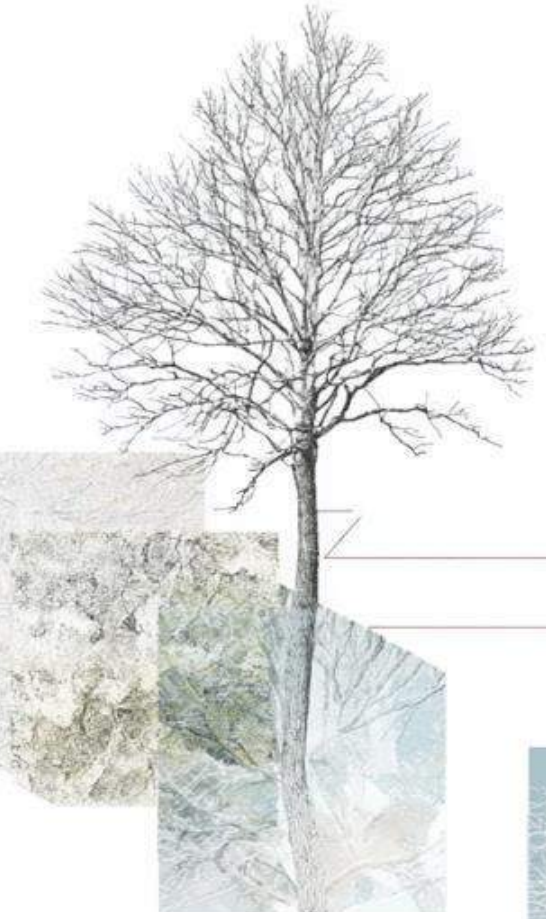
Nature teaches us how to grow…

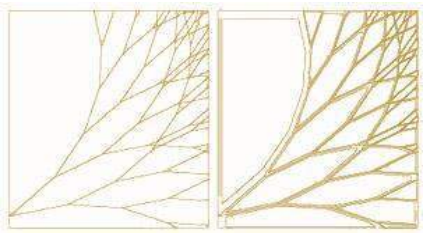
Exploration expands







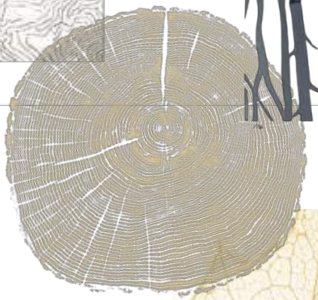




Movement strengthens









Growth begins with **Connection**





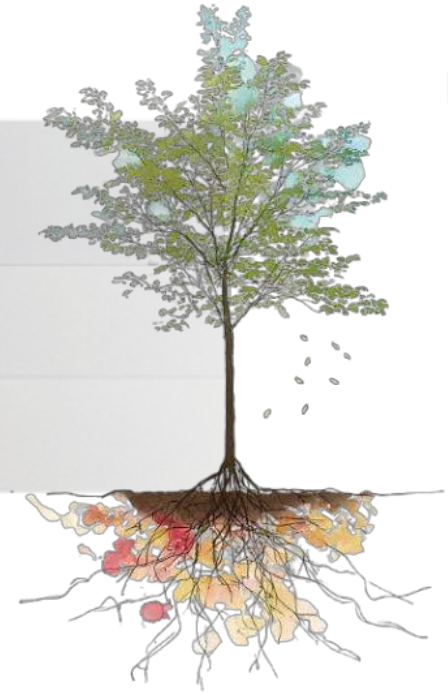


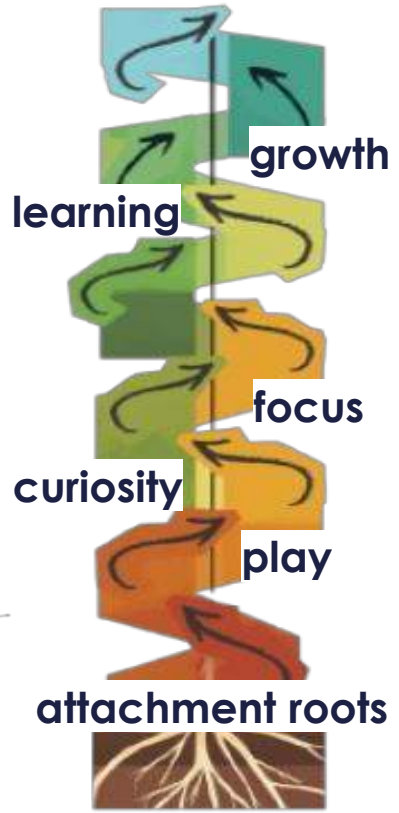
How Growth Happens

The school is shaped as a living system of growth…



From foundation to expansion…





In the beginning embellishing **safety**, **attachment** and playful **engagement**

Then transforming into **curiosity** into **focus** and structured **learning**

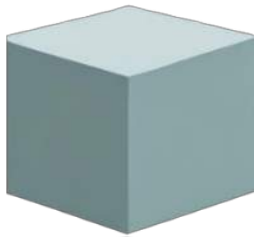
Into an environment that allows ideas to **expand freely** into **confidence**, **independence** and **exploration**

How Growth Happens - Levels

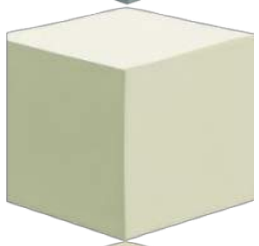




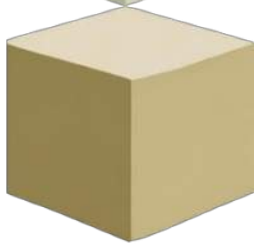




Branches:
(Grades 3rd – 5th)



Trunk:
(Grades 1st – 2nd)



Roots:
(Pre-K - Kindergarten)

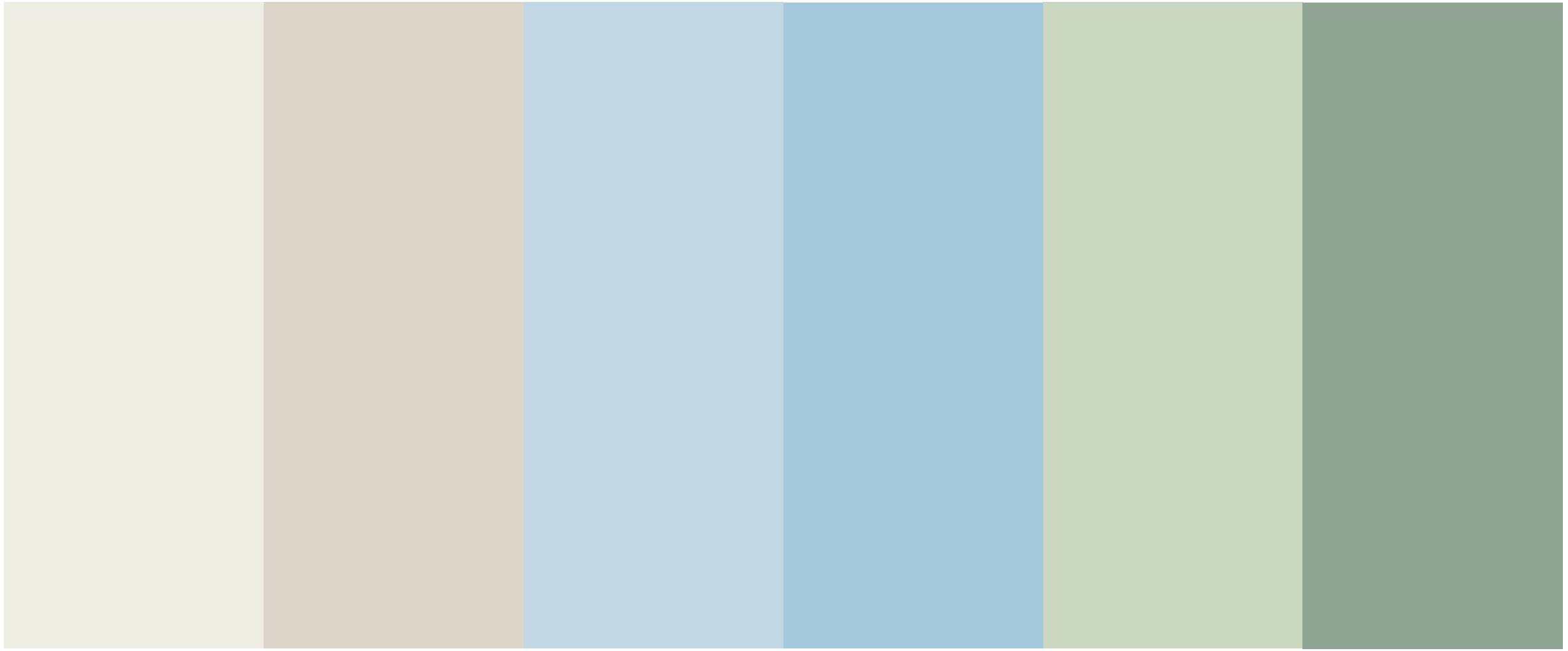
Branches — expand into confidence and independence

Trunk — strengthen curiosity into focus and learning

Roots — nurture attachment, safety and play



Color Palette as a Tool for Growth



Themes + Inspiration Images















Guiding how students move from attachment and play into collaboration, independence and exploration....

Public Engagement



Agenda

1. Call to Order
2. Approval of Minutes – November 18, 2025 – Vote
3. Administrative
    a. Invoice Summary – Vote
    b. Total Project Budget Update
    c. Access to Meeting Packets
    d. Designated Individual for Interior Design – Vote
4. Design Update
    a. Interior Design Concepts / Themes
5. Public Engagement
6. **Discussion/Correspondence/New Items**
7. **Committee Questions**
8. **Public Comments**
9. **Next Meeting Date and Time - Tuesday, January 20, 2026, at 6:30pm**
10. **Adjournment**

Discussion/ Correspondence/ New Items



Committee Questions

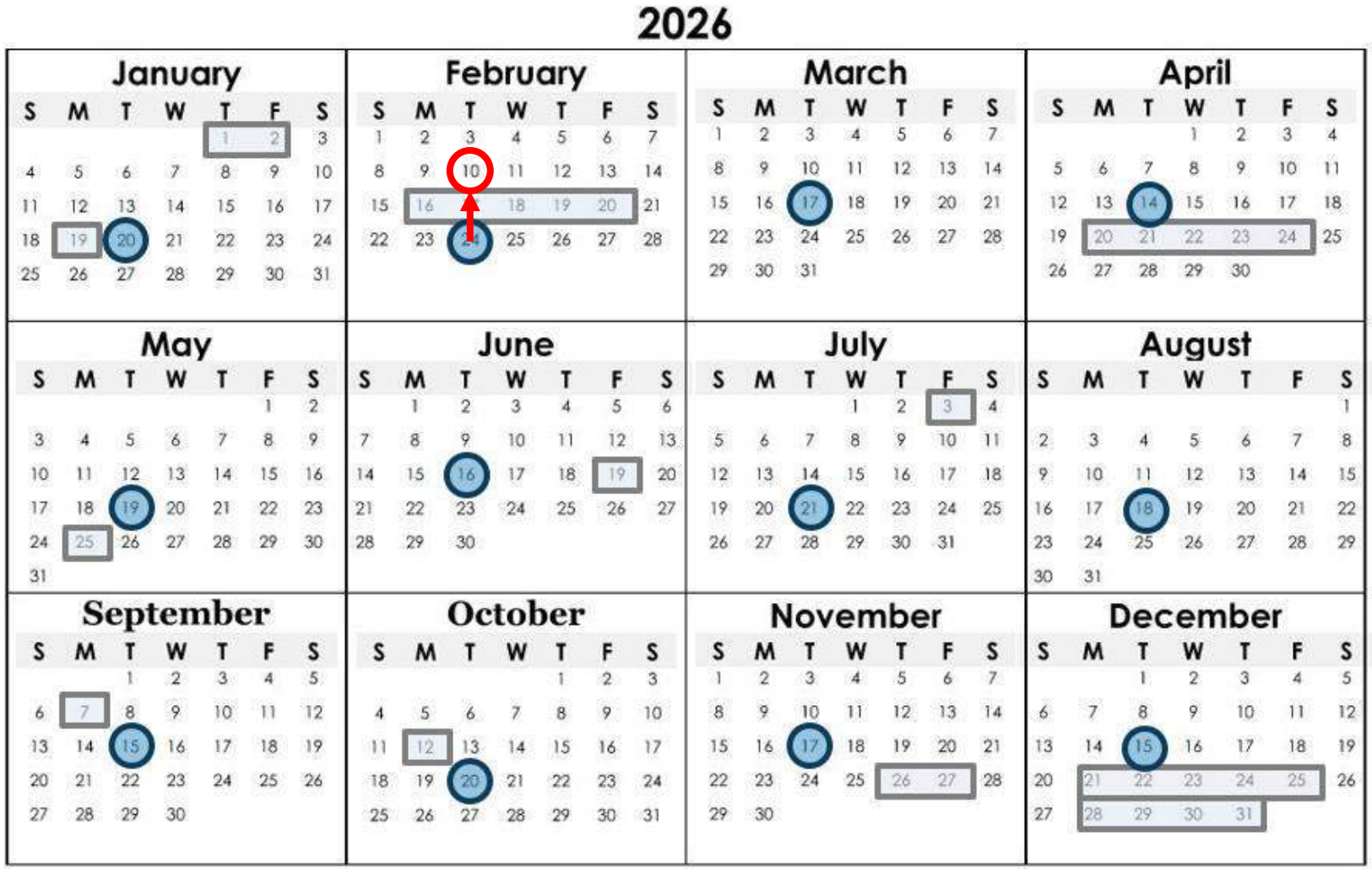


Public Comment



WSBC Meeting Schedule

The project team requests to re-schedule the February meeting from 2/24/26 to <u>2/10/26</u>



THANK YOU & HAPPY HOLIDAYS!

Massachusetts School Building Authority

WILMINGTON, MASS. INCORPORATED 1730

Left Field PROJECT MANAGEMENT

dw DORE + WHITTIER

FONTAINE

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

School Building Committee Meeting #39

January 20, 2026

Massachusetts School Building Authority

Left Field

DORE + WHITTIER

FONTAINE



Agenda

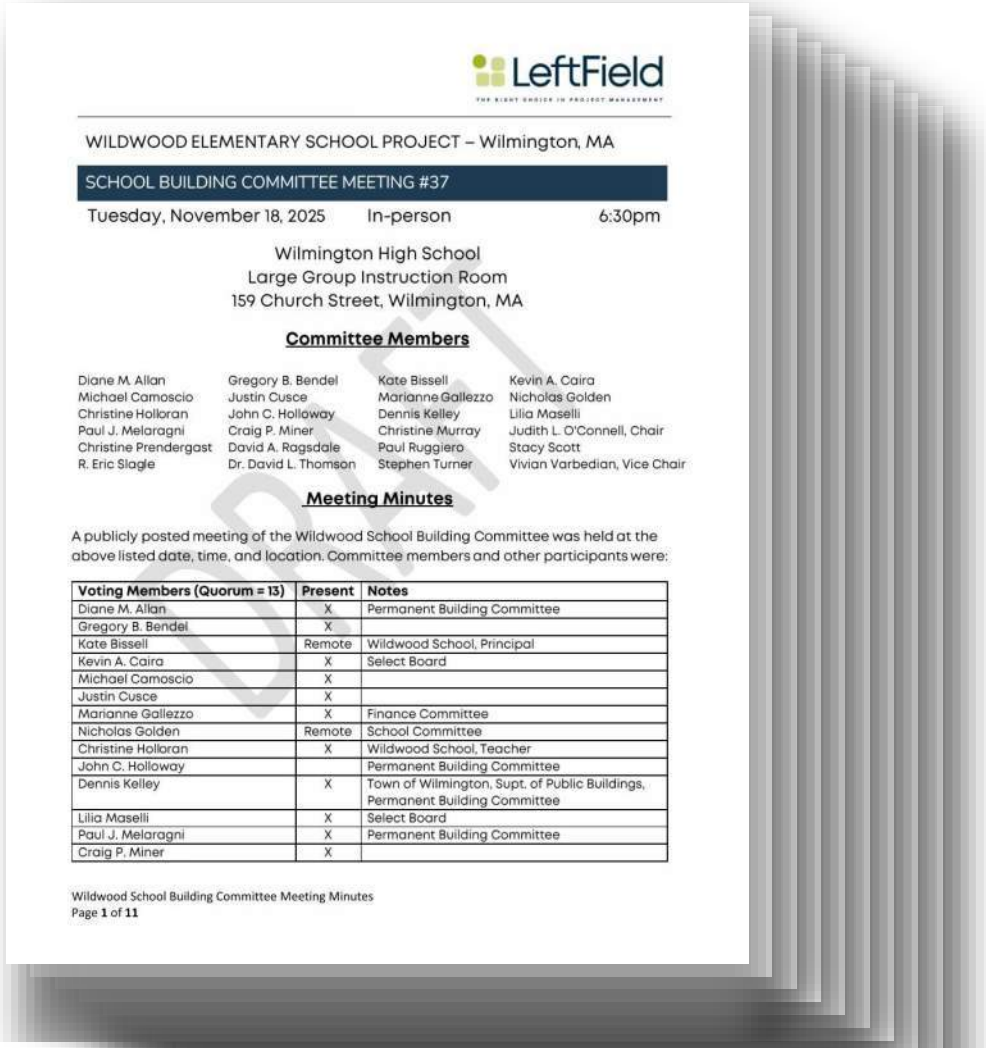
1. Call to Order
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    b. Total Project Budget Update
4. Design Update
5. Public Engagement
6. Discussion/Correspondence/New Items
7. Committee Questions
8. Public Comments
9. Next Meeting Date and Time - Tuesday, February 10, 2026
10. Adjournment

Approval of Minutes



Approval of Meeting Minutes – November 18, 2025 *

*** The incorrect date was unintentionally included in the motion at the December WSBC meeting.**



LeftField

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #37

Tuesday, November 18, 2025 In-person 6:30pm

Wilmington High School
Large Group Instruction Room
159 Church Street, Wilmington, MA

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	X	Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	X	Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	X	Finance Committee
Nicholas Golden	Remote	School Committee
Christine Holloran	X	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	

Wildwood School Building Committee Meeting Minutes
Page 1 of 11

Approval of Meeting Minutes – December 16, 2025



LeftField

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #38

Tuesday, December 16, 2025 In-person 6:30pm

Wilmington High School
159 Church Street, Wilmington, MA
Large Group Instruction Room

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
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Gregory B. Bendel		
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira		Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	Remote	Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	X	Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner		

Wildwood School Building Committee Meeting Minutes
Page 1 of 8

Approval of Invoices



Invoice Summary #23

Wildwood Elementary School (Wilmington)

MSBA Data Entry Sheet

Date	1/11/2026
Period Ending:	12/31/2025
MSBA Reimbursement Package #:	***Invoice Summary #23***
Included GC/CM Requisition:	***Precon #4***

Invoice #	*Invoice Date*	*Vendor*	*Cost Code*	*Value*	
29	12/31/2025	Dore & Whittier - Design Development	0201 0400	$681,831.20	
29	12/31/2025	Dore & Whittier - Traffic Study (Nitsch)	0204 1200	$17,655.00	
29	12/31/2025	Dore & Whittier - Other Reimbursables - Enhanced Energy Modeling (Green Engineer)	0203 9900	$1,705.00	
			Subtotal:	**$701,191.20**	**Invoice Total $701,191.20**
App #4	12/31/2025	Fontaine Bros., Inc. - Preconstruction Services	0501 0000	$26,666.00	
			Subtotal:	**$26,666.00**	**Invoice Total $26,666.00**
4	12/31/2025	Leftfield - December OPM Services	0102 0400	$60,800.00	
			Subtotal:	**$60,800.00**	**Invoice Total $60,800.00**

Total of Invoices Submitted Eligible + Ineligible **$788,657.20**

Total Project Budget – Rolled Up

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015
Wildwood Elementary School
Project Director / Manager: David Saindon / Craig DiCarlo

Period Ending	12/31/2025
MSBA Reimbursement Package	23
Includes GC/CM Requisition	N/A

Current Budget

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0000 0000	**FEASIBILITY STUDY AGREEMENT**	**$1,215,000**	**$0**	**$1,215,000**	**$1,205,180**	**$1,189,117**	**$16,063**	**$9,820**	99%	**($5,528)**	**$1,199,652**	**($15,348)**
0100 0000	**ADMINISTRATION**	**$5,520,000**	**$0**	**$5,520,000**	**$4,780,000**	**$217,600**	**$4,562,400**	**$740,000**		**$740,000**	**$5,520,000**	**$0**
0101 0000	Legal Fees	$100,000	$0	$100,000	$0	$0	$0	$100,000		$100,000	$100,000	$0
0102 0000	Owner's Project Manager (Leftfield)	$4,780,000	$0	$4,780,000	$4,780,000	$217,600	$4,562,400	$0	5%	$0	$4,780,000	$0
0103 0000	Aministration/ Misc Costs	$640,000	$0	$640,000	$0	$0	$0	$640,000		$640,000	$640,000	$0
0200 0000	**ARCHITECTURE & ENGINEERING**	**$15,141,622**	**($240,000)**	**$14,901,622**	**$14,901,622**	**$2,121,485**	**$12,780,137**	**$0**		**$0**	**$14,901,622**	**$0**
0201 0000	Basic Services (Dore & Whittier)	$13,811,622	($175,000)	$13,636,622	$13,636,622	$2,045,493	$11,591,129	$0	15%	$0	$13,636,622	$0
0203 0000	Reimbursable and Other Services (Dore & Whittier)	$1,330,000	($65,000)	$1,265,000	$1,265,000	$75,991	$1,189,009	$0	6%	$0	$1,265,000	$0
0500 0000	**CONSTRUCTION CONTRACT**	**$138,063,666**	**$0**	**$138,063,666**	**$320,000**	**$79,998**	**$240,002**	**$137,743,666**		**$137,743,666**	**$138,063,666**	**$0**
0501 0000	Pre-Construction Services (Fontaine)	$320,000	$0	$320,000	$320,000	$79,998	$240,002	$0	25%	$0	$320,000	$0
0502 0000	Construction											
0502 0000	Construction Budget	$137,743,666	$0	$137,743,666	$0	$0	$0	$137,743,666		$137,743,666	$137,743,666	$0
0502 9900	Retainage	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0508 0000	Change Orders	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0600 0000	**MISCELLANEOUS PROJECT COSTS**	**$1,050,000**	**$0**	**$1,050,000**	**$0**	**$0**	**$0**	**$1,050,000**		**$1,050,000**	**$1,050,000**	**$0**
0700 0000	**FURNISHINGS & EQUIPMENT**	**$3,322,000**	**$0**	**$3,322,000**	**$0**	**$0**	**$0**	**$3,322,000**		**$3,322,000**	**$3,322,000**	**$0**
0701 0000	Furnishings & Equipment (FF+E)	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0703 0000	Technology	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0800 0000	**OWNER'S CONTINGENCY**	**$8,953,338**	**$240,000**	**$9,193,338**	**$0**	**$0**	**$0**	**$9,193,338**		**$9,208,686**	**$9,208,686**	**$15,348**
0801 0000	Owner's Contingency (soft)	$2,066,155	$240,000	$2,306,155	$0	$0	$0	$2,306,155		$2,321,503	$2,321,503	$15,348
0507 0000	Owner's Construction Contingency (hard)	$6,887,183	$0	$6,887,183	$0	$0	$0	$6,887,183		$6,887,183	$6,887,183	$0
	PROJECT TOTALS [MSBA PFA]	**$173,265,626**	**$0**	**$173,265,626**	**$21,206,802**	**$3,608,200**	**$17,598,602**	**$152,058,824**		**$152,058,824**	**$173,265,626**	**($0)**

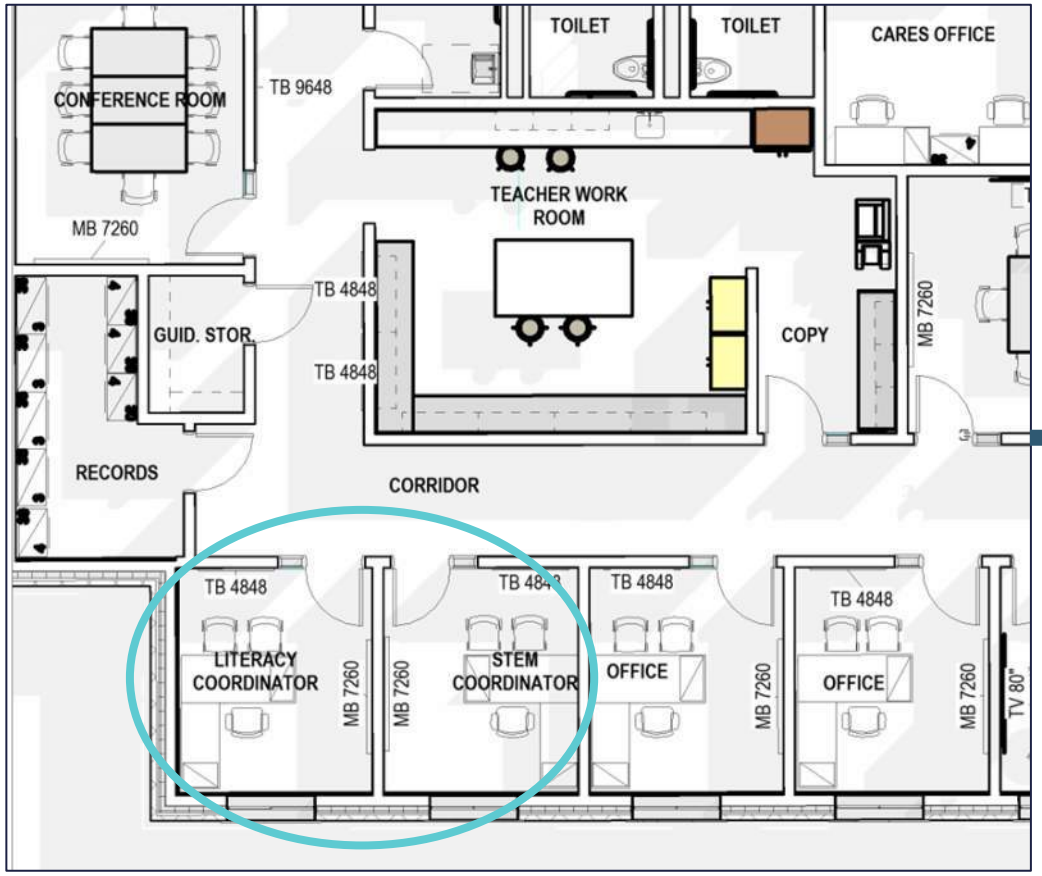
Design Update

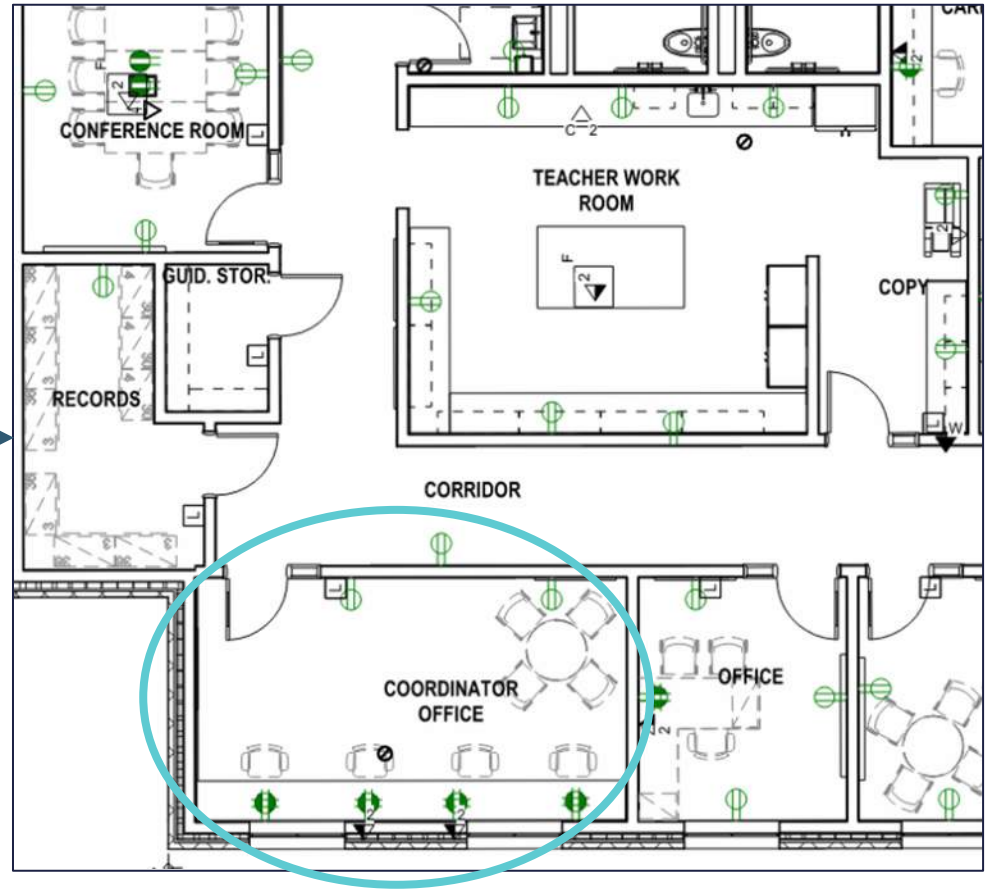


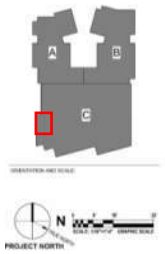
Design Development Progress

Completed Tasks	Ongoing Tasks
User Group Meetings	Site and Building Plan Refinement
Updated Traffic Study	Interior Selections
Hydrant Flow Test	Design coordination (MEP/FP/Tech/Comm)
Environmental Site assessment	Safety and Security
Acoustical Measurements	Cost Estimating Package
Geotechnical Analysis	Conservation NOI
Ambient Noise Levels	Permitting
Emissions Measurements	

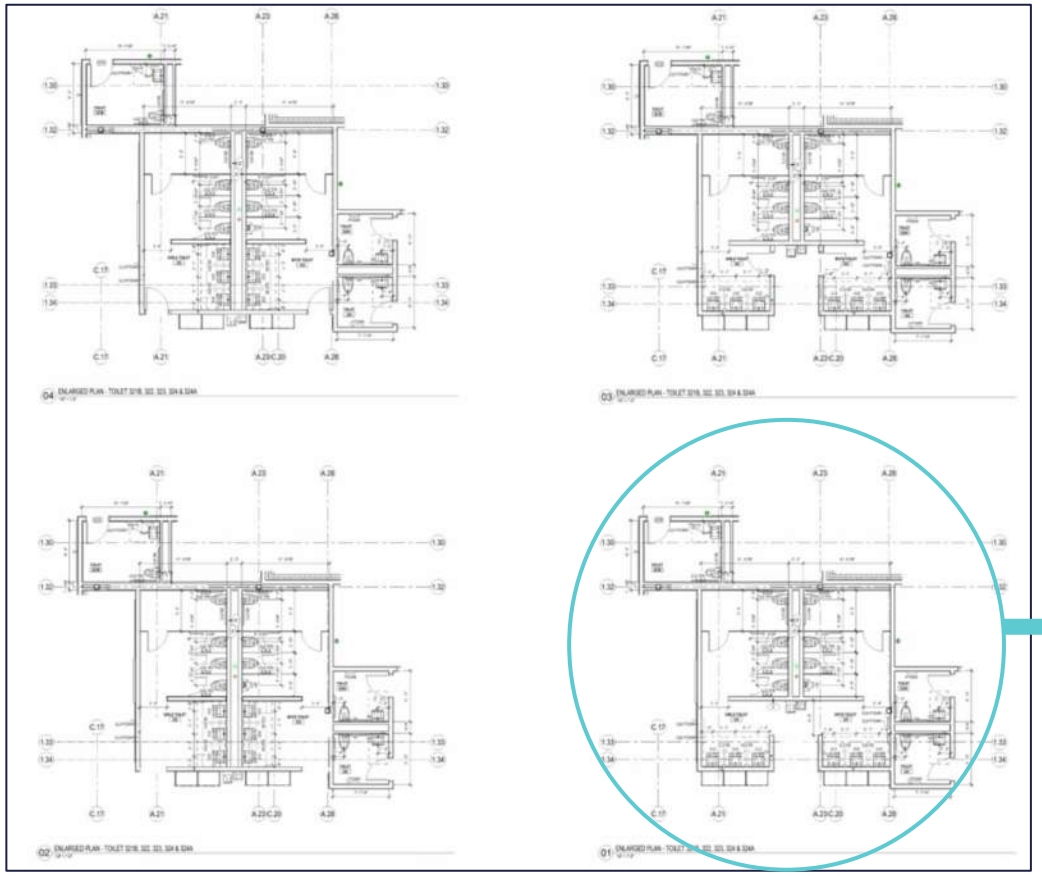
Floor Plan Refinement: Administration





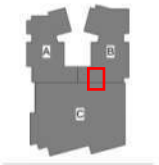


Floor Plan Refinement: Gang Toilet Rooms

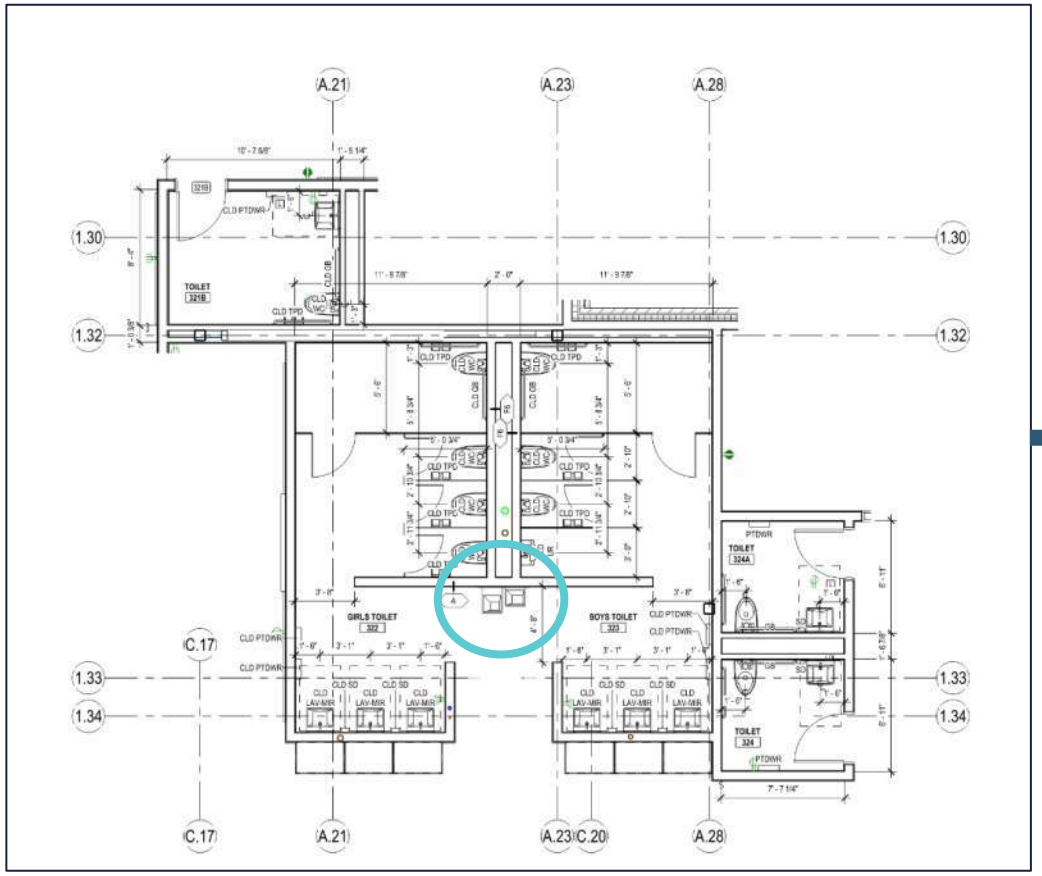


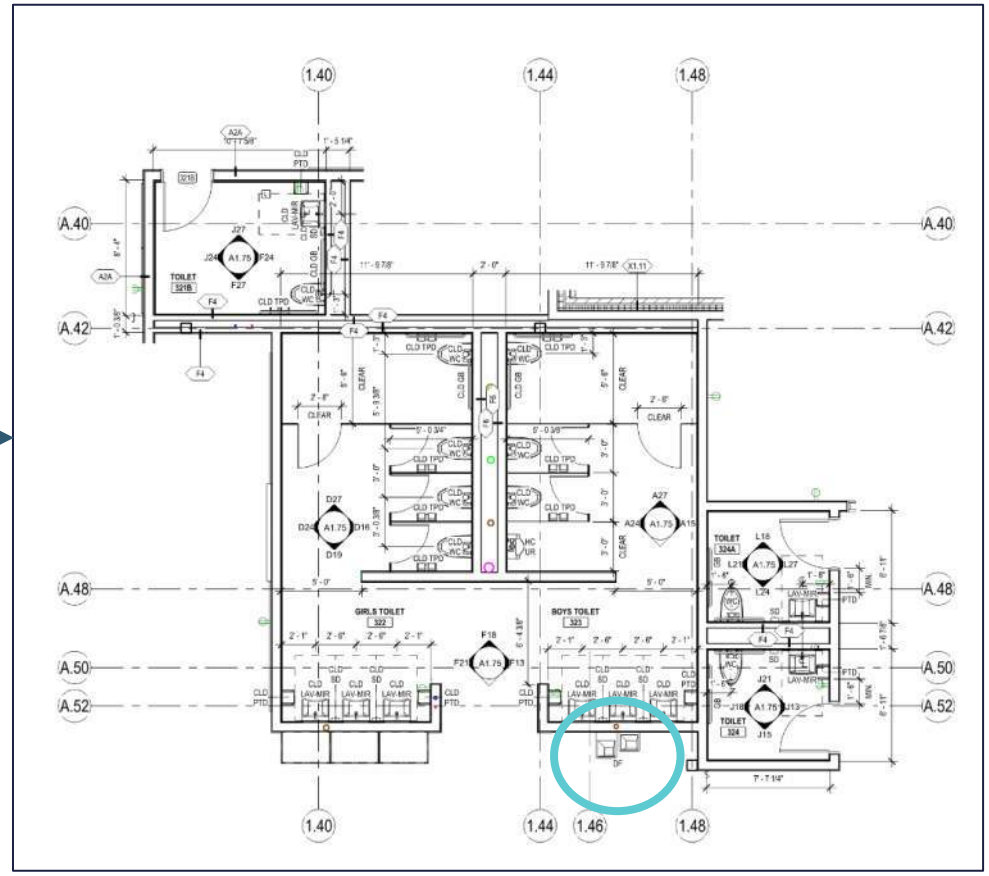
Gang toilet rooms reviewed with District for operational preference.

- No main entry doors for elementary age
- Ease of supervision
- Relocate water station to hallway to avoid gathering at entry way
- Wayfinding to be determined



Floor Plan Refinement: Gang Toilet Rooms





Public Engagement



Agenda

1. Call to Order
2. Approval of Minutes – November 18, 2025, and December 16, 2025 – Vote
3. Administrative
    a. Invoice Summary – Vote
    b. Total Project Budget Update
4. Design Update
5. Public Engagement
6. **Discussion/Correspondence/New Items**
7. **Committee Questions**
8. **Public Comments**
9. **Next Meeting Date and Time - Tuesday, February 10, 2026**
10. **Adjournment**

Discussion/ Correspondence/ New Items



Committee Questions



Public Comment



THANK YOU

Massachusetts School Building Authority

WILMINGTON, MASS. INCORPORATED 1730

Left Field PROJECT MANAGEMENT

dw DORE + WHITTIER

FONTAINE

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

School Building Committee Meeting #40

February 10, 2026

Massachusetts School Building Authority

Left Field

DORE + WHITTIER

FONTAINE



Agenda

1. Call to Order
2. Approval of Minutes – January 20, 2026– Vote
3. Administrative
    a. Invoice Summary – Vote
    b. Total Project Budget Update
4. Design Update
    a. Existing Conditions Investigations and Design Implications
    b. Interior Design
    c. MSBA DD Submission format
5. Public Engagement
6. Discussion/Correspondence/New Items
7. Committee Questions
8. Public Comments
9. Next Meeting Date and Time - Tuesday, March 17, 2026
10. Adjournment

Approval of Minutes



Approval of Meeting Minutes – January 20, 2026



LeftField

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #39

Tuesday, January 20, 2026 In-person 6:30pm

Wilmington High School
159 Church Street, Wilmington, MA
Large Group Instruction Room

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan	Remote	Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	X	Select Board
Michael Camoscio	Remote	
Justin Cusce	X	
Marianne Gallezzo		Finance Committee
Nicholas Golden	X	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley	X	Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli		Select Board
Paul J. Melaragni	X	Permanent Building Committee
Craig P. Miner	X	

Approval of Invoices



Invoice Summary #24

Wildwood Elementary School (Wilmington)

MSBA Data Entry Sheet

Date	2/5/2026
Period Ending:	1/31/2026
MSBA Reimbursement Package #:	***Invoice Summary #24***
Included GC/CM Requisition:	***Precon #5***

Invoice #	*Invoice Date*	*Vendor*	*Cost Code*	*Value*	
30	1/31/2026	Dore & Whittier - Design Development	0201 0400	$681,831.20	
30	1/31/2026	Dore & Whittier - Geotechnical (LGCI)	0204 0300	$33,464.20	
30	1/31/2026	Dore & Whittier - GeoEnvironmental (PEER)	0204 0300	$8,850.60	
30	1/31/2026	Dore & Whittier - Other Reimbursables - Enhanced Energy Modeling (Green Engineer)	0203 9900	$1,705.00	
30	1/31/2026	Dore & Whittier - Other Reimbursables - Permitting (Terraink)	0203 9900	$7,581.75	
30	1/31/2026	Dore & Whittier - Other Reimbursables - Emissions Testing (UEC)	0203 9900	$1,980.00	
					Invoice Total $735,412.75
			Subtotal:	**$735,412.75**	
App #5	1/31/2026	Fontaine Bros., Inc. - Preconstruction Services	0501 0000	$26,666.00	
					Invoice Total $26,666.00
			Subtotal:	**$26,666.00**	
5	1/31/2026	Leftfield - OPM Services - Design Development	0102 0400	$60,800.00	
					Invoice Total $60,800.00
			Subtotal:	**$60,800.00**	

Total of Invoices Submitted **$822,878.75**

Total Project Budget – Rolled Up

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015
Wildwood Elementary School
Project Director / Manager: David Saindon / Craig DiCarlo

Period Ending	1/31/2026
MSBA Reimbursement Package	24
Includes GC/CM Requisition	N/A

Current Budget

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0000 0000	**FEASIBILITY STUDY AGREEMENT**	**$1,215,000**	**$0**	**$1,215,000**	**$1,205,180**	**$1,189,117**	**$16,063**	**$9,820**	99%	**($5,528)**	**$1,199,652**	**($15,348)**
0100 0000	**ADMINISTRATION**	**$5,520,000**	**$0**	**$5,520,000**	**$4,780,000**	**$278,400**	**$4,501,600**	**$740,000**		**$740,000**	**$5,520,000**	**$0**
0101 0000	Legal Fees	$100,000	$0	$100,000	$0	$0	$0	$100,000		$100,000	$100,000	$0
0102 0000	Owner's Project Manager (Leftfield)	$4,780,000	$0	$4,780,000	$4,780,000	$278,400	$4,501,600	$0	6%	$0	$4,780,000	$0
0103 0000	Aministration/ Misc Costs	$640,000	$0	$640,000	$0	$0	$0	$640,000		$640,000	$640,000	$0
0200 0000	**ARCHITECTURE & ENGINEERING**	**$15,141,622**	**($240,000)**	**$14,901,622**	**$14,901,622**	**$2,856,897**	**$12,044,725**	**$0**		**$0**	**$14,901,622**	**$0**
0201 0000	Basic Services (Dore & Whittier)	$13,811,622	($175,000)	$13,636,622	$13,636,622	$2,727,325	$10,909,297	$0	20%	$0	$13,636,622	$0
0203 0000	Reimbursable and Other Services (Dore & Whittier)	$1,330,000	($65,000)	$1,265,000	$1,265,000	$129,573	$1,135,427	$0	10%	$0	$1,265,000	$0
0500 0000	**CONSTRUCTION CONTRACT**	**$138,063,666**	**$0**	**$138,063,666**	**$320,000**	**$106,664**	**$213,336**	**$137,743,666**		**$137,743,666**	**$138,063,666**	**$0**
0501 0000	Pre-Construction Services (Fontaine)	$320,000	$0	$320,000	$320,000	$106,664	$213,336	$0	33%	$0	$320,000	$0
0502 0000	Construction											
0502 0000	Construction Budget	$137,743,666	$0	$137,743,666	$0	$0	$0	$137,743,666		$137,743,666	$137,743,666	$0
0502 9900	Retainage	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0508 0000	Change Orders	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0600 0000	**MISCELLANEOUS PROJECT COSTS**	**$1,050,000**	**$0**	**$1,050,000**	**$0**	**$0**	**$0**	**$1,050,000**		**$1,050,000**	**$1,050,000**	**$0**
0700 0000	**FURNISHINGS & EQUIPMENT**	**$3,322,000**	**$0**	**$3,322,000**	**$0**	**$0**	**$0**	**$3,322,000**		**$3,322,000**	**$3,322,000**	**$0**
0701 0000	Furnishings & Equipment (FF+E)	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0703 0000	Technology	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0800 0000	**OWNER'S CONTINGENCY**	**$8,953,338**	**$240,000**	**$9,193,338**	**$0**	**$0**	**$0**	**$9,193,338**		**$9,208,686**	**$9,208,686**	**$15,348**
0801 0000	Owner's Contingency (soft)	$2,066,155	$240,000	$2,306,155	$0	$0	$0	$2,306,155		$2,321,503	$2,321,503	$15,348
0507 0000	Owner's Construction Contingency (hard)	$6,887,183	$0	$6,887,183	$0	$0	$0	$6,887,183		$6,887,183	$6,887,183	$0
	PROJECT TOTALS [MSBA PFA]	**$173,265,626**	**$0**	**$173,265,626**	**$21,206,802**	**$4,431,078**	**$16,775,723**	**$152,058,824**		**$152,058,824**	**$173,265,626**	**($0)**

Design Update

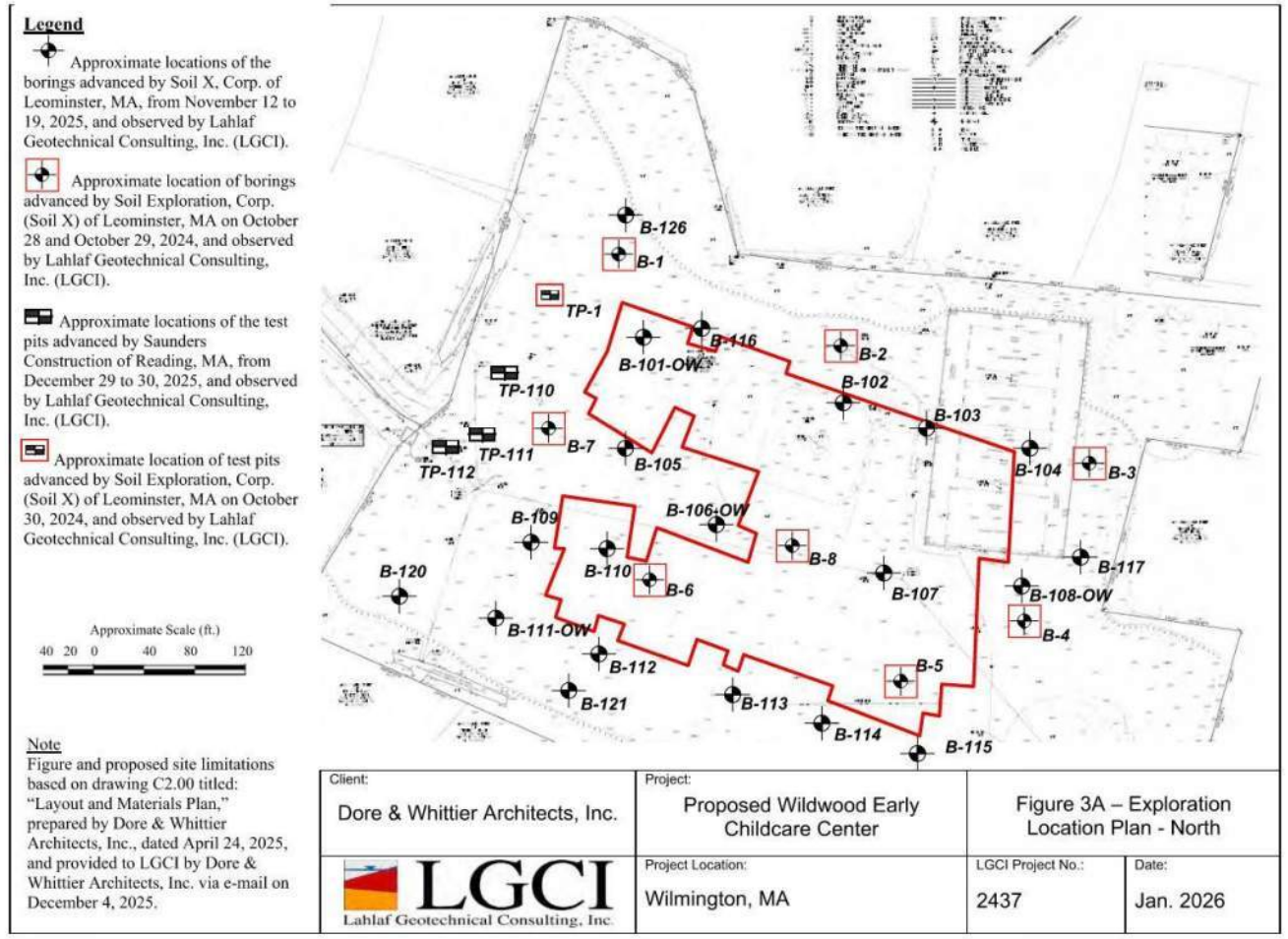


Existing Conditions Investigations – Air Quality

Testing confirmed that bus activity during student arrival and dismissal does not negatively impact outdoor air quality, with pollutant levels remaining well below health-based safety standards, indicating no air quality concerns for students, staff, or nearby neighbors.



Existing Conditions Investigations – Geotechnical



The proposed site can be safely built on, and while some soil improvements are required, they are routine, well-understood construction measures that do not pose unusual risk or concern for the project.

The project team is evaluating Rammed Aggregate Piers (RAPs) versus full soil removal and replacement. Based on experience from similar projects with both clean and arsenic-impacted soils, RAPs typically offer a clear cost advantage while reducing the risk of unforeseen soils, limiting trucking impacts to abutters, and providing a schedule benefit by advancing foundation work and reducing winter construction exposure.

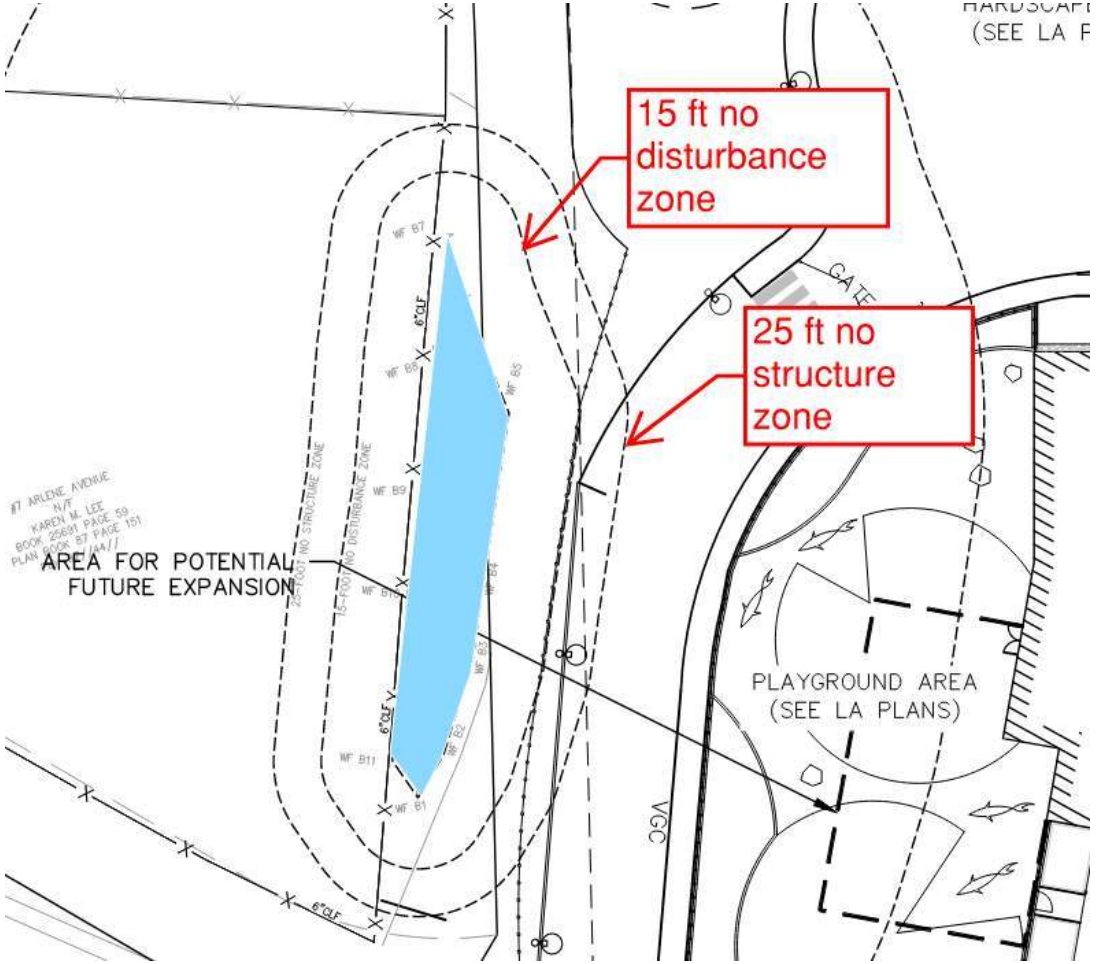
Existing Conditions Investigations – Geo-environmental

Arsenic detected in site soils is likely naturally occurring and does not meet the definition of a reportable release under the MCP.

If soil removal is required, the presence of the naturally occurring arsenic will affect handling, disposal, cost, and schedule, potentially requiring replacement fill and further evaluation as design advances. The project team is evaluating Rammed Aggregate Piers (RAPs) versus full removal and replacement. Based on similar projects, RAPs typically offer cost and schedule advantages while reducing unforeseen soil risks, trucking impacts on abutters, and winter construction exposure by expediting foundation construction.



Existing Conditions Investigations – Wetland Resource Area



The site contains one regulated wetland area with a required 100-foot buffer zone; any work near that area will need Conservation Commission approval. No additional constraints related to floodplains or rare species were identified elsewhere on site.

The project team is taking a conservative approach to both wetland areas identified in the report. The school and site design will continue to avoid or minimize work within the regulated wetland and its associated buffer zones. The building footprint, internal roadways, and parking areas will remain largely as currently designed, subject to minor refinements anticipated as the project progresses.

Existing Conditions Investigations – Hydrant Flow Test

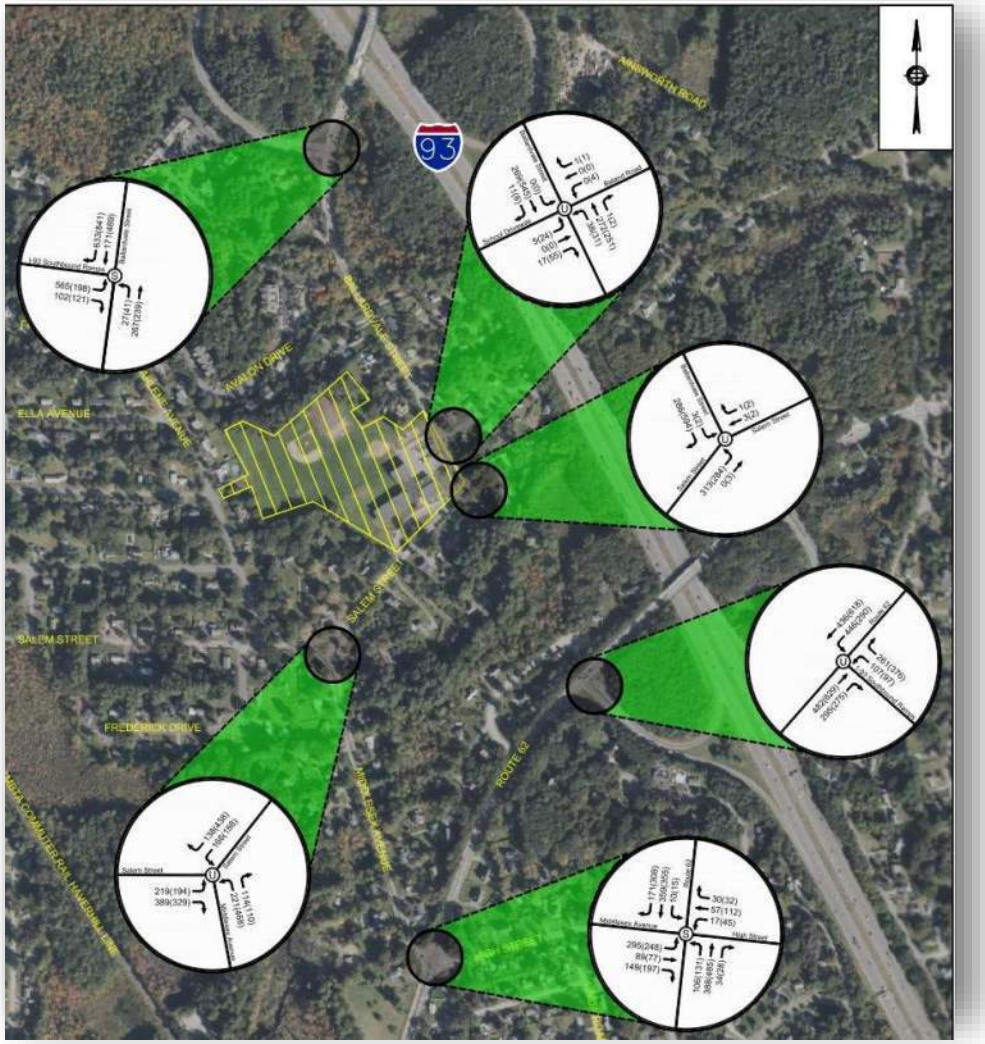
The existing water pressure and flow meet the project's needs.

A dedicated fire pump is <u>not</u> required for the project.



Image credit: louisvillewater.com

Existing Conditions Investigations – Traffic Study



The traffic study found that while the new school will increase traffic during peak arrival and dismissal times, the impacts can be mitigated with targeted roadway and signal improvements.

With these measures in place, the surrounding road network is expected to continue operating acceptably.

The school design will continue with site access and circulation features that separate buses, parent drop-off, and staff parking to improve safety and reduce congestion.

The Town will further evaluate and advance design concepts for off-site intersection improvements—particularly at Salem Street and Middlesex Avenue and at Route 62 and Middlesex Avenue/High Street—including signal timing changes and potential geometric upgrades, which are not part of the immediate school site but are necessary to support future traffic conditions.

Existing Conditions Investigations – Acoustic Testing

Existing background noise levels are relatively low, particularly during nighttime hours, which establishes limits for new noise-generating equipment.

Based on measured conditions, allowable broadband sound levels for new equipment are approximately 49–52 dBA at night and 51–56 dBA during the day.

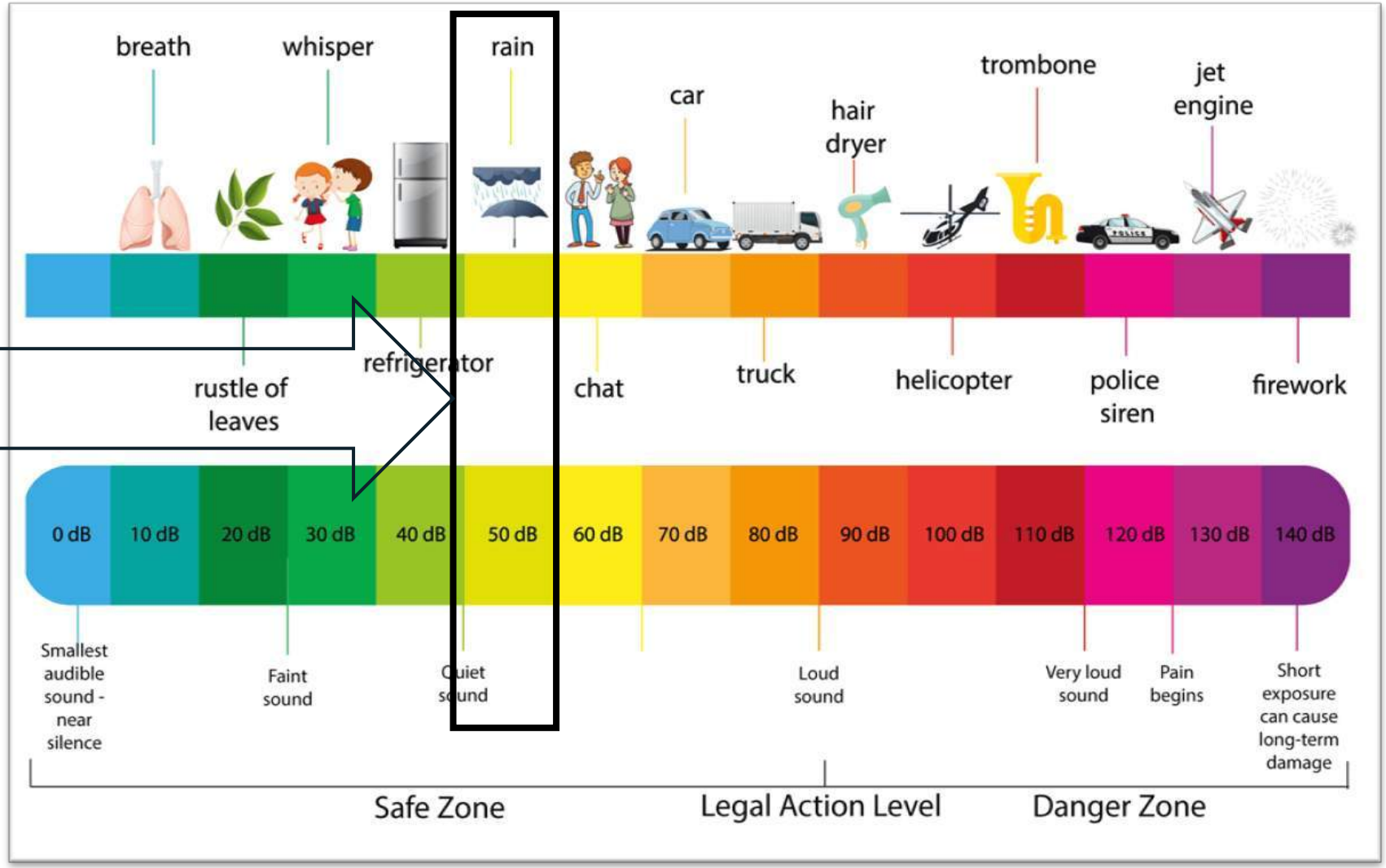
The findings directly inform mechanical and architectural design decisions. The project team is incorporating noise mitigation strategies early to ensure regulatory compliance and minimize community impacts.



Existing Conditions Investigations – Acoustic Testing

49–52 dBA
at night

51–56 dBA
during the
day.



Updates from Designated Individuals



Interior Design

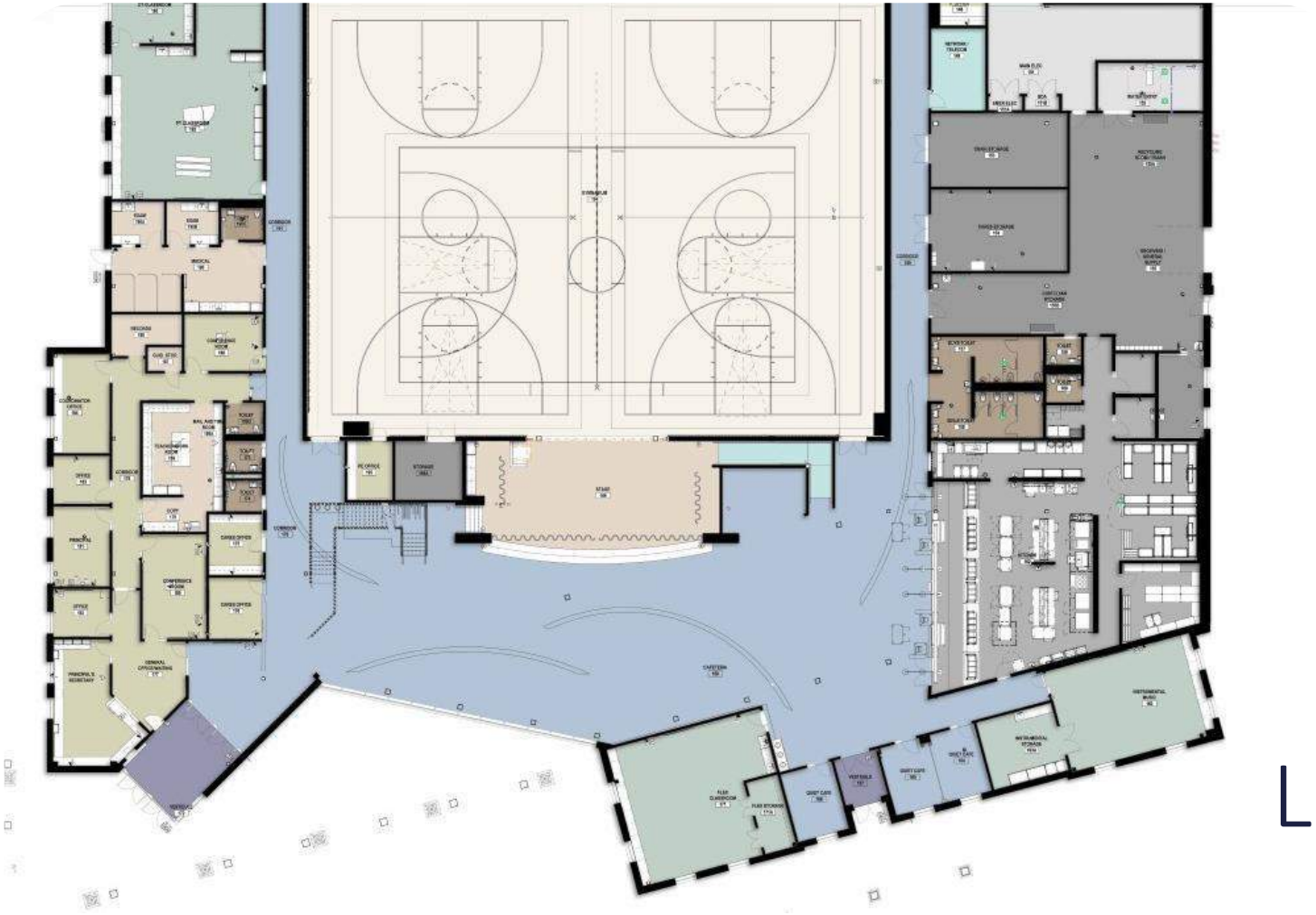


Level 1

Flooring Legend

- Epoxy - Bathrooms
- Epoxy - Kitchen
- Terrazzo
- Athletic Rubber Flooring
- Linoleum
- Quartz Tile
- Carpet Tile
- Concrete Sealer
- Rubber sheet and stair treads
- Aluminum Walk-off Grill

Interior Design



Level 1

Flooring Legend

- Epoxy - Bathrooms
- Epoxy - Kitchen
- Terrazzo
- Athletic Rubber Flooring
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- Concrete Sealer
- Rubber sheet and stair treads
- Aluminum Walk-off Grill

SAMPLE MSBA DD Submission Table of Contents

- Basic project information
- OPM Deliverables
  - Review comments
  - Commissioning Agent review comments
  - Updated project schedule (assume no changes)
  - CM Cost Estimate
  - Updated total project budget (assume no changes)
  - Value Engineering actions (if any)
- Designer Deliverables
  - Workplan
  - Updated reports
  - Building system narratives
  - Building code analysis
  - Sustainability measures and updated LEED scorecard
  - Site assessment update
  - Pending proprietary items
  - Exterior and interior materials
  - Structural calculations
  - Energy model calculations
  - Life cycle cost analysis
  - Heat gain and loss calculations
  - Electrical load calculations
  - Security and visual access requirements
  - Facility and maintenance requirements
  - Quality control narratives
  - Space summary (no changes)
  - Project permitting summary
  - Designer cost estimate
  - Drawings & project manual
  - Project coordination
- Appendices
  - Cost estimate reconciled form
  - Cost estimate comparison form

Early Release Scope Package | MSBA Review

Wilmington - Early Release Package (ERP) Definition and Schedule Matrix

Early Release Package	Drawing Package Issued To Estimators	Drawing Package Issued to MSBA	MSBA review Comments Received	Anticipated Trade Bidding	Package/ Scope Awards	Comments/ Clarifications	Package Clarification/Amendment Inclusions
MSBA DD Submission No scope is planned to be awarded on this drawing set	2/6/2026	21 calendar days 3/20/2026	4/10/2026	N/A	N/A		
ERP 1 - (MSBA 60% Submission) Enabling, full sitework	5/15/2026	21 calendar days 6/25/2026	7/16/2026	Non-trade bidding 5/19/26 - 6/8/26	Late June	Please note, award of ERP-1 (sitework) is currently targeted to take place prior to the receipt of MSBA comments. However, MSBA DD submission comments will have been received.	BP 31-1: Full site package
ERP 2 - (MSBA 90% Submission) Concrete foundations and flatwork, structural steel, foundation waterproofing, and elevator	8/14/2026	21 calendar days 9/28/2026	10/19/2026	Trade and non-trade bidding 8/18/26 - 9/7/26	Late Sept	Please note, award of ERP-2 (superstructure) is currently targeted to take place prior to the receipt of MSBA comments. However, MSBA DD and 60% submission comments will have been received.	BP 3-1: Concrete BP 5-2: Structural Steel BP 7-1: Foundation Waterproofing BP 14-1: Elevator
ERP 2A - Switchgear/ Other TBD	8/14/2026	N/A	N/A	Trade and non-trade bidding 8/18/26 - 9/7/26	Late Sept	The project team will continuously monitor lead times for switchgear as well as other long lead-time equipment.	Scope TBD
ERP 3 - (MSBA 100% CD Submission) All remaining scope	N/A	10/30/2026	N/A	Trade and non-trade bidding 11/3/26 - 11/30/26	December 2026 through January 2027	Please note that bidding/trade package awards associated with this package will be awarded after receipt of MSBA review comments from the DD, 60, and 90 CD submissions	Bid package numbers to be assigned at a later date All MEP & FP All major interior trades

Dates subject to adjustment

Public Engagement



Agenda

1. Call to Order
2. Approval of Minutes – January 20, 2026– Vote
3. Administrative
    a. Invoice Summary – Vote
    b. Total Project Budget Update
4. Design Update
    a. Existing Conditions Investigations and Design Implications
    b. Interior Design
    c. MSBA DD Submission format
5. **Public Engagement**
6. **Discussion/Correspondence/New Items**
7. **Committee Questions**
8. **Public Comments**
9. **Next Meeting Date and Time - Tuesday, March 17, 2026**
10. **Adjournment**

Discussion/ Correspondence/ New Items



Committee Questions



Public Comment



THANK YOU

Massachusetts School Building Authority

WILMINGTON, MASS. INCORPORATED 1730

Left Field PROJECT MANAGEMENT

DORE + WHITTIER

FONTAINE

WILMINGTON PUBLIC SCHOOLS

Wildwood Early Childhood Center Project

School Building Committee Meeting #41

March 18, 2026

Massachusetts School Building Authority

Left Field

DORE + WHITTIER

FONTAINE



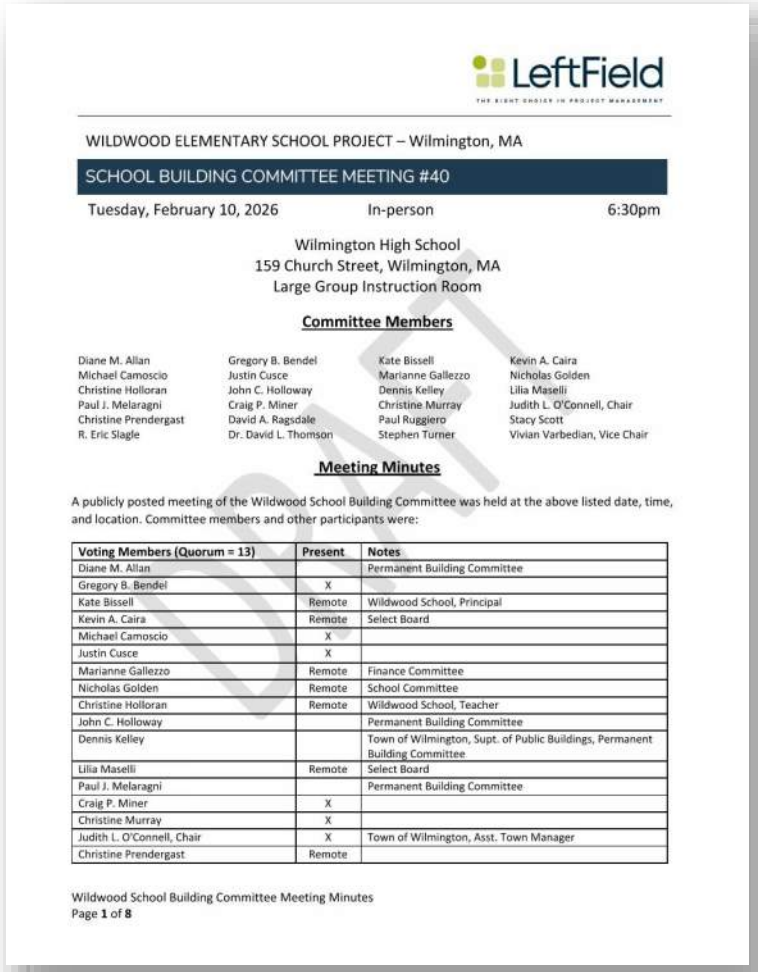
Agenda

1. Call to Order
2. Approval of Minutes – February 10, 2026– Vote
3. Administrative
    a. New Construction Manager Project Executive
    b. Invoice Summary – Vote
    c. Total Project Budget Update
4. Design Update
    a. MSBA DD Submission – Vote
    b. Interior Design Update
5. Public Engagement
6. Discussion/Correspondence/New Items
7. Committee Questions
8. Public Comments
9. Next Meeting Date and Time - Tuesday, April 14, 2026
10. Adjournment

Approval of Minutes



Approval of Meeting Minutes – February 10, 2026



LeftField

WILDWOOD ELEMENTARY SCHOOL PROJECT – Wilmington, MA

SCHOOL BUILDING COMMITTEE MEETING #40

Tuesday, February 10, 2026 In-person 6:30pm

Wilmington High School
159 Church Street, Wilmington, MA
Large Group Instruction Room

Committee Members

Diane M. Allan	Gregory B. Bendel	Kate Bissell	Kevin A. Caira
Michael Camoscio	Justin Cusce	Marianne Gallezzo	Nicholas Golden
Christine Holloran	John C. Holloway	Dennis Kelley	Lilia Maselli
Paul J. Melaragni	Craig P. Miner	Christine Murray	Judith L. O'Connell, Chair
Christine Prendergast	David A. Ragsdale	Paul Ruggiero	Stacy Scott
R. Eric Slagle	Dr. David L. Thomson	Stephen Turner	Vivian Varbedian, Vice Chair

Meeting Minutes

A publicly posted meeting of the Wildwood School Building Committee was held at the above listed date, time, and location. Committee members and other participants were:

Voting Members (Quorum = 13)	Present	Notes
Diane M. Allan		Permanent Building Committee
Gregory B. Bendel	X	
Kate Bissell	Remote	Wildwood School, Principal
Kevin A. Caira	Remote	Select Board
Michael Camoscio	X	
Justin Cusce	X	
Marianne Gallezzo	Remote	Finance Committee
Nicholas Golden	Remote	School Committee
Christine Holloran	Remote	Wildwood School, Teacher
John C. Holloway		Permanent Building Committee
Dennis Kelley		Town of Wilmington, Supt. of Public Buildings, Permanent Building Committee
Lilia Maselli	Remote	Select Board
Paul J. Melaragni		Permanent Building Committee
Craig P. Miner	X	
Christine Murray	X	
Judith L. O'Connell, Chair	X	Town of Wilmington, Asst. Town Manager
Christine Prendergast	Remote	

Wildwood School Building Committee Meeting Minutes
Page 1 of 8

Administrative



Invoice Summary #25

Wildwood Elementary School (Wilmington)

MSBA Data Entry Sheet

Date	3/9/2026
Period Ending:	2/28/2026
MSBA Reimbursement Package #:	***Invoice Summary #25***
Included GC/CM Requisition:	***Precon #6***

Invoice #	*Invoice Date*	*Vendor*	*Cost Code*	*Value*	
31	2/28/2026	Dore & Whittier - Design Development	0201 0400	$681,831.20	
31	2/28/2026	Dore & Whittier - Geotechnical (LGCI)	0204 0300	$5,788.86	
31	2/28/2026	Dore & Whittier - Traffic Studies (Nitsch)	0204 1200	$15,950.00	
31	2/28/2026	Dore & Whittier - Other Reimbursables - Irrigation (Terraink)	0203 9900	$10,890.00	
					Invoice Total
			Subtotal:	**$714,460.06**	**$714,460.06**
App #6	2/28/2026	Fontaine Bros., Inc. - Preconstruction Services	0501 0000	$26,666.00	
					Invoice Total
			Subtotal:	**$26,666.00**	**$26,666.00**
6	2/28/2026	Leftfield - OPM Services - Design Development	0102 0400	$60,800.00	
					Invoice Total
			Subtotal:	**$60,800.00**	**$60,800.00**
			Total of Invoices Submitted	**$801,926.06**	

Total Project Budget – Rolled Up

Wildwood Elementary School - BUDGET TRACKING

MSBA ID: 202003420015
Wildwood Elementary School
Project Director / Manager: David Saindon / Craig DiCarlo

Period Ending 2/28/2026
MSBA Reimbursement Package 25
Includes GC/CM Requisition N/A

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

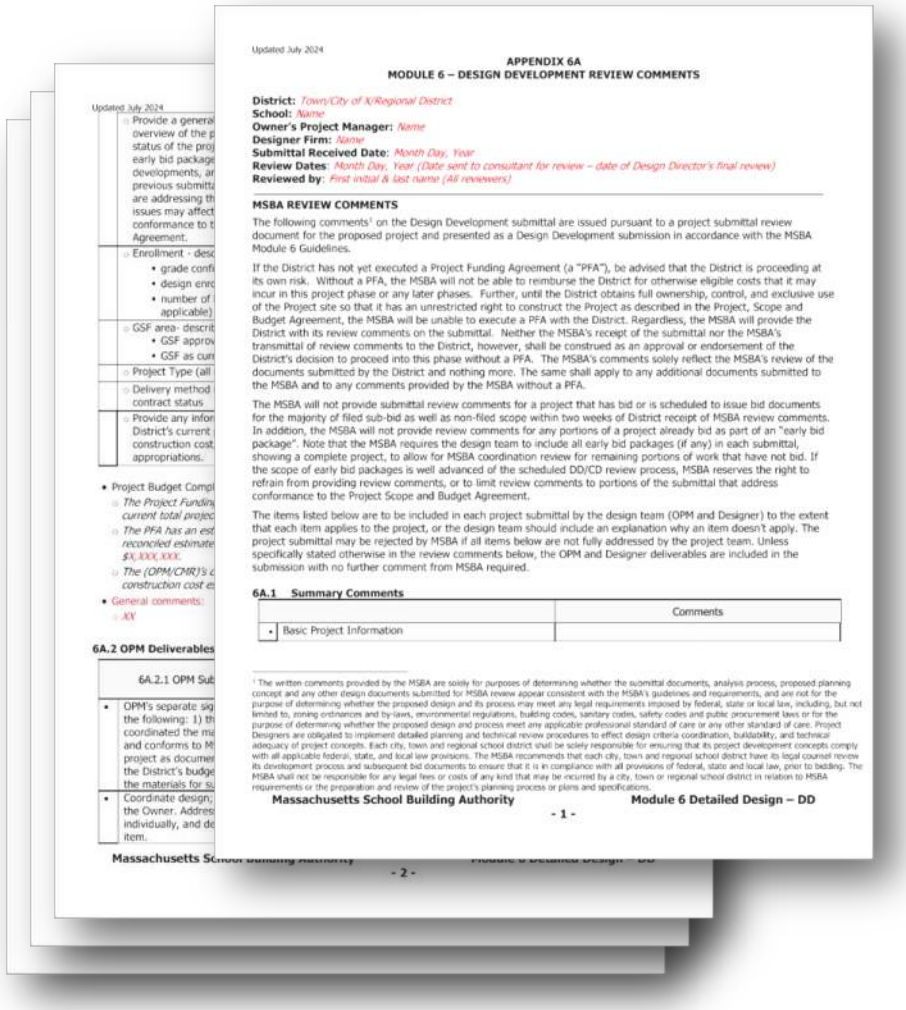
Current Budget

		PFA Budget [A]	Budget Changes [B]	Rev. PFA Budget [C]	Committed Costs [D]	Expended [E]	Unspent [F]=[D]-[E]	Remaining Budget [G]=[C]-[D]	% Complete (against committ'd) [H]=[E]/[J]	CTC (beyond committed) [I]	Anticipated C @ C [J]=[D]+[I]	Variance (Under) / Over [K]=[C]-[J]
0000 0000	**FEASIBILITY STUDY AGREEMENT**	**$1,215,000**	**$0**	**$1,215,000**	**$1,205,180**	**$1,189,117**	**$16,063**	**$9,820**	99%	**($5,528)**	**$1,199,652**	**($15,348)**
0100 0000	**ADMINISTRATION**	**$5,520,000**	**$0**	**$5,520,000**	**$4,780,000**	**$339,200**	**$4,440,800**	**$740,000**		**$740,000**	**$5,520,000**	**$0**
0101 0000	Legal Fees	$100,000	$0	$100,000	$0	$0	$0	$100,000		$100,000	$100,000	$0
0102 0000	Owner's Project Manager (Leftfield)	$4,780,000	$0	$4,780,000	$4,780,000	$339,200	$4,440,800	$0	7%	$0	$4,780,000	$0
0103 0000	Aministration/ Misc Costs	$640,000	$0	$640,000	$0	$0	$0	$640,000		$640,000	$640,000	$0
0200 0000	**ARCHITECTURE & ENGINEERING**	**$15,141,622**	**($240,000)**	**$14,901,622**	**$14,901,622**	**$3,571,358**	**$11,330,264**	**$0**		**$0**	**$14,901,622**	**$0**
0201 0000	Basic Services (Dore & Whittier)	$13,811,622	($175,000)	$13,636,622	$13,636,622	$3,409,156	$10,227,466	$0	25%	$0	$13,636,622	$0
0203 0000	Reimbursable and Other Services (Dore & Whittier)	$1,330,000	($65,000)	$1,265,000	$1,265,000	$162,202	$1,102,798	$0	13%	$0	$1,265,000	$0
0500 0000	**CONSTRUCTION CONTRACT**	**$138,063,666**	**$0**	**$138,063,666**	**$320,000**	**$133,330**	**$186,670**	**$137,743,666**		**$137,743,666**	**$138,063,666**	**$0**
0501 0000	Pre-Construction Services (Fontaine)	$320,000	$0	$320,000	$320,000	$133,330	$186,670	$0	42%	$0	$320,000	$0
0502 0000	Construction											
0502 0000	Construction Budget	$137,743,666	$0	$137,743,666	$0	$0	$0	$137,743,666		$137,743,666	$137,743,666	$0
0502 9900	Retainage	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0508 0000	Change Orders	$0	$0	$0	$0	$0	$0	$0		$0	$0	$0
0600 0000	**MISCELLANEOUS PROJECT COSTS**	**$1,050,000**	**$0**	**$1,050,000**	**$0**	**$0**	**$0**	**$1,050,000**		**$1,050,000**	**$1,050,000**	**$0**
0700 0000	**FURNISHINGS & EQUIPMENT**	**$3,322,000**	**$0**	**$3,322,000**	**$0**	**$0**	**$0**	**$3,322,000**		**$3,322,000**	**$3,322,000**	**$0**
0701 0000	Furnishings & Equipment (FF+E)	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0703 0000	Technology	$1,661,000	$0	$1,661,000	$0	$0	$0	$1,661,000		$1,661,000	$1,661,000	$0
0800 0000	**OWNER'S CONTINGENCY**	**$8,953,338**	**$240,000**	**$9,193,338**	**$0**	**$0**	**$0**	**$9,193,338**		**$9,208,686**	**$9,208,686**	**$15,348**
0801 0000	Owner's Contingency (soft)	$2,066,155	$240,000	$2,306,155	$0	$0	$0	$2,306,155		$2,321,503	$2,321,503	$15,348
0507 0000	Owner's Construction Contingency (hard)	$6,887,183	$0	$6,887,183	$0	$0	$0	$6,887,183		$6,887,183	$6,887,183	$0
	PROJECT TOTALS [MSBA PFA]	**$173,265,626**	**$0**	**$173,265,626**	**$21,206,802**	**$5,233,005**	**$15,973,797**	**$152,058,824**		**$152,058,824**	**$173,265,626**	**($0)**

Design Updates



Design Development Submission



Updated July 2024

APPENDIX 6A
MODULE 6 – DESIGN DEVELOPMENT REVIEW COMMENTS

District: *Town/City of X/Regional District*
School: *Name*
Owner's Project Manager: *Name*
Designer Firm: *Name*
Submittal Received Date: *Month Day, Year*
Review Dates: *Month Day, Year (Date sent to consultant for review – date of Design Director's final review)*
Reviewed by: *First initial & last name (All reviewers)*

MSBA REVIEW COMMENTS

The following comments[1] on the Design Development submittal are issued pursuant to a project submittal review document for the proposed project and presented as a Design Development submission in accordance with the MSBA Module 6 Guidelines.

If the District has not yet executed a Project Funding Agreement (a "PFA"), be advised that the District is proceeding at its own risk. Without a PFA, the MSBA will not be able to reimburse the District for otherwise eligible costs that it may incur in this project phase or any later phases. Further, until the District obtains full ownership, control, and exclusive use of the Project site so that it has an unrestricted right to construct the Project as described in the Project, Scope and Budget Agreement, the MSBA will be unable to execute a PFA with the District. Regardless, the MSBA will provide the District with its review comments on the submittal. Neither the MSBA's receipt of the submittal nor the MSBA's transmittal of review comments to the District, however, shall be construed as an approval or endorsement of the District's decision to proceed into this phase without a PFA. The MSBA's comments solely reflect the MSBA's review of the documents submitted by the District and nothing more. The same shall apply to any additional documents submitted to the MSBA and to any comments provided by the MSBA without a PFA.

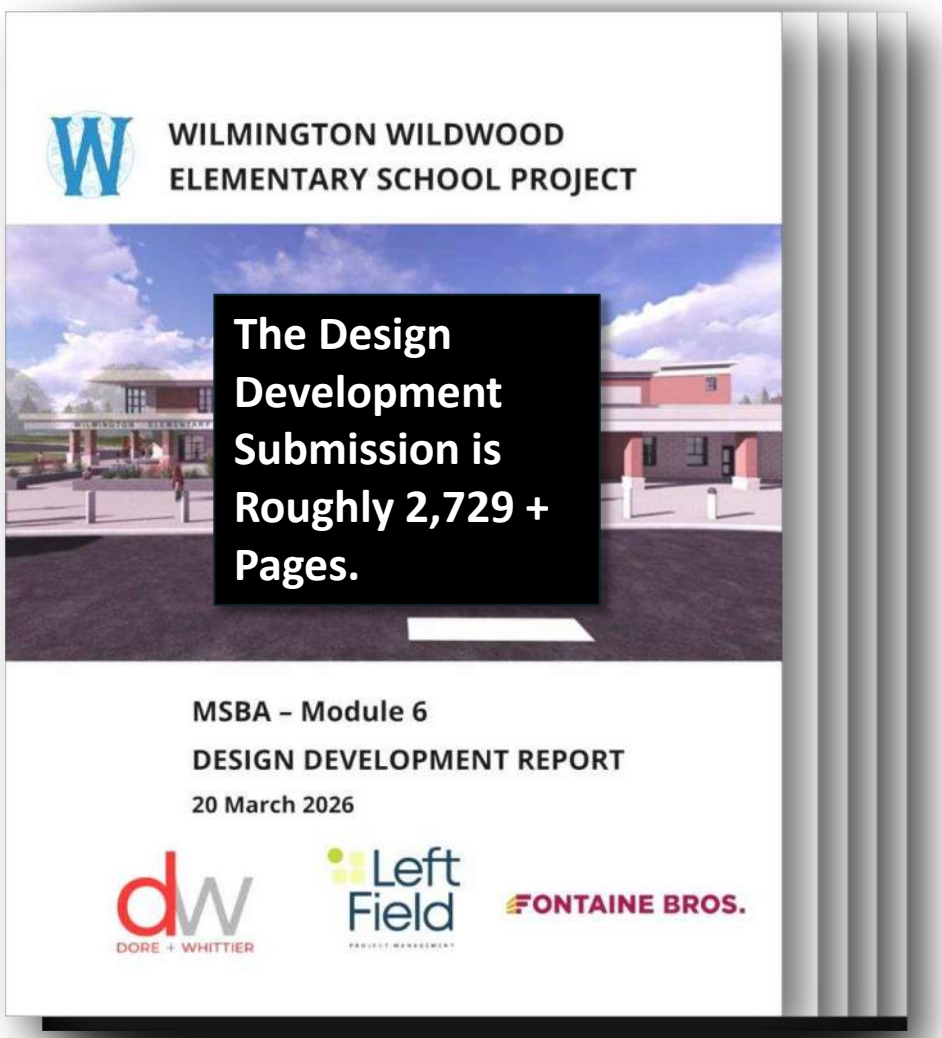
The MSBA will not provide submittal review comments for a project that has bid or is scheduled to issue bid documents for the majority of filed sub-bid as well as non-filed scope within two weeks of District receipt of MSBA review comments. In addition, the MSBA will not provide review comments for any portions of a project already bid as part of an "early bid package". Note that the MSBA requires the design team to include all early bid packages (if any) in each submittal, showing a complete project, to allow for MSBA coordination review for remaining portions of work that have not bid. If the scope of early bid packages is well advanced of the scheduled DD/CD review process, MSBA reserves the right to refrain from providing review comments, or to limit review comments to portions of the submittal that address conformance to the Project Scope and Budget Agreement.

The items listed below are to be included in each project submittal by the design team (OPM and Designer) to the extent that each item applies to the project, or the design team should include an explanation why an item doesn't apply. The project submittal may be rejected by MSBA if all items below are not fully addressed by the project team. Unless specifically stated otherwise in the review comments below, the OPM and Designer deliverables are included in the submission with no further comment from MSBA required.

6A.1 Summary Comments

	Comments
Basic Project Information	

[1] The written comments provided by the MSBA are solely for purposes of determining whether the submittal documents, analysis process, proposed planning concept and any other design documents submitted for MSBA review appear consistent with the MSBA's guidelines and requirements, and are not for the purpose of determining whether the proposed design and its process may meet any legal requirements imposed by federal, state or local law, including, but not limited to, zoning ordinances and by-laws, environmental regulations, building codes, sanitary codes, safety codes and public procurement laws or for the purpose of determining whether the proposed design and process meet any applicable professional standard of care or any other standard of care. Project Designers are obligated to implement detailed planning and technical review procedures to effect design criteria coordination, buildability, and technical adequacy of project concepts. Each city, town and regional school district shall be solely responsible for ensuring that its project development concepts comply with all applicable federal, state, and local law provisions. The MSBA recommends that each city, town and regional school district have its legal counsel review its development process and subsequent bid documents to ensure that it is in compliance with all provisions of federal, state and local law, prior to bidding. The MSBA shall not be responsible for any legal fees or costs of any kind that may be incurred by a city, town or regional school district in relation to MSBA requirements or the preparation and review of the project's planning process or plans and specifications.



Design Development Submission Contents

TABLE OF CONTENTS

Cover Letter

Table of Contents & Acknowledgements 6A.0.0

Summary 6A.1.0
Introduction - Basic Project Information 1.1

OPM Deliverables 6A.2.0
OPM's Submittal Review & Coordination 2.1
Design Review
District Response to MSBA Comments
Designer Evaluation Form
Project Schedule
Project Scope & Budget
Updated Total Project Budget
Early Bid Package
Value Engineering Recommendations

Designer Deliverables
General Requirements
Updated Work Plan
Basis of Design Narratives
Architecture
Structural
Civil
Landscape Architecture B.4
Mechanical B.5
Electrical B.6
Plumbing & Fire Protection B.7
Data / Communication / Security B.8
Building Code Analysis C
Green Communities Designations/ Requirements D
Updated LEED Scorecard E
USGBC Registration F
Site Vulnerability/Risk Assessment G

List of Proprietary Items H
Exterior and Interior Color Theory I
Structural Calculations J
Structural Peer Review Status K
Energy Model Calculations L
Life Cycle Cost Analysis M
Heat Gain / Loss Calculations N
Total Electrical Load Calculations O
Security and Visual Access Requirements P
Facility Maintenance Requirements
Quality Control Narrative

Space Summary

Appendix 5: DD Phase Geotechnical Report – LGCI, Inc. x-5
Appendix 6: DD Phase Environmental Site Assessment – PEER x-6
Appendix 7: DD Phase Hazardous Materials Inspection Letter – UEC x-7
Appendix 8: DD Phase Flow Test Results x-8
Appendix 9: Wetland Resource Area Analysis Report – LEC x-9
Appendix 10: Early Release Package (ERP) Definition and Schedule Matrix x-10
Appendix 11: LeftField DD Review Comments x-11
Appendix 12: Commissioning Agent Review Comments x-12
Appendix 13: CM DD Review Comments x-13
Appendix 14: DESE Letter of Approval x-14
Appendix 15: Massachusetts Historic Commission Approval Letter x-15
Appendix 16: Office of the Inspector General Approval Letter to Proceed x-16
Appendix 17: State Site Permit Tracking Worksheet x-17

Appendix 18: MEPA Checklist x-18
Appendix 19: Updated Project Schedule x-19
Appendix 20: CM Construction Cost Estimate (CSI and Uniformat) x-20
Appendix 21: OPM Cost Estimate Reconciliation Form x-21
Appendix 22: Cost Estimate Comparison Form x-22
Appendix 23: Updated MSBA 3011 Budget Form x-23
Appendix 24: Value ng Log x-24
ineering Summary Tracking Sheet x-25

To maintain the project's schedule with the MSBA in regard to MSBA submission reviews, which have an interface with early release scopes of work, the Design Development Submission is scheduled to be submitted to the MSBA on March 20, 2026.

Design Development Submission Contents

Table of Contents - Page 1

TABLE OF CONTENTS

Cover Letter	
Table of Contents & Acknowledgements	6A.0.0
Summary	6A.1.0
Introduction - Basic Project Information	1.1
OPM Deliverables	6A.2.0
OPM's Submittal Review & Coordination	2.1
Design Review	
District Response to MSBA Comments	
Designer Evaluation Form	
Project Schedule	
Project Scope & Budget	
Updated Total Project Budget	
Early Bid Package	
Value Engineering Recommendations	
Designer Deliverables	6A.3.0
General Requirements	6A.3.1
Updated Work Plan	A
Basis of Design Narratives	B
Architecture	B.1
Structural	B.2
Civil	B.3
Landscape Architecture	B.4
Mechanical	B.5
Electrical	B.6
Plumbing & Fire Protection	B.7
Data / Communication / Security	B.8
Building Code Analysis	C
Green Communities Designations/ Requirements	D
Updated LEED Scorecard	E
USGBC Registration	F
Site Vulnerability/Risk Assessment	G

Cover Letter

Table of Contents & Acknowledgements 6A.0.0

Summary 6A.1.0

Introduction - Basic Project Information 1.1

OPM Deliverables 6A.2.0

OPM's Submittal Review & Coordination 2.1

Design Review

District Response to MSBA Comments

Designer Evaluation Form

Project Schedule

Project Scope & Budget

Updated Total Project Budget

Early Bid Package

Value Engineering Recommendations

Design Development Submission Contents

Table of Contents - Page 1

TABLE OF CONTENTS

Cover Letter	
Table of Contents & Acknowledgements	6A.0.0
Summary	6A.1.0
Introduction - Basic Project Information	1.1
OPM Deliverables	6A.2.0
OPM's Submittal Review & Coordination	2.1
Design Review	
District Response to MSBA Comments	
Designer Evaluation Form	
Project Schedule	
Project Scope & Budget	
Updated Total Project Budget	
Early Bid Package	
Value Engineering Recommendations	
Designer Deliverables	6A.3.0
General Requirements	6A.3.1
Updated Work Plan	A
Basis of Design Narratives	B
Architecture	B.1
Structural	B.2
Civil	B.3
Landscape Architecture	B.4
Mechanical	B.5
Electrical	B.6
Plumbing & Fire Protection	B.7
Data / Communication / Security	B.8
Building Code Analysis	C
Green Communities Designations/ Requirements	D
Updated LEED Scorecard	E
USGBC Registration	F
Site Vulnerability/Risk Assessment	G

Designer Deliverables	6A.3.0
General Requirements	6A.3.1
Updated Work Plan	A
Basis of Design Narratives	B
Architecture	B.1
Structural	B.2
Civil	B.3
Landscape Architecture	B.4
Mechanical	B.5
Electrical	B.6
Plumbing & Fire Protection	B.7
Data / Communication / Security	B.8
Building Code Analysis	C
Green Communities Designations/ Requirements	D
Updated LEED Scorecard	E
USGBC Registration	F
Site Vulnerability/Risk Assessment	G

Design Development Submission Contents

- List of Proprietary Items
- Exterior and Interior Color Theory
- Structural Calculations
- Structural Peer Review Status
- Energy Model Calculations
- Life Cycle Cost Analysis
- Heat Gain / Loss Calculations
- Total Electrical Load Calculations
- Security and Visual Access Requirements
- Facility Maintenance Requirements
- Quality Control Narrative

- Space Summary
  - Updated & Signed Document
  - Space Conf. Grossing Factor & Final Design Variations
- Project Approvals
- Designer's Construction Cost Estimate
- Design Development Drawings (attached)
- Design Development Specifications (attached)

Table of Contents - Page 2

List of Proprietary Items
Exterior and Interior Color Theory
Structural Calculations
Structural Peer Review Status
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Total Electrical Load Calculations
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Facility Maintenance Requirements
Quality Control Narrative

Space Summary
Updated & Signed Document
Space Conformance. Grossing Factor and Final Design Program Variations
Project Approvals
Designer's Construction Cost Estimate
Design Development Drawings (attached)
Design Development Specifications (attached)

Appendix

Appendix 1: Response To MSBA SD Comments
Appendix 2: School Building Committee Meeting Minutes – DD Phase
Appendix 3: DD Phase Owner Presentations
Appendix 4: Updated Traffic Impact Study – Nitsch Engineering
Appendix 5: DD Phase Geotechnical Report – LGCI, Inc.
Appendix 6: DD Phase Environmental Site Assessment – PEER
Appendix 7: DD Phase Hazardous Materials Inspection Letter – UEC
Appendix 8: DD Phase Flow Test Results
Appendix 9: Wetland Resource Area Analysis Report – LEC
Appendix 10: Early Release Package (ERP) Definition and Schedule Matrix
Appendix 11: LeftField DD Review Comments
Appendix 12: Commissioning Agent Review Comments
Appendix 13: CM DD Review Comments
Appendix 14: DESE Letter of Approval
Appendix 15: Massachusetts Historic Commission Approval Letter
Appendix 16: Office of the Inspector General Approval Letter to Proceed
Appendix 17: State Site Permit Tracking Worksheet

DORE + WHITTIER

Appendix

- Appendix 1: Response To MSBA SD Comments
- Appendix 2: School Building Committee Meeting Minutes – DD Phase
- Appendix 3: DD Phase Owner Presentations
- Appendix 4: Updated Traffic Impact Study – Nitsch Engineering
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- Appendix 11: LeftField DD Review Comments
- Appendix 12: Commissioning Agent Review Comments
- Appendix 13: CM DD Review Comments
- Appendix 14: DESE Letter of Approval
- Appendix 15: Massachusetts Historic Commission Approval Letter
- Appendix 16: Office of the Inspector General Approval Letter to Proceed
- Appendix 17: State Site Permit Tracking Worksheet

Design Development Submission Contents

- Appendix 18: MEPA Checklist
- Appendix 19: Updated Project Schedule
- Appendix 20: CM Construction Cost Estimate (CSI and Uniformat)
- Appendix 21: OPM Cost Estimate Reconciliation Form
- Appendix 22: Cost Estimate Comparison Form
- Appendix 23: Updated MSBA 3011 Budget Form
- Appendix 24: Value Engineering Log
- Appendix 25: MSBA Value Engineering Summary Tracking Sheet

Table of Contents - Page 3

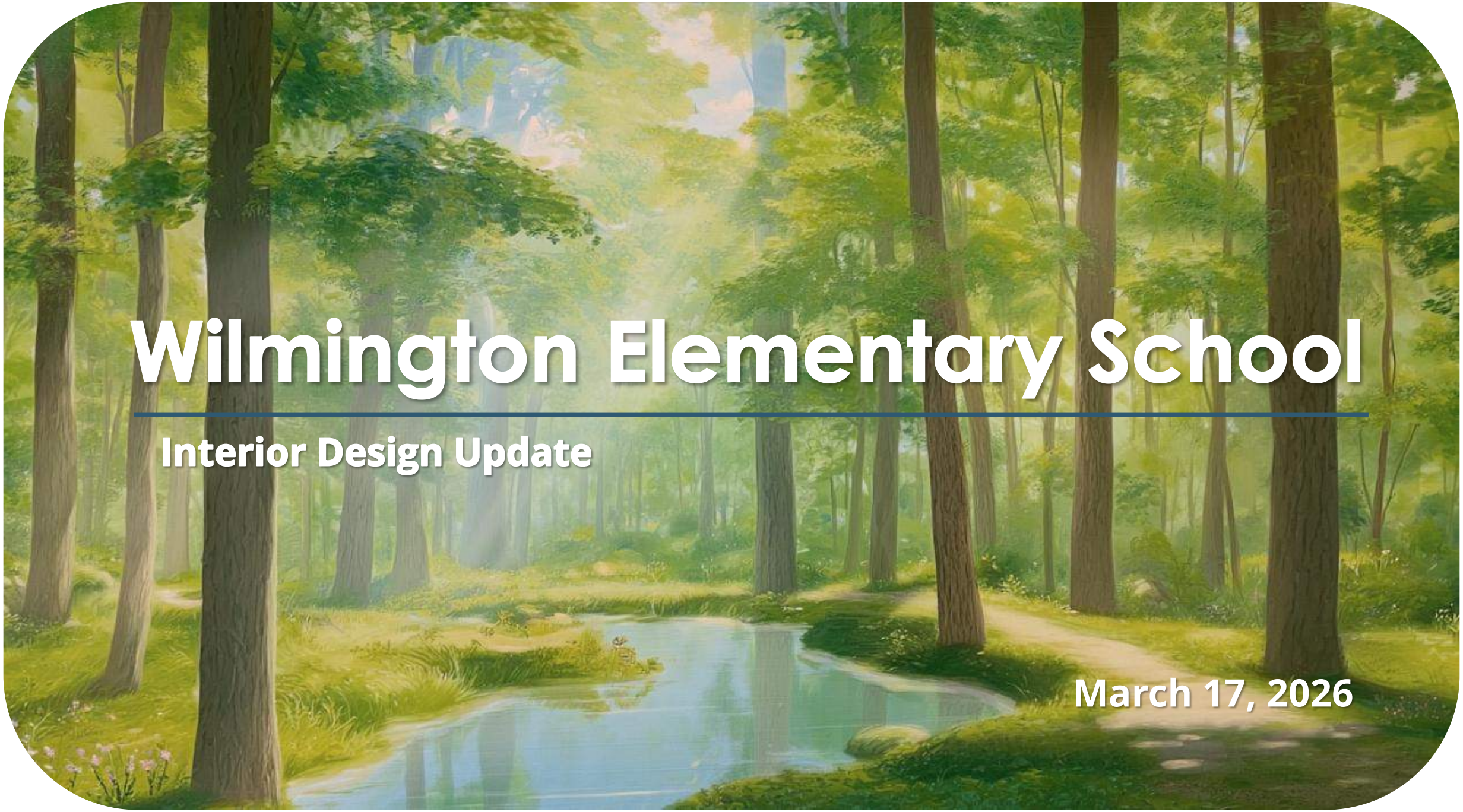
Appendix 18: MEPA Checklist x-18
Appendix 19: Updated Project Schedule x-19
Appendix 20: CM Construction Cost Estimate (CSI and Uniformat) x-20
Appendix 21: OPM Cost Estimate Reconciliation Form x-21
Appendix 22: Cost Estimate Comparison Form x-22
Appendix 23: Updated MSBA 3011 Budget Form x-23
Appendix 24: Value Engineering Log x-24
Appendix 25: MSBA Value Engineering Summary Tracking Sheet x-25

Design Development Phase Takeaways

The Project remains consistent with the scope approved by the voters. The gross square footage, educational program, construction phasing sequence, and overall schedule remain unchanged. In addition, two independent cost estimates have been completed and are within 1.62% of each other, confirming that the Project is currently ON BUDGET.

Estimate Reconciliation Summary as compared to the Schematic Design Construction Budget

PFA Schematic Design Construction Budget	Design Development Reconciled Estimates		% Δ Between Estimates
	PM+C	Fontaine	
$137,743,666	$135,413,592	$137,629,181	1.62%
Underrun >>	$2,330,074	$114,485	



Wilmington Elementary School

Interior Design Update

March 17, 2026

Interior Design Strategy:

- A growth-based interior framework rooted in Wilmington's landscape
- A clear color + material strategy by grade level
- Durable, maintainable finishes that age well
- Directional alignment before detailed selections

Design Framework



Welcoming | *Clear circulation, visual calm, and age-appropriate cues*



Grounded | *Durable materials, restrained contrast, consistent logic*



Natural | *Place-informed color and material choices*



Lasting | *Longevity, repairability, and adaptability*

Interior Design Concept & Framework

The school's vertical organization is inspired by the growth of a tree, mirroring a student's educational journey from a firm foundation to a broader perspective



Level 3:
Canopy & Outlook

Level 2:
Structure & Branching

Level 1:
Roots & Water









Overall Materials Strategy



Primary wall tone (all levels)



Accent colors (introduced by level)



DOORS | CASEWORK

TERRAZZO



TACTILE WALL TILES



LINOLEUM FLOORING



NATURE-INSPIRED GRAPHICS AT GLAZING

Primary finishes remain consistent throughout the building.
Accent colors are introduced selectively to support wayfinding and grade identity.

OVERALL FLOOR PLAN



FLOORING LEGEND

- Epoxy - Back-of-House
- Epoxy - Bathrooms
- Epoxy - Kitchen
- Terrazzo
- Athletic Rubber Flooring
- Linoleum
- Quartz Tile
- Carpet Tile
- Concrete Sealer
- Rubber sheet and stair treads
- Aluminum Walk-off Grill
- Walk-Off Carpet

Level 1

OVERALL FLOOR PLAN



FLOORING LEGEND

- Epoxy - Back-of-House
- Epoxy - Bathrooms
- Epoxy - Kitchen
- Terrazzo
- Athletic Rubber Flooring
- Linoleum
- Quartz Tile
- Carpet Tile
- Concrete Sealer
- Rubber sheet and stair treads
- Aluminum Walk-off Grill
- Walk-Off Carpet

Level 2

OVERALL FLOOR PLAN

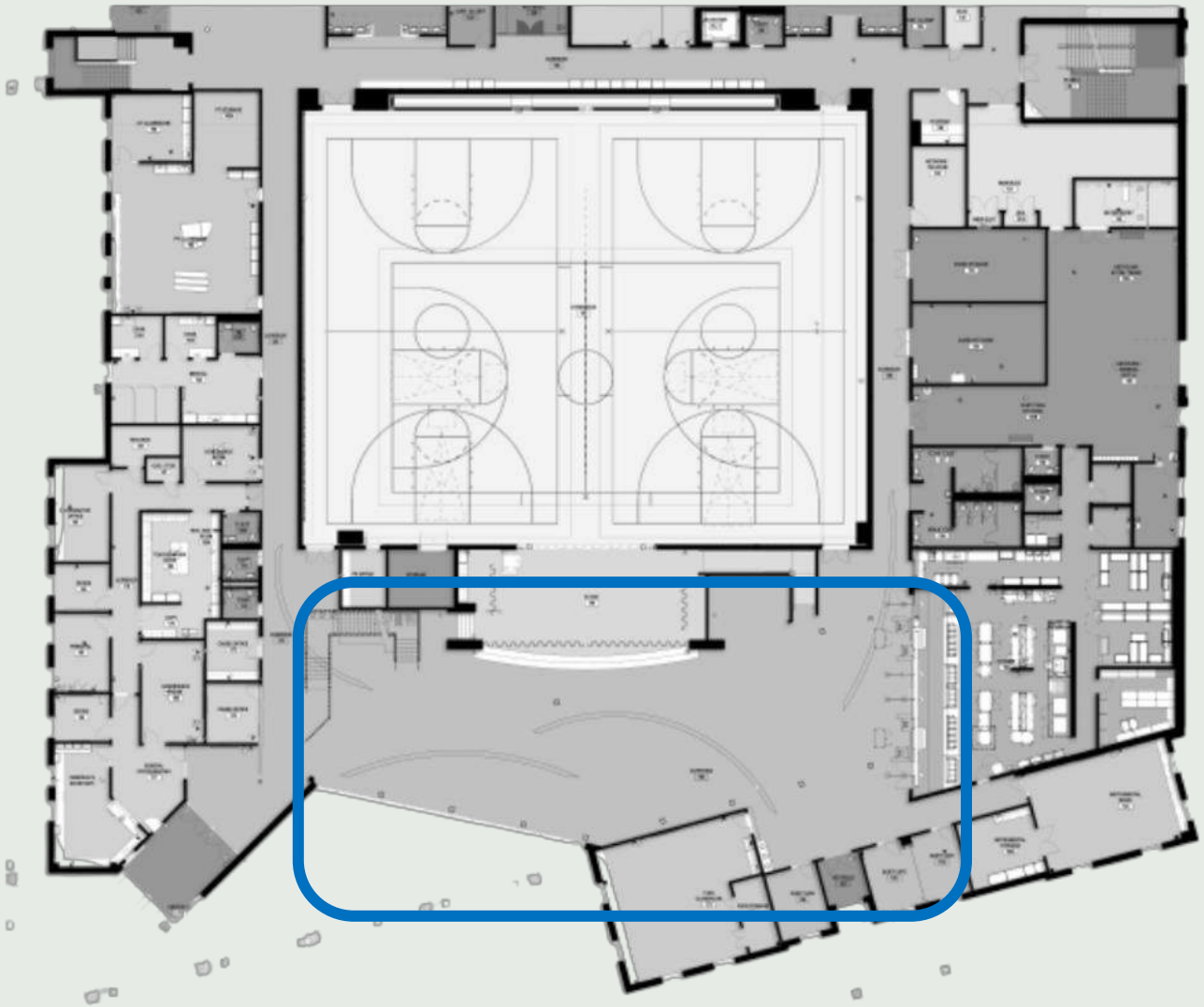


FLOORING LEGEND

- Epoxy - Back-of-House
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- Carpet Tile
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- Rubber sheet and stair treads
- Aluminum Walk-off Grill
- Walk-Off Carpet

Level 3

CAFETERIA



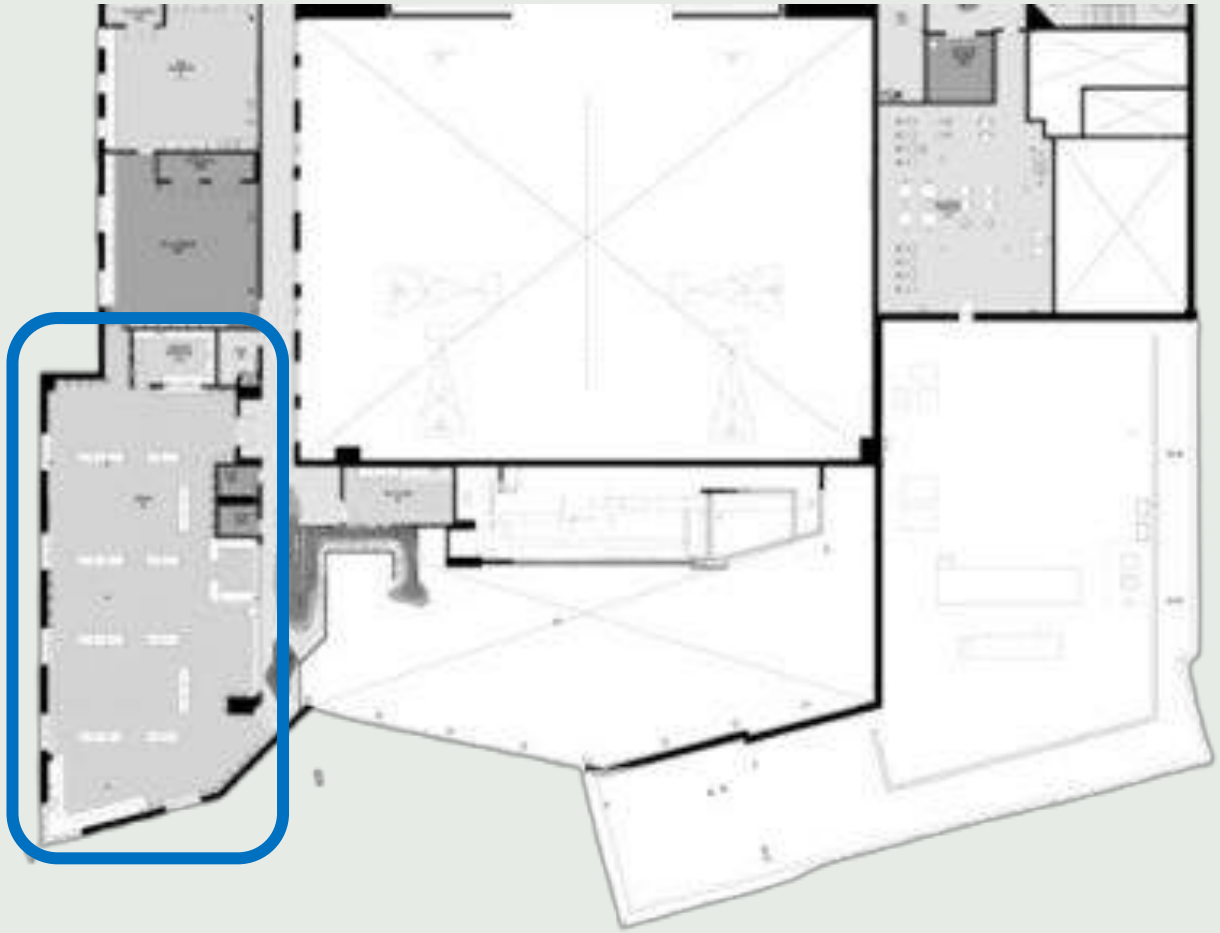
Cafeteria



View from Stair Landing



LIBRARY



Library | Quiet Reading

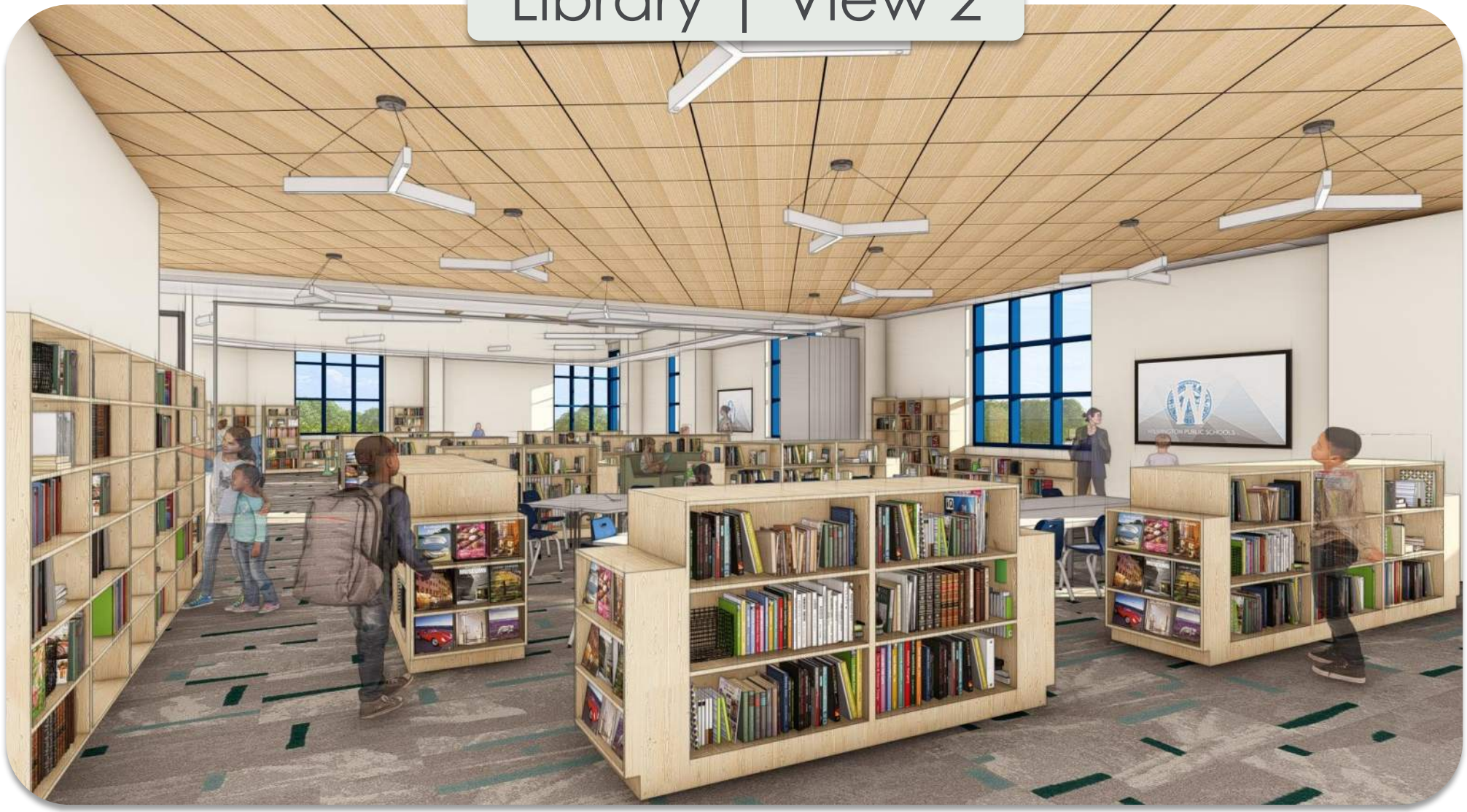








Library | View 2

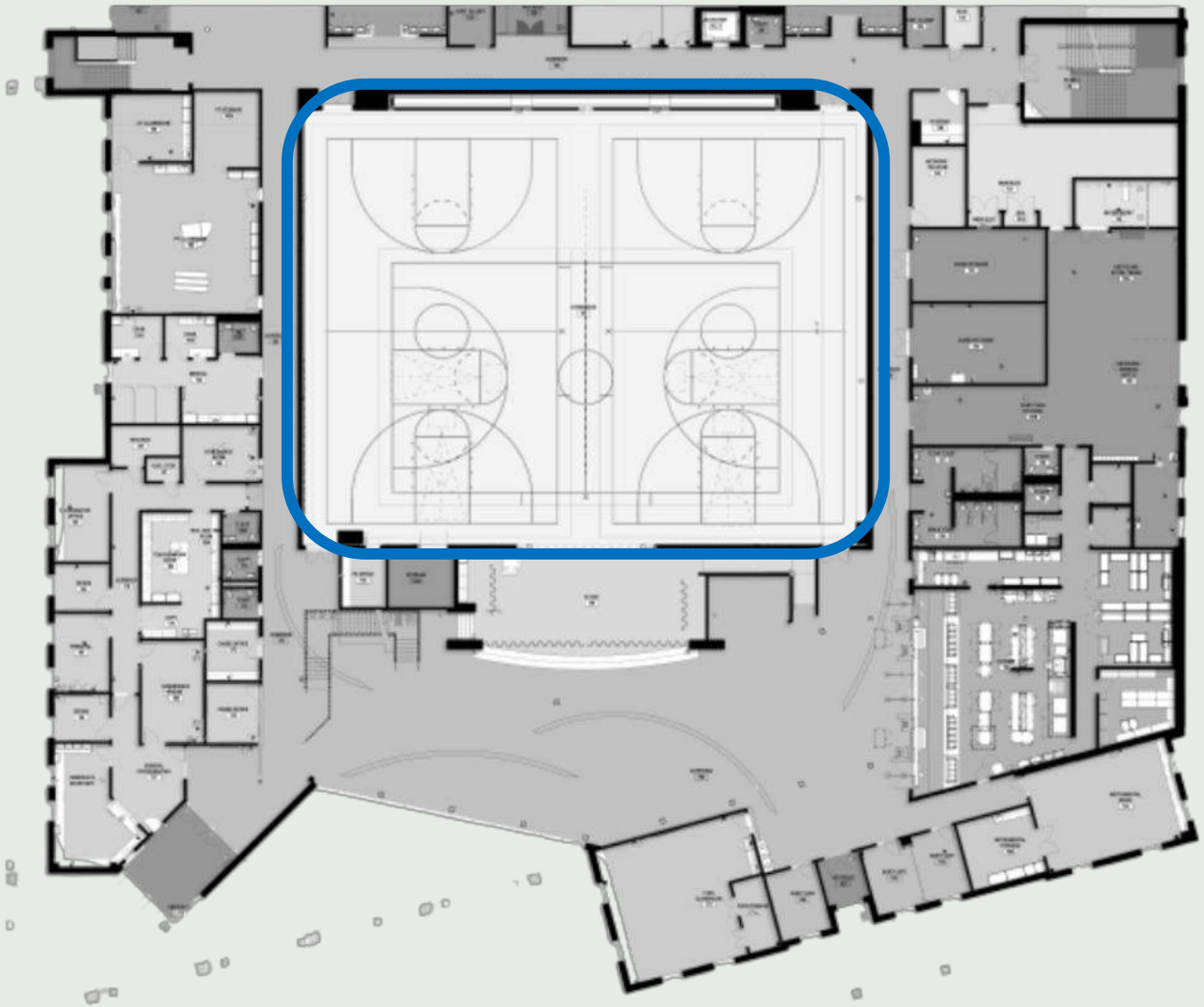




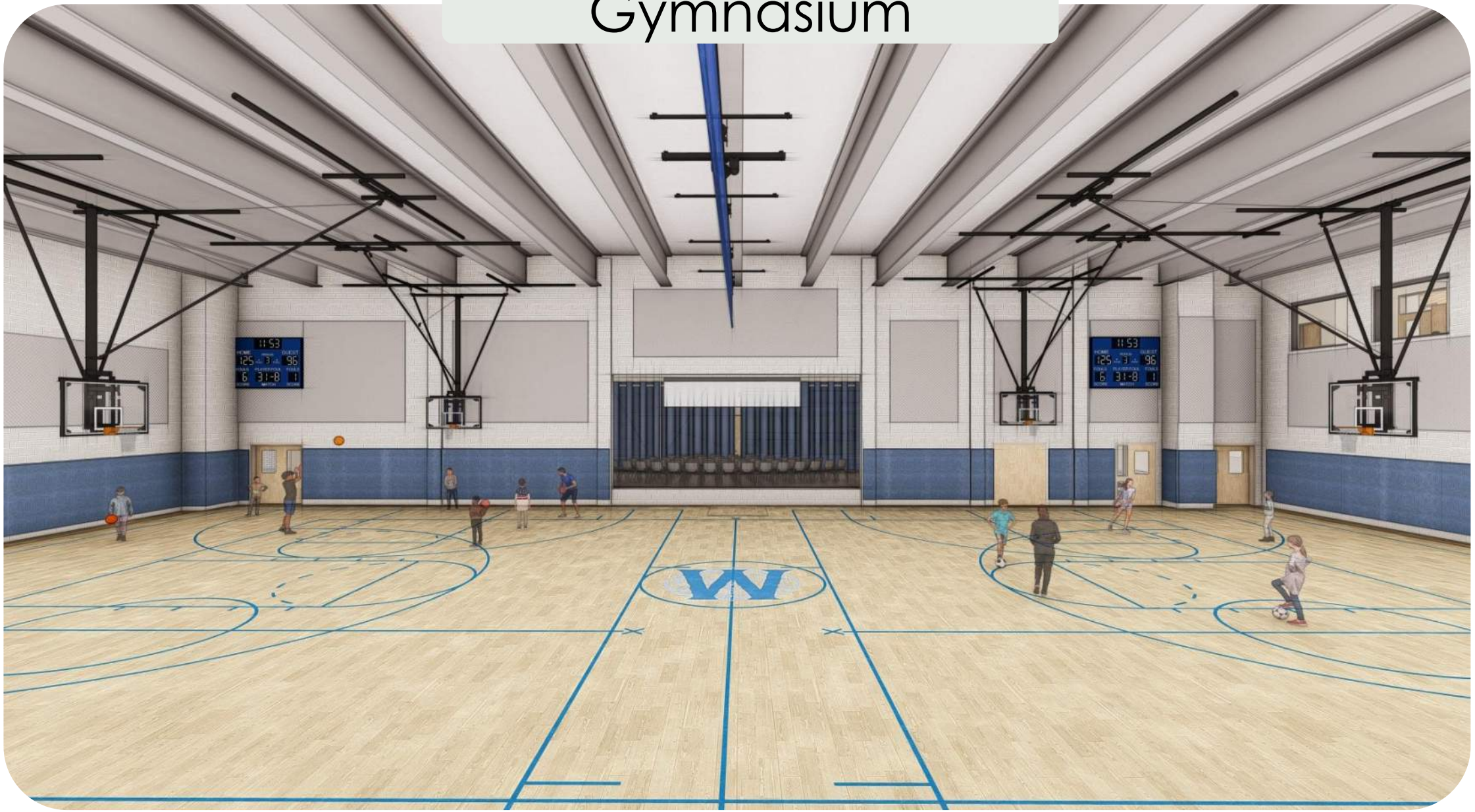




GYM



Gymnasium



Gymnasium



Gymnasium



EDUCATIONAL WINGS

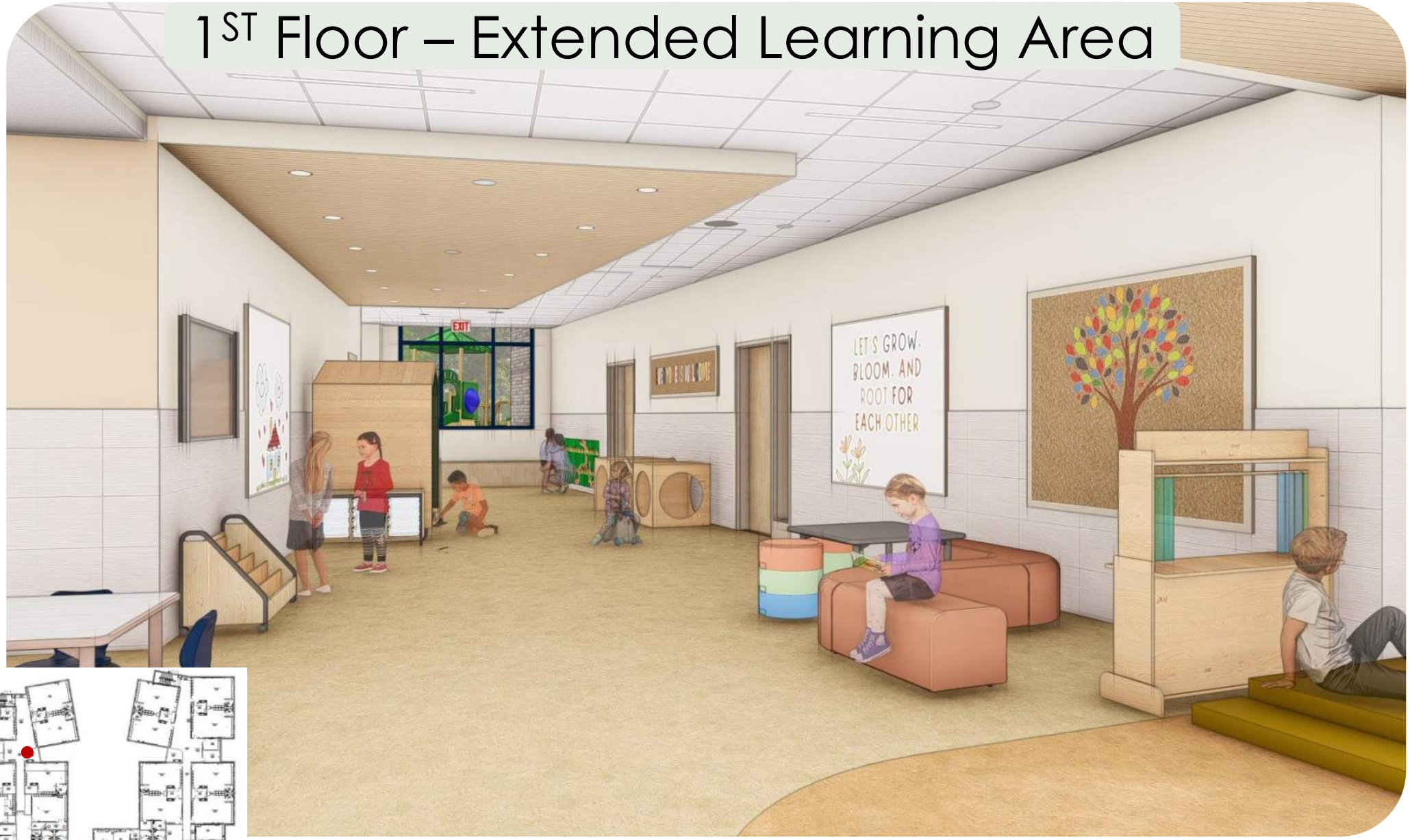


3rd Floor | General Classroom

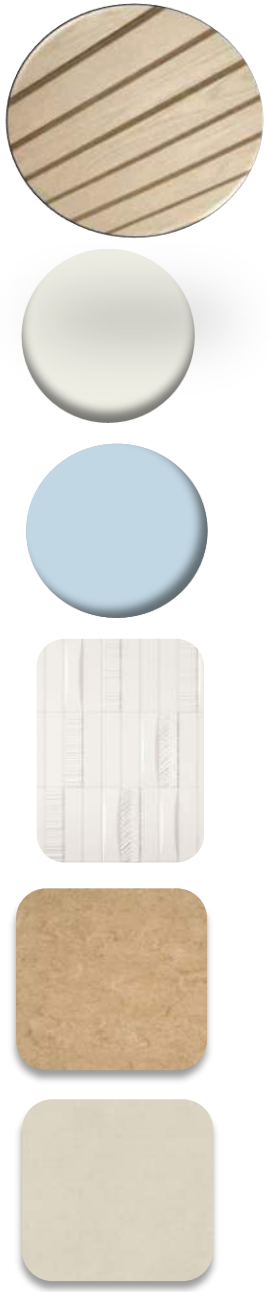




1ST Floor – Extended Learning Area







Typical: Small Group Room



Teacher Collaboration





Public Engagement



Agenda

1. Call to Order
2. Approval of Minutes – February 10, 2026– Vote
3. Administrative
    a. New Construction Manager Project Executive
    b. Invoice Summary – Vote
    c. Total Project Budget Update
4. Design Update
    a. MSBA DD Submission – Vote
    b. Interior Design Update
5. **Public Engagement**
6. **Discussion/Correspondence/New Items**
7. **Committee Questions**
8. **Public Comments**
9. **Next Meeting Date and Time - Tuesday, April 14, 2026**
10. **Adjournment**

Discussion/ Correspondence/ New Items

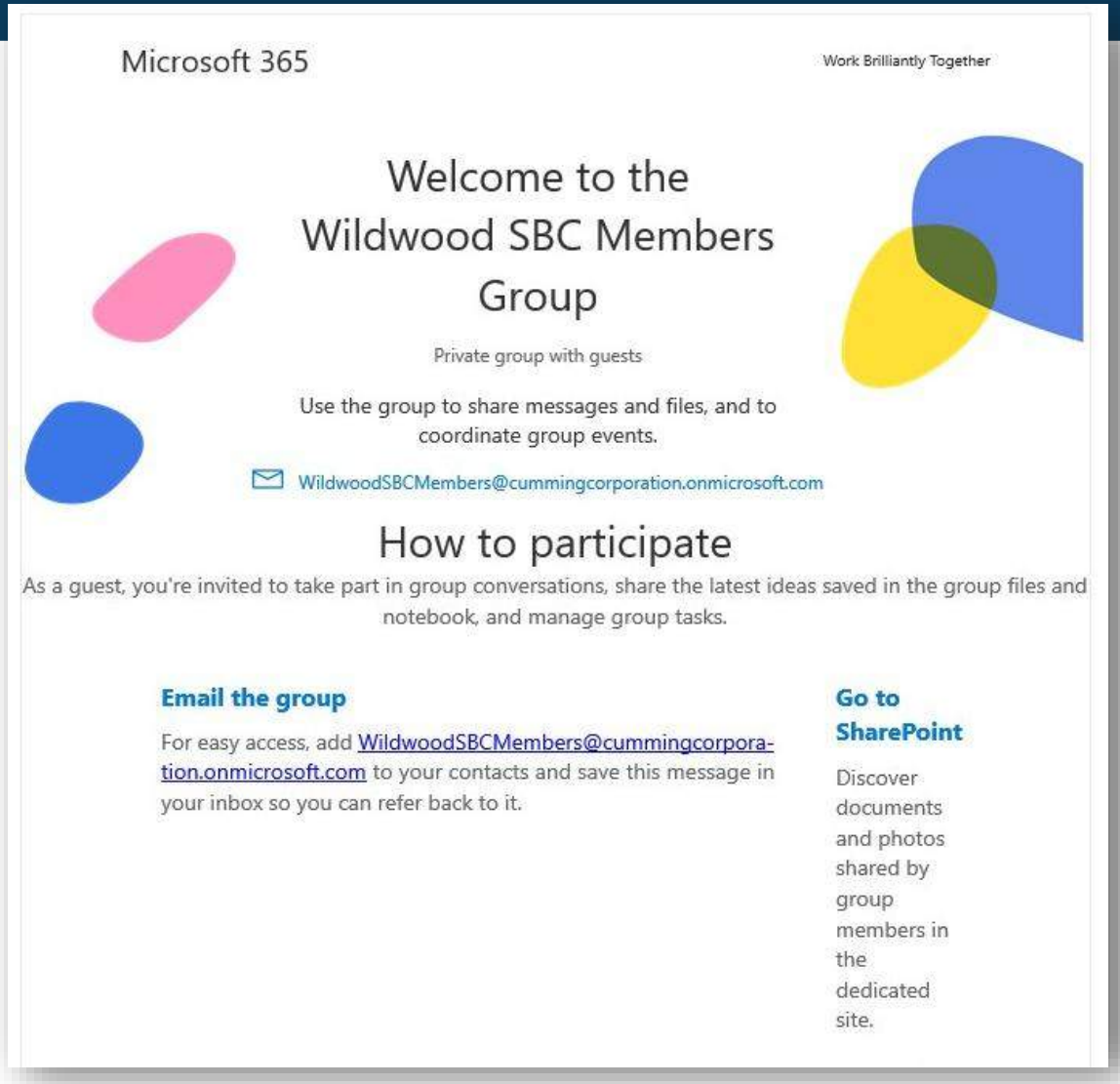


Automated E-mail Notification

Committee members may have received an automated email from LeftField about the Wildwood SBC E-mail Group.

Result of recent IT systems integration on LeftField's side.

No action is needed by committee members.



Committee Questions



Public Comment



THANK YOU

Massachusetts School Building Authority

WILMINGTON, MASS. INCORPORATED 1730

Left Field PROJECT MANAGEMENT

DORE + WHITTIER

FONTAINE

Nitsch Engineering

Traffic Impact Study

North Intermediate School

320 Salem Street
Wilmington, MA

November 20, 2025

Prepared for:

Dore + Whittier Architects, Inc.
260 Merrimac Street
Newburyport, MA 01950

Submitted by:

Nitsch Engineering
2 Center Plaza, Suite 430
Boston, MA 02108

Nitsch Engineering Project #15428

TABLE OF CONTENTS

1 Executive Summary 3
1.1 Trip Generation and Access 3
1.2 Parking 3
1.3 Conclusions and Recommendations 3

2 Introduction 4
2.1 Existing Site 4
2.2 Proposed Development 4
2.3 Study Area 5
2.4 Methodology 5

3 Existing Conditions 8
3.1 Roadways 8
3.2 Study Intersections 9

4 Existing Traffic Conditions 12
4.1 Traffic Count Data 12
4.2 Seasonal Adjustment 13

5 Safety Analysis 17
5.1 Crash Data 17
5.2 Intersection Crash Rates 18

6 Future No-Build Traffic Conditions 19
6.1 Background Growth 19
6.2 Additional Development 19
6.3 2031 No-Build Traffic Volumes 20

7 Proposed Future Conditions 22
7.1 Proposed Development 22
7.2 Proposed Trip Generation 22
7.2.1 Bus Trips 23
7.2.2 2031 No-Build (Without School) Traffic Volumes 23
7.3 Trip Distribution 25
7.4 Mode Split and Assignment 28
7.5 Proposed 2031 Build Volumes 28
7.6 Parking Generation and Adequacy 34

8 Traffic Analysis 35
8.1 Evaluation Criteria 35
8.2 Capacity Analyses 36
8.2.1 2024 Existing Conditions Capacity Analysis 36
8.2.2 2031 No-Build Conditions Capacity Analysis 38
8.2.3 2031 Build Conditions Capacity Analysis 40
8.2.4 2031 Build Conditions (With Mitigation) Capacity Analysis 42

9 Sight Distance 45

10 Conclusions and Recommendations 46
10.1 Conclusions 46
10.2 Recommendations 47

LIST OF TABLES

Table 1 - Automatic Traffic Recorder (ATR) Volume Summary 12
Table 2 - Automatic Traffic Recorder (ATR) Speed Summary 12
Table 3 - Crash Statistics 18
Table 4 - Crash Rate Summary 19
Table 5 - Existing and Proposed Trip Generation 23
Table 6 - Passenger Car Distribution 25
Table 7 - Bus Distribution 25
Table 8 - Project Trips by Mode 28
Table 9 - Proposed Parking Summary 34
Table 10 - Intersection Level of Service Criteria 35
Table 11 - Capacity Analysis Summary: 2024 Existing Conditions 37
Table 12 - Capacity Analysis Summary: 2031 No-Build Conditions 39
Table 13 - Capacity Analysis Summary: 2031 Build Conditions 41
Table 14 - Capacity Analysis Summary: 2031 Build Conditions (With Optimized Signal Timing) 43
Table 15 - Capacity Analysis Summary: 2031 Build Conditions (Single Lane Roundabout) 44
Table 16 - Capacity Analysis Summary: 2031 Build Conditions (Roundabout with Bypass Lanes) 44
Table 16 – Sight Distance Criteria 45
Table 17 – Sight Distance Evaluation 46

LIST OF FIGURES

Figure 1 – Locus Map 6
Figure 2 – Study Area 7
Figure 3 – 2024 Existing Weekday Daily Traffic Volumes 14
Figure 4 – 2024 Existing Weekday Peak Hour Traffic Volumes 15
Figure 5 – 2024 Existing Weekday Peak Hour Pedestrian and Bicycle Volumes 16
Figure 6 – 2031 No-Build Weekday Peak Hour Traffic Volumes 21
Figure 7 – 2031 No-Build (Without School) Weekday Peak Hour Traffic Volumes 24
Figure 8 – Passenger Car Trip Distribution 26
Figure 9 – Bus Trip Distribution 27
Figure 10 – AM Passenger Car Trip Assignment 29
Figure 11 – PM Passenger Car Trip Assignment 30
Figure 12 – AM Bus Trip Assignment 31
Figure 13 – PM Bus Trip Assignment 32
Figure 14 – 2031 Build Weekday Peak Hour Traffic Volumes 33

1 Executive Summary

Nitsch Engineering (Nitsch) has completed a detailed Traffic Impact Study (TIS) to evaluate the potential impacts of redeveloping the North Intermediate elementary school on the existing site, combining the student population of the existing North Intermediate school, Woburn Street elementary school, and Wildwood Early Childhood Center to accommodate the larger student population.

The proposed school will provide enhancements to traffic circulation and controls such as providing a dedicated parent loop, extended bus loop with dedicated driveway to separate cars and buses, separate emergency access driveway, and increased parking.

1.1 Trip Generation and Access

Based off Institute of Transportation Engineers' (ITE) Trip Generation rates and adjusted for the C.A.R.E.S. after school program, the new school is anticipated to generate 569 weekday morning peak school hour (8:00 AM – 9:00 AM) trips and 286 weekday afternoon peak school hour (3:15 PM – 4:15 PM) trips. This represents a net increase of 381 trips during the morning peak hour and 173 trips during the afternoon peak hour compared to the existing North Intermediate school on site.

Access and egress to the site will be provided via two primary driveways. The driveway at the southern end of the parcel (south driveway) will provide access and egress to and from Salem Street. The driveway to the east of the site (east driveway) will allow access and egress to and from Ballardvale Street, to be located just north of the existing school driveway. The south driveway will be the designated bus entrance and the east driveway will be used for parent pick-up and drop-off. A staff parking lot at the east end of the site will be accessed by both driveways. With the site layout, buses and most passenger cars will have separate circulation routes that will minimize conflicts with each other and streamline the student arrival and dismissal patterns.

1.2 Parking

A total of 193 parking spaces will be provided on-site. A dedicated parent pick-up/drop-off loop is proposed on-site so parents will be able to circulate through the site to queue in the loop instead of in the parking lot or the surrounding roadways.

1.3 Conclusions and Recommendations

After adding the expected new traffic to the existing traffic on the adjacent intersections, the proposed school is expected to worsen operations at the intersection of Salem Street at Middlesex Avenue and Route 62 at Middlesex Avenue/High Street. Our analysis shows that the expected operational issues can be mitigated through signal retiming at the intersection of Route 62 at Middlesex Avenue/High Street and construction of a roundabout at the intersection of Salem Street at Middlesex Avenue. No significant impact is expected at the other study intersections.

2 Introduction

Nitsch has prepared this Traffic Impact Study (TIS) for the proposed North Intermediate Elementary School redevelopment, located at 320 Salem Street, Wilmington, Massachusetts. This TIS will review existing roadway conditions, access/egress, crash data, and traffic volumes, and it will assess existing and future traffic conditions at intersections in the study area.

This TIS is revised to incorporate comments received from the Wilmington Department of Public Works (DPW) on the original report submitted April 9, 2025. The primary updates include the addition of the intersection of Route 62 at I-93 Southbound Ramps, re-evaluating the Build and Build with Mitigation capacity analysis using ITE trip generation rates, and analyzing traffic operations for a potential roundabout at the intersection of Salem Street and Middlesex Avenue.

2.1 Existing Site

The site for the proposed redevelopment is located on an approximate twelve-acre lot located at 320 Salem Street, which currently holds the North Intermediate School and a playground, baseball fields, soccer fields, tennis courts, and a basketball court. The school is one of two intermediate schools in the Wilmington Public School system and serves the east region of the Town.

The existing North Intermediate School consists of a building with two stories for a total of 54,569 square feet. A paved play area and a parking lot are also present on the site. The North Intermediate School serves approximately 250 students in grades four and five.

Primary access to the North Intermediate School is provided by a loop on Salem Street, providing access to the main entrance at the south of the building. The loop accommodates one-way traffic, with an ingress driveway at the southeast corner of the building and an egress driveway at the southwest corner of the building. Bus drop-off and pick-up occurs at this loop. Additional access is located to the east of the building and is served by another pair of one-way driveways off Ballardvale Street. Parent drop-off and pick-up occurs in this area, which also provides approximately 52 parking spaces for school staff.

Figure 1 shows the Locus Map and Figure 2 shows the project area.

2.2 Proposed Development

The project consists of the construction of an approximate 163,573-square-foot, three-story elementary school building to replace the existing school facility at 320 Salem Street and will serve 855 students from pre-kindergarten through grade five. The redeveloped building will consolidate students from the Wildwood Early Childhood Center and the Woburn Street Elementary School with the students at the existing North Intermediate school. The Wildwood Early Childhood Center is located at 182 Wildwood Street and serves pre-kindergarten and kindergarten. The building at 182 Wildwood Street was closed in 2023 and the students are temporarily being housed between the West Intermediate School and the Wilmington Middle School. The Woburn Street School is located at 227 Woburn Street and currently serves grades one through three.

A total of 193 parking spaces will be provided on-site. A dedicated parent pick-up/drop-off loop is proposed on-site so parents will be able to circulate through the site to queue in the loop instead of in the parking lot or the surrounding roadways.

Access and egress to the site will be provided via three driveways. The driveway at the south of the parcel (south driveway) will provide access and egress to and from Salem Street. The driveway at the east of the parcel (east driveway) will provide access and egress to and from Ballardvale Street. The driveway at the west of the parcel will provide access and egress to and from Arlene Avenue for emergency use only.

2.3 Study Area

The study area includes seven roadways and six existing intersections as follows:

Roadways

1. Salem Street
2. Middlesex Avenue
3. Ballardvale Street
4. Baland Road
5. I-93 Southbound Ramps at Ballardvale Street and Route 62
6. Route 62
7. High Street

Intersections

1. Salem Street and Middlesex Avenue
2. Ballardvale Street and Salem Street
3. Ballardvale Street and Baland Road/School Driveway
4. Ballardvale Street and I-93 Southbound Ramps
5. Route 62 and Middlesex Avenue/High Street
6. Route 62 and I-93 Southbound Ramps

2.4 Methodology

We have conducted this traffic assessment in three phases. The first phase involves an evaluation of existing traffic conditions within the study area, including an inventory of existing roadway and intersection geometry, observations of traffic volumes, review of vehicular crash data, and evaluation of parking utilization.

The second phase of the study establishes the framework for evaluating the transportation impacts of the proposed elementary school development project. We assessed travel demand forecasts for the project, along with future traffic demands on the study area intersections due to projected background traffic growth and other proposed area developments that will occur, independent of the proposed development. We used 2031 as the design year for analysis, reflecting a seven-year horizon. This phase also includes an evaluation of parking demand generated by the project.

The third and final phase involves conducting traffic analyses to evaluate both existing and projected future intersection operations. We used this analysis as the basis for determining the potential project impacts and potential mitigation measures for the elementary school development.

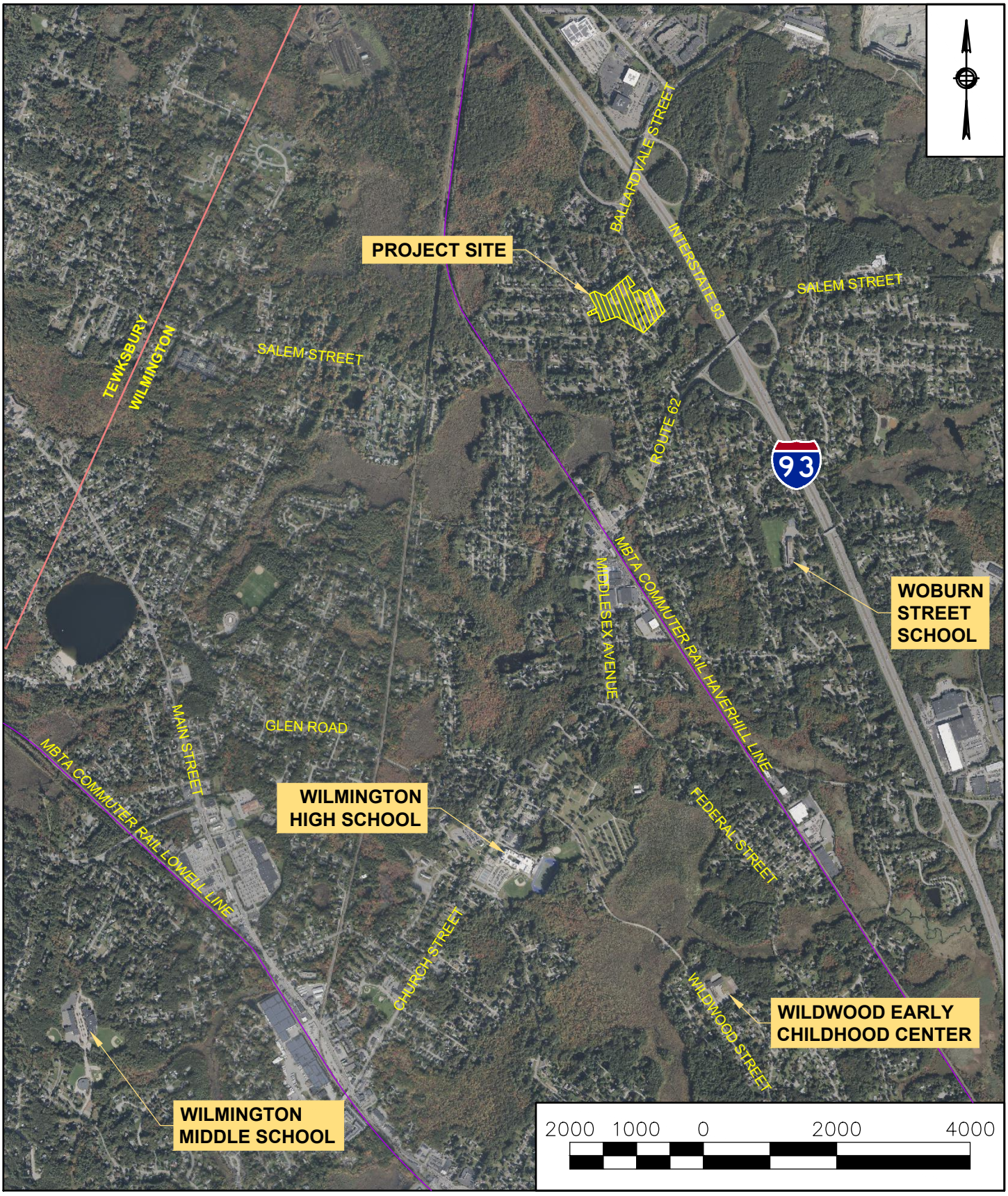


Figure 1 - Locus Map

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering



Figure 2 - Study Area

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

3 Existing Conditions

Nitsch conducted a site visit on Wednesday, October 23, 2024 to observe the roadway conditions and existing traffic. The observations occurred during sunny conditions when school was in-session. The following is a summary of the existing roadways and intersections.

3.1 Roadways

Salem Street

Within the study area, Salem Street is an urban major collector that runs in the east-west direction from the Tewksbury town line east to a dead-end just past the intersection with Ballardvale Street. Salem Street is discontinuous, starting again on the opposite side of I-93 and running concurrently with Route 62 to the North Reading town line. Land use on Salem Street is primarily residential, with some industrial uses on the east segment.

Near the study area, Salem Street is approximately 26 feet wide and has a narrow sidewalk on the north side of the road. Directional travel is separated by a double-yellow center line and the speed limit is 25 mph. Salem Street is under the jurisdiction of the Town of Wilmington.

Middlesex Avenue

Middlesex Avenue is an urban minor arterial that generally runs north-south in Wilmington from the intersection with Salem Street approximately 2.3 miles south to its terminus at Main Street. A portion of Middlesex Avenue runs concurrent with Route 62. After branching off from Route 62 at Church Street, Middlesex Avenue becomes a local roadway until its southern terminus at Route 62. The width of Middlesex Avenue varies but typically measures around 34 feet. The roadway is under the jurisdiction of the town of Wilmington and features a speed limit of 25 mph. The land use along the corridor includes residential neighborhoods, commercial areas, and some recreational spaces. Sidewalks are present on one side of the street in most sections, and on-street parking is mainly restricted.

Ballardvale Street

Ballardvale Street runs north-south and spans approximately 2.5 miles, extending south from the Andover town line to the intersection with Salem Street. Between the Andover Town Line and Route 125, Ballardvale Street is an urban minor arterial that runs through an industrial park and is wide to accommodate large trucks, with two southbound lanes in some places. As it runs concurrently with Route 125, Ballardvale Street is an urban principal arterial that intersects the beginning of Route 125 and a pair of ramps to access Interstate 93 before approaching the study area. Within the study area, Ballardvale Street is an urban major collector that is approximately 24 feet wide, with one lane in each direction. Sidewalks are provided on the west side of Ballardvale Street near the school but terminate as the roadway approaches the I-93 ramps.

The speed limit on Ballardvale Street near the I-93 ramps is 35 mph but it decreases to 25 mph as it approaches the North Intermediate School. During school arrival and dismissal periods, a school zone speed limit of 20 mph is enforced with flashing beacons. Ballardvale Street is under the jurisdiction of the Town of Wilmington, apart from the bridge over I-93 and the ramp intersections, which are owned by MassDOT. Within the study area, land use is primarily residential, with a single institutional use being the North Intermediate School.

Baland Road

Baland Road is a local roadway that runs east-west in the study area. Baland Road begins across from the school driveway off Ballardvale Street and terminates as a dead-end approximately 500 feet to the east. There are several single-family homes on Baland Road, with sidewalks on both sides of the street and no pavement markings. Baland Road is approximately 28 feet wide and has no posted speed limit, assuming the statutory speed limit of 30 mph in thickly settled areas. The roadway is under the jurisdiction of the Town of Wilmington.

Interstate 93 Southbound Rampss

The Interstate 93 (I-93) Southbound Ramps are a pair of cloverleaf-style ramps connecting Ballardvale Street to I-93 southbound. To the north of I-93 are another pair of cloverleaf-style ramps connecting to I-93 northbound, but are outside of the study area. Directional travel on the ramps is separated by a six-foot raised median and bounded by guardrails on both sides of the roadway, with each travel lane being approximately 20 feet wide. There is no posted advisory speed on the ramps and guardrails are provided on both sides of the roadway. The ramps are under the jurisdiction of MassDOT.

Route 62

Route 62 runs east-west through Wilmington and is classified as an urban minor arterial. Extending from the Burlington town line to the North Reading town line, Route 62 spans approximately 4.5 miles. The roadway varies in width, averaging around 36 feet, and accommodates two-way traffic separated by a double-yellow center line. Route 62 has a posted speed limit of 35 miles per hour (mph) and the southbound approach in the study area under the jurisdiction of MassDOT and the northbound approach in the study area is under the jurisdiction of the Town of Wilmington. Near the study area, land use on Route 62 is primarily residential. Sidewalk availability is inconsistent, with some sections having well-maintained sidewalks on one or both sides, while other sections lack pedestrian pathways. On-street parking is generally restricted.

High Street

High Street is classified as a local road that runs primarily north-south from the intersection with Route 62 and Middlesex Avenue approximately two-thirds of a mile to the intersection with Woburn Street. At the intersection with Route 62 and Middlesex Avenue, High Street has an east-west orientation. High Street is approximately 22 feet wide, with directional travel separated by a double yellow centerline and a sidewalk provided on the west/south side of the roadway.

Land Use on High Street is primarily residential. The Woburn Street School is located at the southern end of High Street, as it intersects Woburn Street. The posted speed limit on High Street is 30 mph. The roadway is under the jurisdiction of the Town of Wilmington.

3.2 Study Intersections

Salem Street and Middlesex Avenue

Salem Street and Middlesex Avenue intersect to form a three-way unsignalized intersection, with Salem Street approaching from the west and north and Middlesex Avenue approaching from the south. The three roadways intersect in a triangular shape with several raised median islands and the control is atypical from that of a standard three-way intersection. There are no posted stop signs or yield signs.

The Salem Street eastbound approach is approximately 26 feet wide, providing for two lanes in the unmarked approach. The right-most lane is used as a right-turn lane, where vehicles must yield to southbound traffic. The left-most lane is used as a left-turn lane onto Salem Street heading northbound. From the north, the Salem Street southbound approach consists of a single 12-foot lane. The approach operates freely, with through-moving vehicles getting the right-of-way and right-turning vehicles diverging into a channelized departure lane. From the south, the Middlesex Avenue northbound approach consists of a single lane as it passes a conflict point where eastbound traffic passes through to turn left at the intersection. No right-of-way signs are posted, suggesting eastbound traffic must yield to northbound traffic. However, northbound vehicles in the field were frequently observed yielding to eastbound traffic turning left onto Salem Street, particularly during periods of congestion. North of this conflict point, the northbound approach opens into a 12-foot through lane and a 12-foot left-turn lane. Northbound left-turning vehicles must yield to southbound traffic.

The medians and multiple conflict points have the effect of a modified circular intersection, with eastbound-left and northbound-left turning vehicles yielding to oncoming traffic before entering the intersection and circulating around the median islands. The unusual geometry of the intersection presents multiple challenges including driver confusion, limited sight lines, and limited deflection promoting high speeds. Significant congestion was observed during field observations, particularly in the northbound direction. A sidewalk is present on the north side and west side of the intersection, with a single pedestrian crossing across the west Salem Street leg. There are no bicycle facilities present at the intersection.

Salem Street and Ballardvale Street

Salem Street and Ballardvale Street intersect to form a three-way unsignalized intersection, with Salem Street approaching from the west and east and Ballardvale Street approaching from the north. The Salem Street eastbound approach and the Ballardvale Street southbound approach are free movements, forming the main line of the intersection. The Salem Street westbound approach is under stop control.

The Salem Street eastbound approach and Ballardvale Street southbound approach both consist of a single 12-foot general purpose lane. The Salem Street westbound approach is approximately 20 feet wide and unmarked. A sidewalk is provided on the northwest side of the intersection and a three-foot paved shoulder is present on both sides of the main line. There are no marked crosswalks provided at the intersection.

Ballardvale Street and School Driveway/Baland Road

Ballardvale Street intersects with Baland Road and the North Intermediate School driveway to form a four-way unsignalized intersection, with Ballardvale Street approaching from the north and south, Baland Road approaching from the east, and the school driveway approaching from the west. The school driveway is divided into separate legs for the entrance and exit that are separated by a raised concrete sidewalk approximately 65 feet long. The school driveway entrance is located slightly north of Baland Road and is approximately 26 feet wide. The school driveway exit is located just south of Baland Road and is approximately 60 feet wide.

The Ballardvale Street northbound and southbound approaches each consist of a single 12-foot general purpose lane and operate free. Baland Road is approximately 26 feet wide and is unmarked. While no signs are explicitly posted, the Baland Road and school driveway approaches operate under stop control. Sidewalks are provided on the west side of the intersection. There are no marked crosswalks at the intersection.

Ballardvale Street and I-93 Southbound Ramps

Ballardvale Street intersects with the I-93 southbound ramps to form a three-way signalized intersection, with Ballardvale Street approaching from the north and south and the I-93 southbound ramps approaching from the west. The Ballardvale Street northbound approach consists of an 11-foot left-turn lane and an 11-foot through lane. The Ballardvale Street southbound approach consists of a 12-foot through lane and a 12-foot right-turn lane. The right-turn lane provides channelized access to the I-93 southbound ramp and vehicles must yield to oncoming traffic turning left from Ballardvale Street northbound as they merge onto the ramp. The I-93 southbound ramp eastbound approach consists of two 11-foot left-turn lanes and a 16-foot channelized right turn lane. Vehicles turning right must yield to oncoming traffic from Ballardvale Street southbound.

The intersection is controlled by a fully-actuated, uncoordinated traffic signal. The signal operates in three phases. The first phase serves the Ballardvale Street northbound and southbound through movements. The second phase serves the eastbound left-turn movements from the I-93 southbound ramp. The third phase provides a protected left-turn phase for northbound traffic. The Ballardvale Street southbound right and I-93 southbound ramp eastbound right movements are yield-controlled. There are no crosswalks, sidewalks, or bicycle facilities provided at the intersection.

Route 62 and Middlesex Avenue/High Street

Route 62 intersects Middlesex Avenue and High Street to form a four-way signalized intersection, with Route 62 approaching from the north, Middlesex Avenue approaching from the west and south, and High Street approaching from the east. The Route 62 southbound approach consists of an 11-foot left-turn lane, an 11-foot through lane, and an 11-foot right-turn lane. The Middlesex Avenue northbound approach consists of an 11-foot left-turn lane and a 12-foot shared through/right lane. The Middlesex Avenue eastbound approach consists of an 11-foot shared left/through lane and a 12-foot right-turn lane. The High Street westbound approach consists of an 11-foot shared left/through lane and an 11-foot right turn lane. The right turn lanes on the eastbound and westbound approaches are very short, providing storage for only one or two vehicles. The Middlesex Avenue west leg and High Street east leg both have a narrow street-level concrete median separating the approaches and departures. Crosswalks are provided across all four intersection legs and concrete sidewalks are provided on all intersection corners, although the northeast corner sidewalk ends just past the intersection.

The traffic signal is controlled by a fully-actuated, uncoordinated signal. The first phase serves the Route 62 southbound left turn movement, the Middlesex Avenue northbound left-turn movement, and the Middlesex Avenue eastbound right-turn overlap. The second phase serves the Route 62 southbound through and right movements and the Middlesex Avenue northbound through movement. The third phase serves the Middlesex Avenue eastbound and High Street westbound movements. The fourth phase is an exclusive pedestrian phase.

Route 62 and I-93 Southbound Ramps

Route 62 intersects with the I-93 southbound ramps to form a three-way intersection under stop control, with Route 62 approaching from the north and south and the I-93 southbound ramps approaching from the east. The Route 62 northbound approach consists of a 15-foot through lane and a channelized right-turn lane that provides access to the I-93 southbound ramp. The Route 62 southbound approach consists of a 15-foot through lane. The I-93 westbound approach consists of a 15-foot left-turn lane and a channelized right-turn lane that provides access to Route 62.

The I-93 southbound ramp left-turn lane is stop controlled, and the two channelized right turn lanes are yield controlled. A sidewalk is present on the western side of Route 62, and no other crosswalks, sidewalks, or bicycle facilities are provided at the intersection.

4 Existing Traffic Conditions

4.1 Traffic Count Data

Nitsch retained Precision Data Industries, Inc. (PDI) of Hudson, Massachusetts to collect traffic data within the study area, including both Automatic Traffic Recorder (ATR) counts and Turning Movement Counts (TMC).

ATR Data

PDI collected ATR counts for a continuous 48-hour period at three locations from Wednesday, October 23, 2024 to Thursday, October 24, 2024. The ATR volumes are summarized in Table 1 and the bi-directional average daily traffic (ADT) volumes are shown graphically in Figure 3. The ATR speeds are summarized in Table 1. The full ATR dataset is included in Appendix A.

Table 1 - Automatic Traffic Recorder (ATR) Volume Summary

Location	ADT[a]		Peak Hour Traffic			K Factor[e]
	Volumes (vpd)[b]	Directional Distribution[c]	Period	Volumes (vph)[d]	Directional Distribution[c]	
Ballardvale Street north of Salem Street	7,991	61% SB	Morning Afternoon	644 939	54% SB 69% SB	0.08 0.12
Middlesex Avenue south of Salem Street	12,533	55% SB	Morning Afternoon	902 1,172	67% SB 50% NB/SB	0.07 0.09
Route 62 north of High Street	17,779	55% SB	Morning Afternoon	1,308 1,494	54% NB 56% NB	0.07 0.08

[a]Average Daily Traffic; [b]Vehicles per day; [c]NB = Northbound, SB = Southbound [d]Vehicles per hour; [e]Proportion of daily traffic

Table 2 - Automatic Traffic Recorder (ATR) Speed Summary

ATR Location	2-Way Speed (MPH)		Directional Speed (MPH)		
	Average	85th Percentile	Direction	Average	85th Percentile
Ballardvale Street north of Salem Street	27	31	NB	28	29
			SB	30	32
Middlesex Avenue south of Salem Street	32	36	NB	34	34
			SB	34	36
Route 62 north of High Street	37	42	NB	40	40
			SB	38	40

TMC Data

PDI collected TMC data at the first five study intersections on Thursday, October 24, 2024. TMC data was recorded from 8:00 AM to 10:00 AM and from 2:30 PM to 4:30 PM to capture the peak traffic hours during the school day. The counts included passenger vehicles, heavy vehicles, bicycles, and pedestrians.

The morning peak hour for the study area occurred from 8:00 AM to 9:00 AM and the afternoon vehicle peak hour occurred between 3:30 PM and 4:30 PM. However, the afternoon vehicle peak hour for the North Intermediate School driveway, which captures parents and buses entering and exiting the school for pick-up, occurred between 3:15 PM and 4:15 PM. Because of this, traffic volumes occurring between 3:15 PM and 4:15 PM were used for analysis purposes at the intersections of Ballardvale Street at Baland Road/School Driveway and Ballardvale Street at Salem Street to most accurately capture the traffic associated with the existing school during the afternoon peak hour. We used traffic volumes occurring between 3:30 PM and 4:30 PM to analyze the afternoon peak hour at all other study intersections.

The Wilmington Department of Public Works (DPW) requested an analysis of the intersection of Route 62 at I-93 Southbound Ramps after the initial TIS submission. TMC data for this intersection was supplemented by a memorandum dated January 27, 2025 by VHB for a project at 800 Salem Street, further described in Section 6.2 of this TIS. This TMC data was collected on December 19, 2024 and we used the same peak hours as the study from 7:30 AM to 8:30 AM and 4:00 PM to 5:00 PM for the specific intersection to account for the development and commuter traffic.

Existing Queuing Observations

The Wilmington DPW notes significant queuing issues southbound along Ballardvale Street through the Salem Street and Middlesex Avenue intersection to the Route 62 and Middlesex Avenue/High Street intersection during morning commuting hours. The ATR located at Ballardvale Street north of Salem Street captured northbound and southbound traffic in 15-minute increments. According to the ATR data the largest morning southbound 15-minute commuting spikes occurred at 7:00, 8:30, and 9:00 on Wednesday, October 23, 2024, and 7:30, 8:15, and 8:45 on Thursday, October 24, 2024. Notably, measured volumes were higher in the afternoon although the same issue was not noted by the DPW.

Queuing issues are present before, during, and after the morning drop-off peak hour of the proposed development according to past DPW observations and the data collected for this study. Additional field observations and data collection would be required to analyze this existing queuing issue.

4.2 Seasonal Adjustment

Nitsch queried MassDOT traffic data for counts nearby that would establish a seasonal adjustment for the volumes we measured in November. No local data was available, so Nitsch used MassDOT's 2023 Weekday Seasonal Adjustment Factors, the most recent year of available data.

All study roadways fall in groups U4-U7 as Urban Minor Arterials, Urban Major Collectors, or Urban Local Roads. Counts within Groups U4-U7 collected during the month of October experience volumes that are 14% higher, respectively, than average counted volumes. To present a conservative approach, we did not seasonally adjust the counted volumes since it would result in lower traffic volumes. MassDOT's 2023 Weekday Seasonal Factors are included in Appendix B.

Figure 4 shows the 2024 existing peak-hour traffic volumes at the study intersections in the form of turning movements. The full TMC dataset is included in Appendix A. Figure 5 shows the 2024 existing peak hour pedestrian and bicycle volumes.

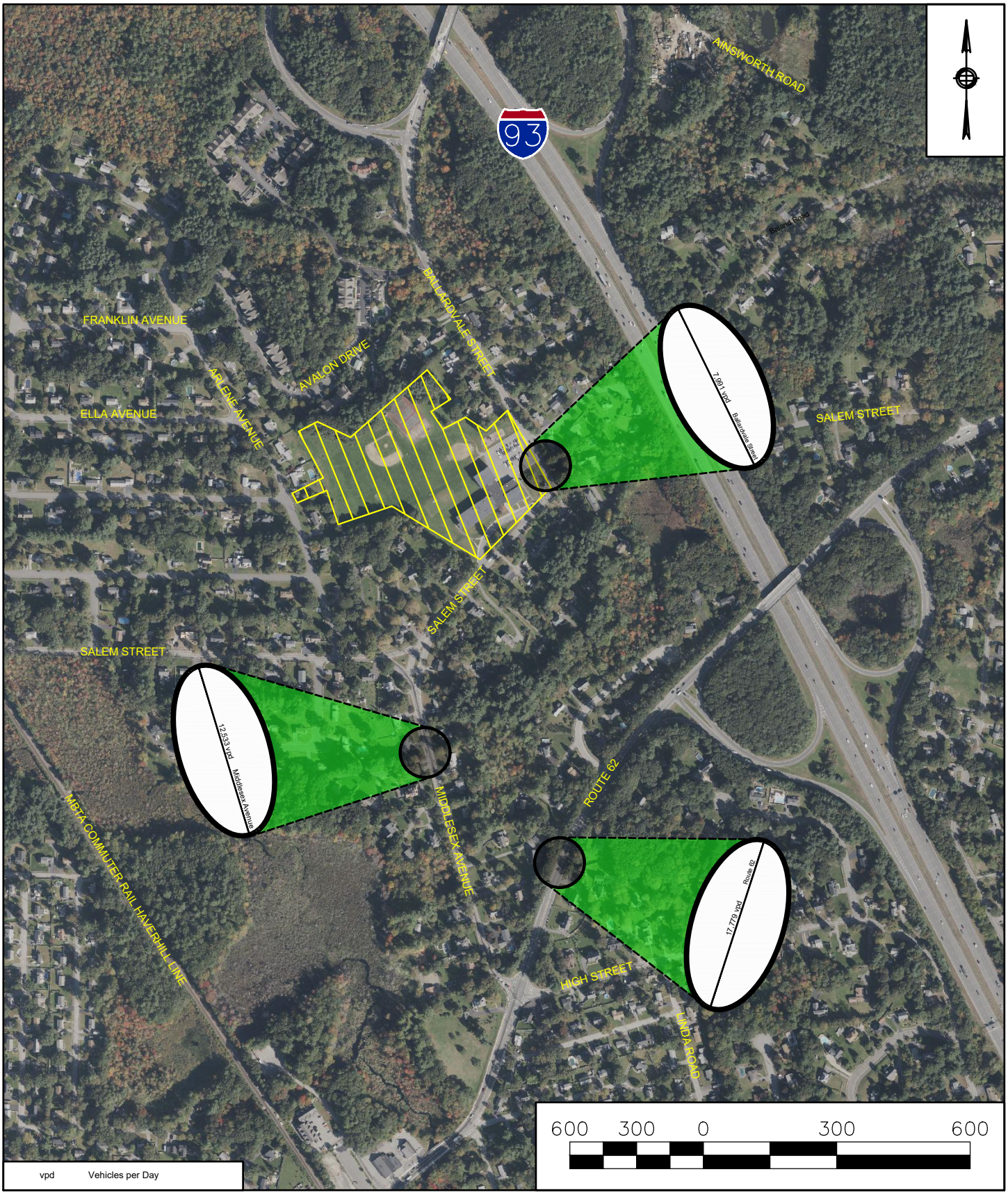


Figure 3 - 2024 Existing Weekday Daily Traffic Volumes

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

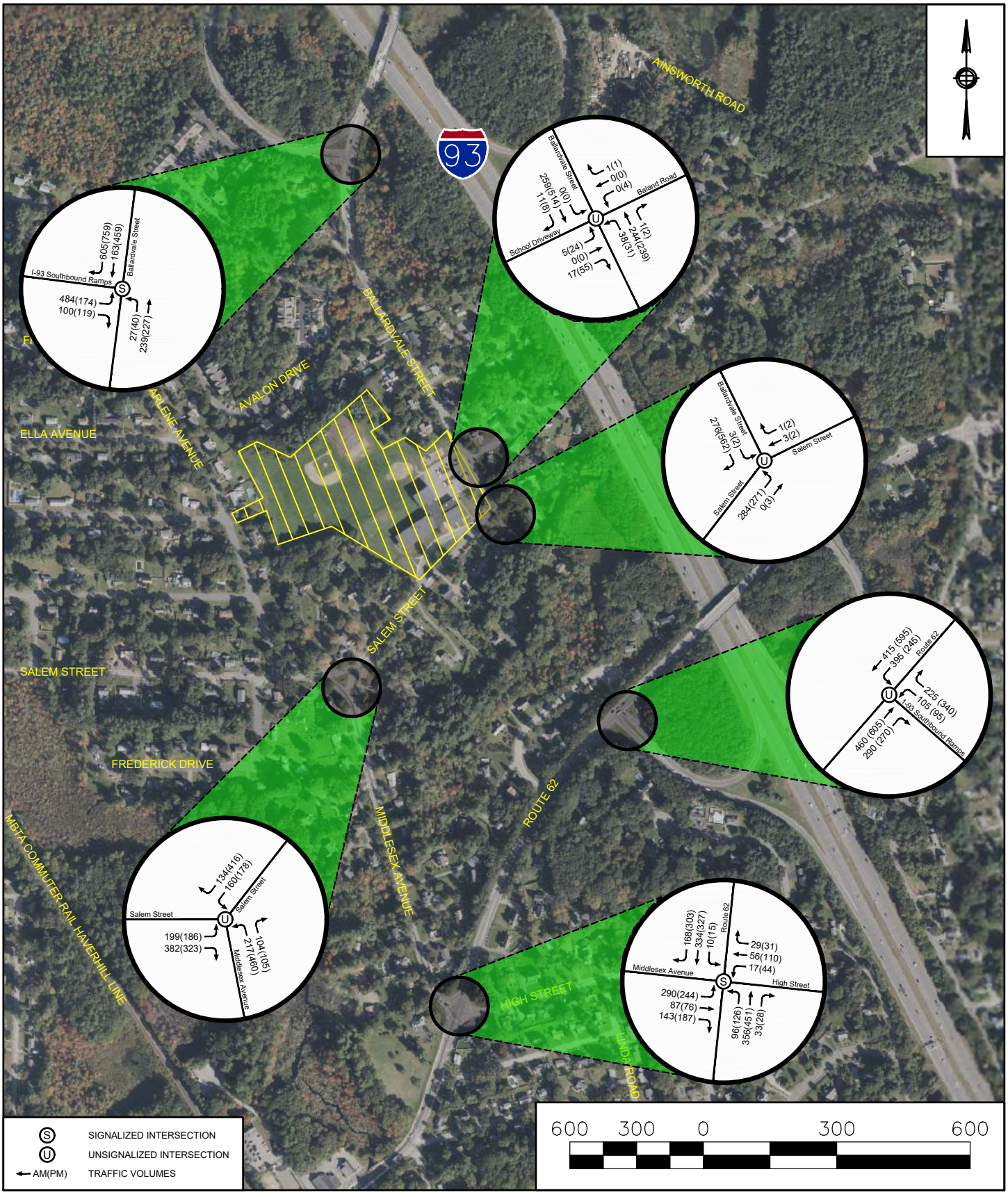


Figure 4 - 2024 Existing Weekday Peak Hour Traffic Volumes

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

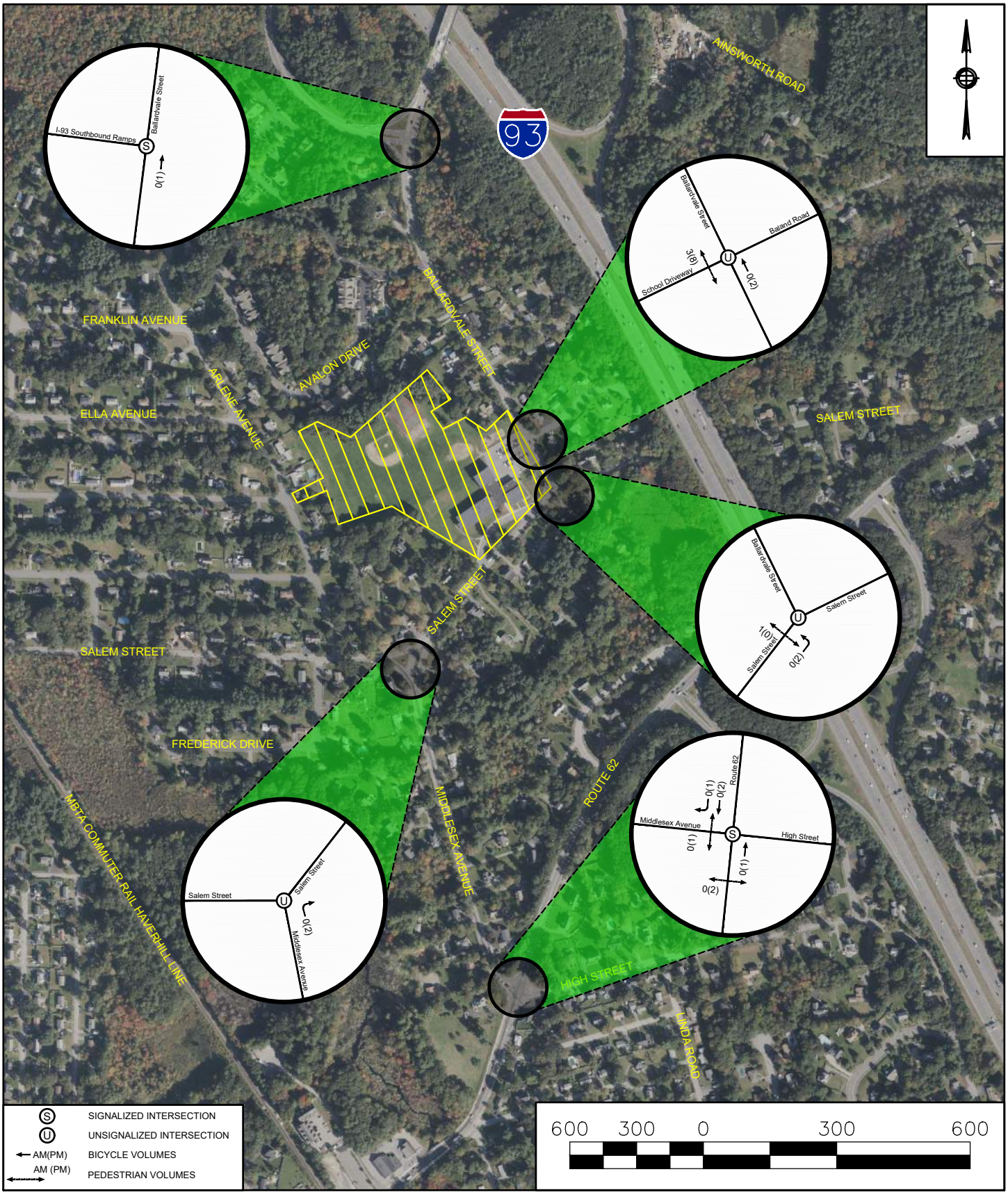


Figure 5 - 2024 Existing Weekday Peak Hour Pedestrian and Bicycle Volumes

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

5 Safety Analysis

5.1 Crash Data

We obtained crash data for the study intersections from MassDOT's IMPACT Crash Data Portal for the five most recent complete years of data, 2016-2020. Table 3 summarizes the crash statistics for the six study-area intersections.

A total of 54 crashes were reported within the study area from 2016 to 2020. Twenty-six crashes occurred at the intersection of Route 62 and Middlesex Avenue/High Street, nine crashes occurred at the intersection of Ballardvale Street and I-93 Southbound ramps, nine crashes occurred at the intersection of Route 62 and I-93 Southbound ramps, eight crashes occurred at the intersection of Salem Street and Middlesex Avenue, and two crashes occurred at the intersection of Ballardvale Street and Baland Road/School Driveway. No crashes occurred at the intersection of Ballardvale Street and Salem Street during the study period.

In terms of severity, 13 crashes (24%) resulted in personal injury, and there were no crashes with fatalities. Rear-end crashes were the most frequent type of crash with a total of 27 crashes (50%), followed by angle crashes with 18 (33%), and single vehicle crashes with 4 (7%). No crashes involved pedestrians or cyclists. Seven crashes (13%) occurred during peak travel hours and eight crashes (15%) occurred during adverse weather or roadway conditions.

At the intersection of Route 62 and Middlesex Avenue/High Street, where 26 of the 54 (48%) crashes occurred, the most common crash type was rear-end, with 17 (65%). This is a common crash type at signalized intersections, and may be attributed to incorrectly timed clearance intervals, poor sight distance, stop-and-go traffic, high speeds, or roadway grades. Both minor street legs have limited stopping sight distance, with curved approaches near the intersection which may contribute to rear-end crashes. At the southbound approach, the speed limit is 45 mph, which can also contribute to rear-end crashes. While this intersection had the most crashes during the study period, only 3 (12%) resulted in personal injury.

Table 3 - Crash Statistics

Intersection	Ballardvale St at I-93 SB Ramps	Ballardvale St at Baland Rd/ School Driveway	Salem Street at Middlesex Ave	Route 62 at I-93 SB Ramps	Route 62 at Middlesex Ave/ High St	Overall
Total Crashes	**9**	**2**	**8**	**9**	**26**	**54**
2016	1	0	2	0	6	***9***
2017	0	1	0	3	7	***11***
2018	1	1	2	2	4	***10***
2019	6	0	1	4	5	***16***
2020	1	0	3	0	4	***8***
Severity of Crash						
Property damage only (none injured)	5	1	8	4	23	***41***
Non-fatal injury	4	1	0	5	3	***13***
Fatal Injury	0	0	0	0	0	***0***
Unknown	0	0	0	0	0	***0***
Not Reported	0	0	0	0	0	***0***
Manner of Collision						
Angle	4	0	1	6	7	***18***
Rear-end	4	1	4	1	17	***27***
Sideswipe, same direction	1	0	0	1	0	***2***
Single vehicle crash	0	1	2	0	1	***4***
Sideswipe, opposite direction	0	0	0	0	1	***1***
Head-on	0	0	1	1	0	***2***
Involving Cyclists or Pedestrians						
Pedestrian	0	0	0	0	0	***0***
Cyclist	0	0	0	0	0	***0***
Percent Occurring During						
Peak Hours (7-9 AM, 4-6 PM)	11%	50%	13%	67%	8%	***13%***
Adverse Weather/Roadway Conditions[a]	11%	0%	38%	0%	12%	***15%***

[a] Rain, snow, sleet/hail/freezing rain/freezing drizzle, blowing sand/snow; Wet, icy, snowy, or slushy road surface

5.2 Intersection Crash Rates

The intersection crash rate is recognized as an effective tool to measure the safety of intersections. Crash rates for intersections are expressed by the number of crashes per million entering vehicles (MEV). Table 4 compares the crash rates for the study intersections with the Statewide and District 4 averages, as appropriate. The intersection crash rate calculations are included in Appendix C.

Table 4 - Crash Rate Summary

Location	Facility Type	Number of Crashes[a]	Crash Rate[b]	Average Rates[b,c]		Comparison to Average Rates	
				District 4	Statewide	District 5	Statewide
Ballardvale St at I-93 SB Ramps	Signalized Intersection	9	0.33	0.73	0.78	55% Lower	58% Lower
Ballardvale St at Baland Rd/ School Driveway	Unsignalized Intersection	2	0.14	0.57	0.57	75% Lower	75% Lower
Salem Street at Middlesex Ave	Unsignalized Intersection	8	0.25	0.57	0.57	56% Lower	56% Lower
Route 62 at I-93 SB Ramps	Unsignalized Intersection	9	0.19	0.57	0.57	67% Lower	67% Lower
Route 62 at Middlesex Ave/ High St	Signalized Intersection	26	0.62	0.73	0.78	16% Lower	21% Lower

[a] Based on 5-year crash history from MassDOT, 2016-2020
[b] Crashes per million entering vehicles (MEV),
[c] Based on the full set of MassDOT crash database entries as queried October 2024

Based on Table 4, crash rates at the six study intersections are all lower than both the district and statewide averages. No crashes occurred at the intersection of Ballardvale Street and Salem Street, so a crash rate was not calculated.

6 Future No-Build Traffic Conditions

Nitsch used the 2024 existing traffic volumes as the baseline for projecting traffic volumes to future 2031 No-Build conditions. To determine future 2031 conditions, the following steps are included:

- Project existing 2024 traffic volumes seven years in the future to the horizon year (2031) using an annual background traffic growth factor to account for regional growth;
- Add traffic volumes associated with any planned developments that may impact the study area;
- Include any planned roadway improvements that may affect traffic volumes; and
- Analyze the study area location to determine future traffic operations.

6.1 Background Growth

General economic shifts and population growth can drive increased traffic volumes in an area over time. Nitsch consulted with MassDOT's Office of Transportation Planning (OTP) to establish a background growth rate to apply to the seven-year planning horizon. Based on recent population trends and the current planning forecasts, OTP recommended an annual growth rate of 0.25 percent per year, which was applied to this study.

6.2 Additional Development

Nitsch contacted the Town of Wilmington's Planning Department to identify any planned developments that will potentially add traffic to the study area. The City identified four development projects that have the potential to impact traffic within the study area, and these projects are described below. The traffic assessments or studies received for these four projects are provided in Appendix D.

Nitsch also queried the MassDOT project information website to identify any planned roadway projects. There are no planned roadway projects in the study area.

181-187 Ballardvale Street

181-187 Ballardvale Street is an approximate 66,100 square-foot (sf) life science research and development building, to be located on the corner of Route 125 and Ballardvale Street, north of the study area. The site currently holds the Ballardvale Technology Center. The Traffic Memo provided by the Town for the project concludes that the project will have nominal impact to the intersection of Route 125 and Ballardvale Street and the intersection of Ballardvale Street and the I-93 Ramps. The trips shown in the Traffic Memo were distributed throughout the network and assigned to the study intersections accordingly.

800 Salem Street

A 237,880 sf warehouse building was recently constructed at 800 Salem Street, approximately 1.5 miles north of the intersection of Route 62 and Middlesex Avenue/High Street. At the time of our data collection, the building was not yet occupied, so the anticipated traffic from the development was not captured in the traffic counts. Traffic data and a traffic memorandum dated January 27, 2025 was provided by the Town of Wilmington for this project and the additional trips estimated by the study were assigned to the intersection of Route 62 and Middlesex Avenue/High Street and Route 62 at I-93 Southbound Ramps accordingly. This traffic study also provided existing traffic volumes for the intersection of Route 62 at I-93 Southbound Ramps.

Jefferson Road Multifamily Development

A 108 unit residential development is approved to be located at the corner of Middlesex Avenue and Jefferson Road, approximately one-quarter mile south of the intersection of Route 62 and Middlesex Avenue/High Street. The traffic study received for this project identified the net vehicle trip generation during the weekday morning and weekday afternoon peak hours. We estimate that 50% of the new trips will travel north/south on Route 62 through the study intersection of Route 62 and Middlesex Avenue/High Street. The additional trips were assigned to the intersection accordingly.

Upton Park

Upton Park is a recently constructed office/warehouse development located at 36 and 38 Upton Drive, approximately 1.5 miles north of the project site. At the time of this report, the building is not yet occupied, so the anticipated traffic from the development was not captured in the traffic counts. The traffic study received for this project shows the anticipated new trips from this project at the study intersection of Ballardvale Street and I-93 Southbound ramps. These trips were distributed throughout the network and assigned to the study intersections accordingly.

6.3 2031 No-Build Traffic Volumes

We developed the 2031 No-Build volumes by applying annual growth rates for seven years to the 2024 Existing conditions volumes turning movements and then added the trips generated by the development projects described above. Figure 7 presents the peak hour traffic volumes for 2031 No-Build conditions.

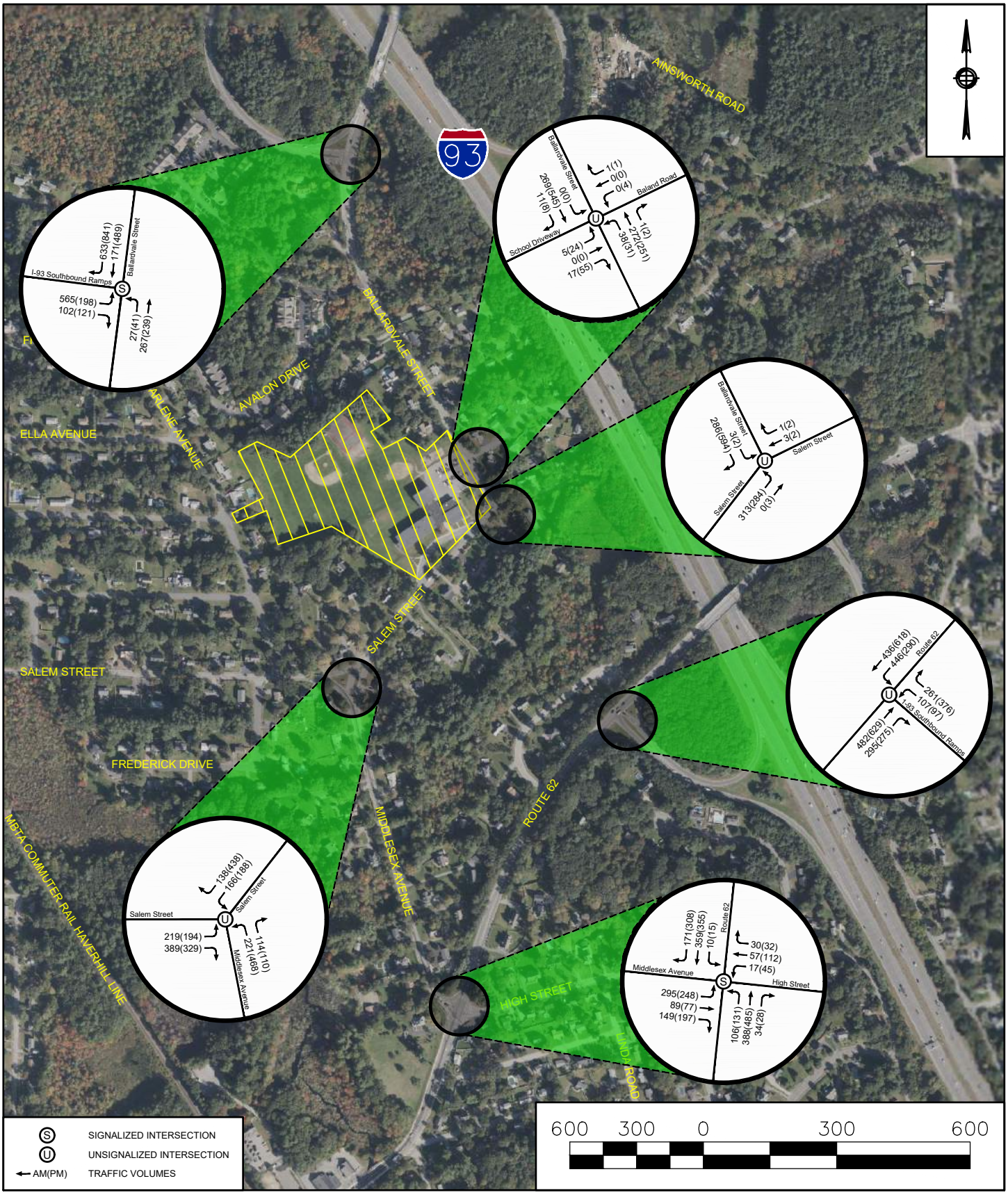


Figure 6 - 2031 No-Build Weekday Peak Hour Traffic Volumes

North Intermediate School

320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

7 Proposed Future Conditions

7.1 Proposed Development

The existing school will be demolished and a new school will be constructed on the existing site. The new schoolhouse will have 3 stories and an approximate 163,573 square feet of gross floor area (gfa) to accommodate 855 students in Pre-K through 5th grade. The redeveloped building will consolidate three existing schools - the North Intermediate school located at the existing site, the Woburn Street school currently located at 227 Woburn Street, and the Wildwood Early Childhood Center formerly located at 182 Wildwood Street.

Two primary driveways will provide access and egress to the site. The driveway at the southern end of the parcel (south driveway) will provide access and egress to and from Salem Street. This driveway will be located near the existing bus loop at the North Intermediate School and will be the designated entrance for buses. The driveway to the east of the site (east driveway) will allow access and egress to and from Ballardvale Street, to be located just north of the existing school driveway. This will be the designated entrance and exit for parent student drop-off and pick-up. With this setup, buses and most passenger cars will have separate circulation routes that will minimize conflicts with each other and streamline the student arrival and dismissal patterns.

Buses will enter from Salem Street and park in the designated bus loop as they drop-off and pick-up students before circling around and exiting back out onto Salem Street. Parents will be directed to enter on Ballardvale Street near where the existing school entrance is located. They will continue west before utilizing the turn-around area at the northwest corner of the school and circling back to the east to stop at the loading/unloading zone. The bus loop and driveway provides queuing space for 10 buses at a time and the parent loop provides over 1,700 feet of on-site queuing, enough for approximately 70 passenger vehicles at a time. This is expected to adequately accommodate the morning and afternoon demand due to the staggered arrival rates of parent vehicles.

Adjacent to Salem Street and Ballardvale Street, new sidewalks will be constructed as needed to tie into the pedestrian circulation within the site.

A total of 193 parking spaces will be provided on-site. Approximately 600 feet of queuing capacity (approximately 24 vehicles) is proposed on-site for parents, matching the existing amount of on-site queueing. The site plan is provided in Appendix E.

7.2 Proposed Trip Generation

Nitsch reviewed the Institute of Transportation Engineers' (ITE) publication *Trip Generation, 11th Edition* to estimate the vehicle trip rates for the existing and the proposed reconstructed school. ITE compiles studies based on similar land uses to establish average trip generation rates based on an independent variable.

Nitsch also factored in Wilmington Public School Children's Art, Recreation and Enrichment Services (C.A.R.E.S.) data provided by the DPW. The C.A.R.E.S. program provides childcare before and after scheduled school hours for students enrolled at Wilmington public schools, resulting in a reduction of trips during the peak hour drop-off and pick-up. The C.A.R.E.S. enrollment data is provided in Appendix F.

Trip generation rates for the elementary school were based on Land Use Code (LUC) 520 (elementary school). The weekday morning drop-off and weekday afternoon pick-up trips are outlined in Table 5 and the ITE data is provided in Appendix G.

Table 5 - Existing and Proposed Trip Generation

Time	Elementary School (LUC 520)			
	North Intermediate School			
	Existing with 250 Students	Redeveloped with 855 Students	C.A.R.E.S. Students	Net Increase
Weekday Daily	568	1942	-	1374
Entering	284	971	-	687
Exiting	284	971	-	687
Weekday Morning Peak	188	641	-72	381
Entering	101	346	-36	209
Exiting	87	295	-36	172
Weekday Afternoon Peak	113	385	-99	173
Entering	52	177	-44	81
Exiting	61	208	-45	102

As shown in Table 5, the proposed redeveloped School with 855 students would result in approximately 381 additional trips (209 trips in and 172 trips out) during the weekday morning drop-off time and 173 additional trips (81 trips in and 102 trips out) during the weekday afternoon pick-up time.

7.2.1 Bus Trips

Additionally, Nitsch reached out to the principal at the North Intermediate School for bus volumes. In the existing condition, 12 full-size buses are used for pick-up, and 10 full-size buses are used for drop-off. These buses currently serve both the Woburn Street school and North Intermediate School, dropping students off at North Intermediate in the morning before dropping off the remaining first through third graders at Woburn Street (and vice-versa in the afternoon). Since the proposed redevelopment consolidates these two schools, the bus volumes will remain the same as in the existing condition and buses will only need to stop at one school. Bus trips will have a separate distribution pattern than the trips described above, which will be referred to as Passenger Car Trips. Existing Wildwood Early Childhood Center bus trips were not considered separately and were consolidated with North Intermediate School and Woburn Street School routes to remain conservative with Passenger Car Trip distribution. Since the redeveloped school will serve the same catchment area as the existing school, there is expected to be minimal change to the school bus routes.

7.2.2 2031 No-Build (Without School) Traffic Volumes

Due to the relocation of the school driveways, the net trips cannot be directly applied to the existing traffic volumes. Before the new trips can be added into the network, all existing school trips must be removed from the network and then added back in heading to and from the proposed site driveways. We estimated the trip distribution for the existing North Intermediate school based on the school's catchment area (a process discussed in Section 7.3) and removed those trips from the network. Figure 7 shows the 2031 No-Build (Without School) Peak Hour traffic volumes.

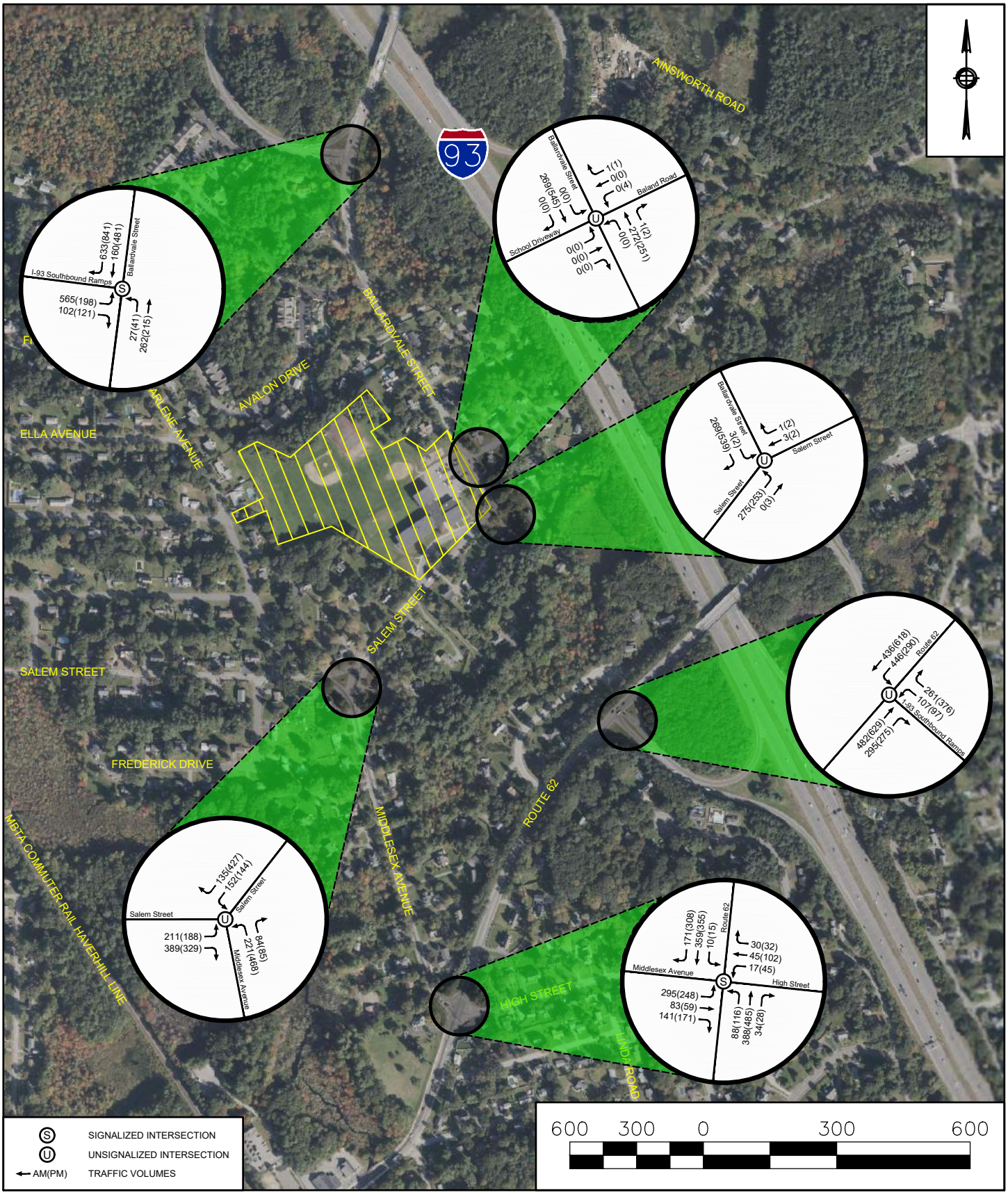


Figure 7 - 2031 No-Build (Without School) Weekday Peak Hour Traffic Volumes

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

7.3 Trip Distribution

The trips to/from the proposed school were distributed and assigned based on the logical travel routes through the existing roadway network within the town of Wilmington. Similar to trip generation, the distribution patterns were split between passenger car trips and bus trips.

Cropper GIS Consulting, LLC completed a Time and Distance Analysis for Wilmington Public Schools in 2023 as part of a long-range planning effort. To determine passenger car distributions, Nitsch used a map included in that analysis displaying the catchment area and student population density for the east school district, which the Wildwood, Woburn Street, and North Intermediate schools serve. Using this map, the catchment area was subdivided based on the most likely route to take to the school and a weight was assigned to it based on the student population density within the subdivision. These weights were then converted into percentages. The catchment map is provided in Appendix H. Table 6 shows the distribution of how passenger cars are predicted to enter and exit the network.

Table 6 - Passenger Car Distribution

Street and Direction	Distribution
Ballardvale Avenue, to/from the north	5%
Salem Street, to/from the west	15%
Middlesex Avenue to/from the southeast	50%
High Street, to/from the southwest	25%
Route 62, to/from the northeast	5%

These percentages were carried through the network based on the appropriate route the vehicles would take through the network. It is assumed all of these passenger cars will be entering and exiting through the south driveway on Salem Street. The passenger car trip distribution percentages are shown in Figure 8.

For the bus trips, a slightly different method was used. As discussed in section 7.2.1, the bus routes at the proposed school are not expected to change significantly from the routes at the existing school. As such, the existing school bus routes were converted into a distribution that was carried through the network. Table 7 shows the distribution of how buses are predicted to enter and exit the network.

Table 7 - Bus Distribution

Street and Direction	Distribution
Ballardvale Avenue, to/from the north	10%
Salem Street, to/from the west	20%
Middlesex Avenue to/from the southeast	50%
High Street, to/from the southwest	20%

It is assumed that all buses will enter and exit through the driveway on Ballardvale Street. The Bus Trip Distribution percentages are shown in Figure 9.

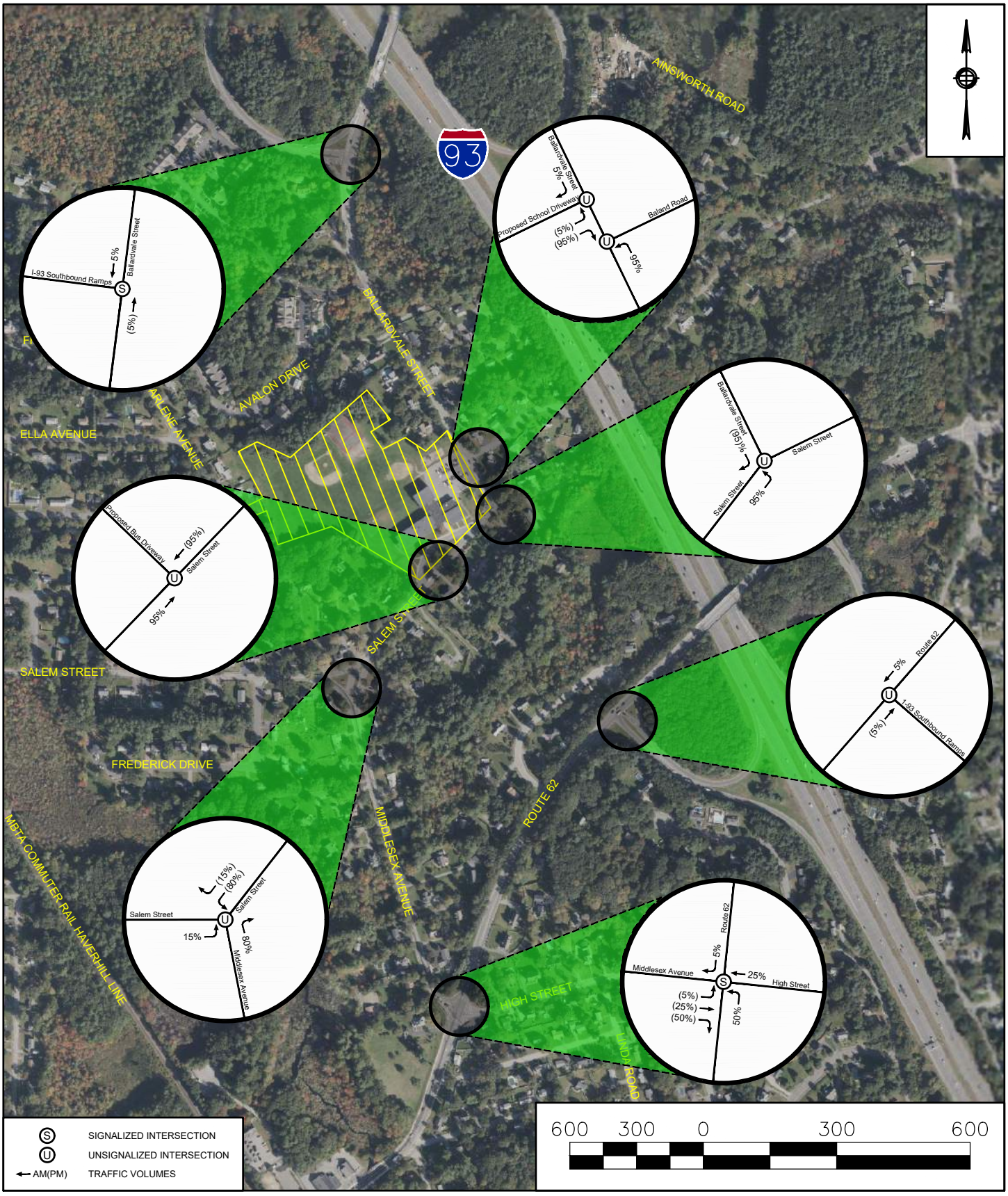


Figure 8 - Passenger Car Trip Distribution

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

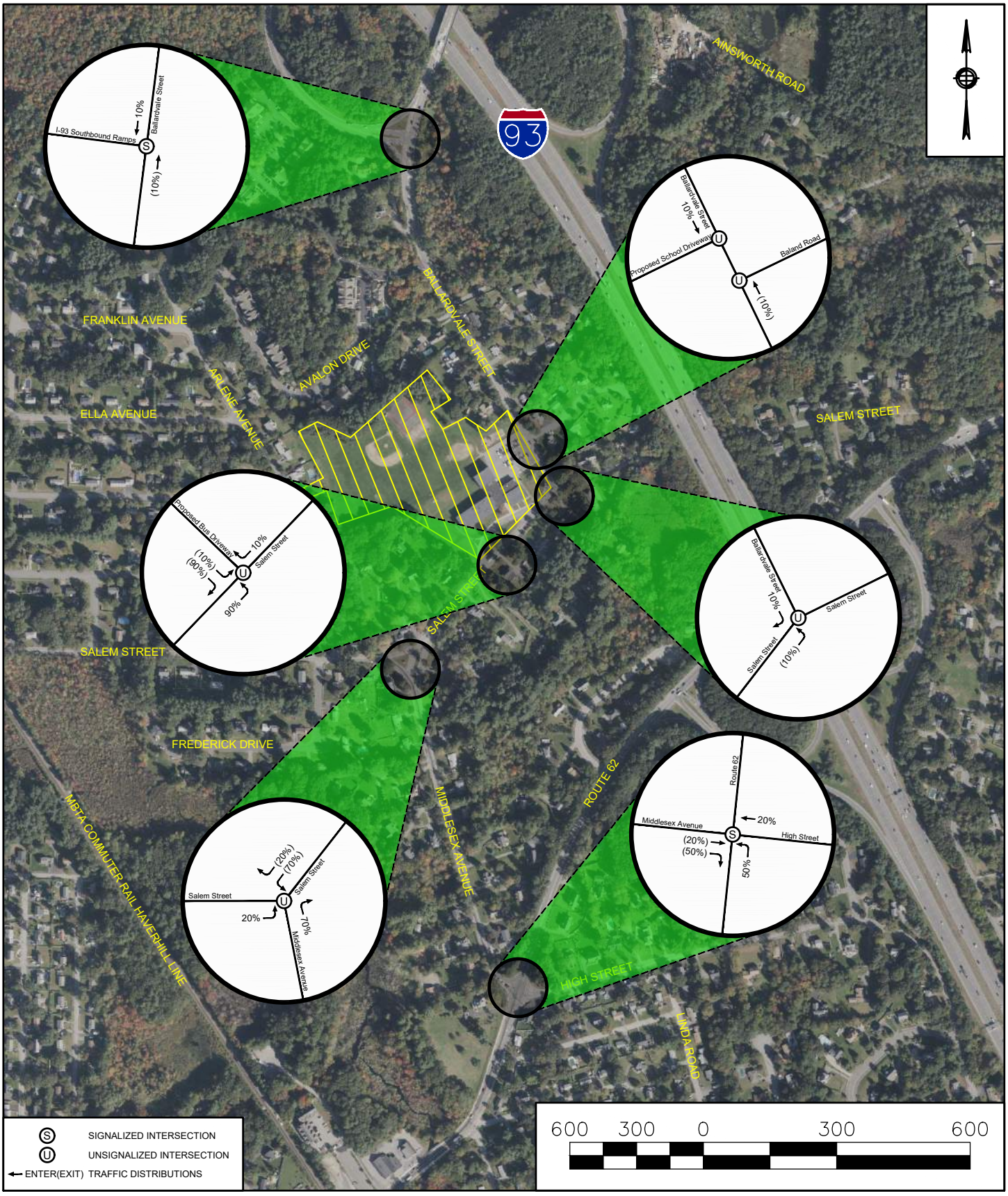


Figure 9 - Bus Trip Distribution

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

7.4 Mode Split and Assignment

To accurately determine the traffic impacts of the proposed school, alternative modes of transportation were considered in the trip assignment calculations. Since the school is located in a residential area, some students may walk to school. However, this is not expected to be a significant portion of the trips due to most students living outside of a 1/2 mile radius from the school. Based on information received from Wilmington Public Schools, approximately 5% of students (12 students) at the existing North Intermediate school walk to school, 65% take the bus, and the remaining 30% are picked up/dropped off by a parent or guardian.

The number of students walking to the proposed school is not expected to increase compared to existing, since the additional students the school serves will be younger and less likely to commute on foot. As discussed in earlier sections, the number of bus trips are not expected to increase since the current buses serve both the North Intermediate and Woburn Street schools. The passenger car trips, which were calculated based on the existing driveway counts, are expected to increase in proportion to the increase in number of students the school serves.

The peak hour trip generation includes the total amount of pre-kindergarten through fifth grade students (855) including all three schools. The specific mode split of the Wildwood Early Childhood Center was not indicated, therefore we proceeded using mode split information from the North Intermediate School principal. As the grades kindergarten through fifth grade are going to be the primary trip generation driver, it is deemed appropriate to maintain the existing mode split. Table 8 shows the project trips by mode for the proposed school.

Table 8 - Project Trips by Mode

Time	Mode		
	Walking Trips	Passenger Car Trips	Bus Trips
Weekday Morning Peak	24	569	24
Entering	12	310	12
Exiting	12	259	12
Weekday Afternoon Peak	24	286	20
Entering	12	133	10
Exiting	12	163	10

The passenger car and bus distributions were then applied to their respective trips shown in Table 8. The project trip assignment to the study intersections is shown in Figures 10, 11, 12, and 13.

7.5 Proposed 2031 Build Volumes

For the proposed school, the corresponding trip assignment volumes were added to the 2031 No-Build (Without School) Volumes that yield the 2031 Build Volumes. The 2031 Build Peak Hour Turning Movement Volumes are shown in Figure 14.

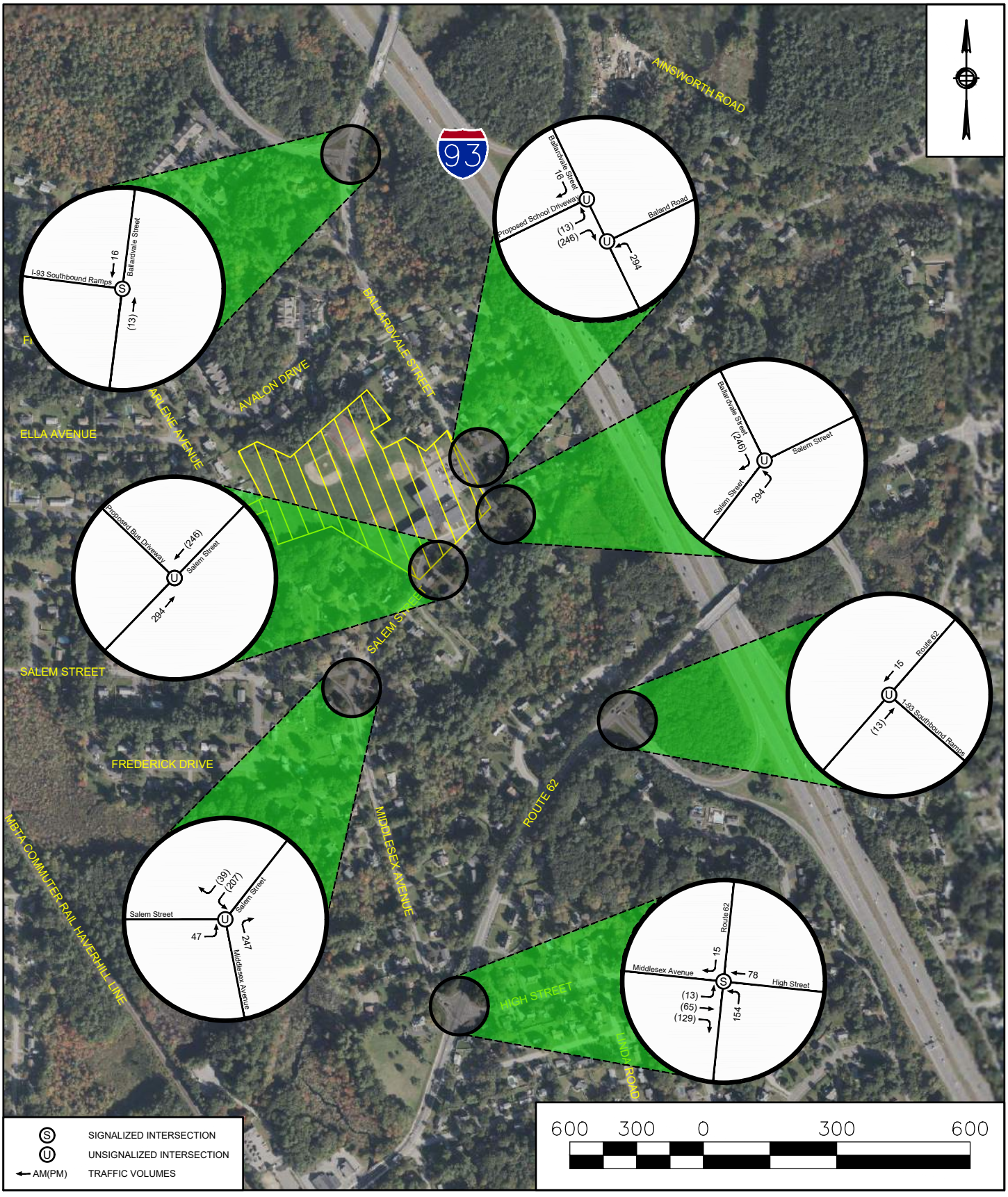


Figure 10 - AM Passenger Car Trip Assignment

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

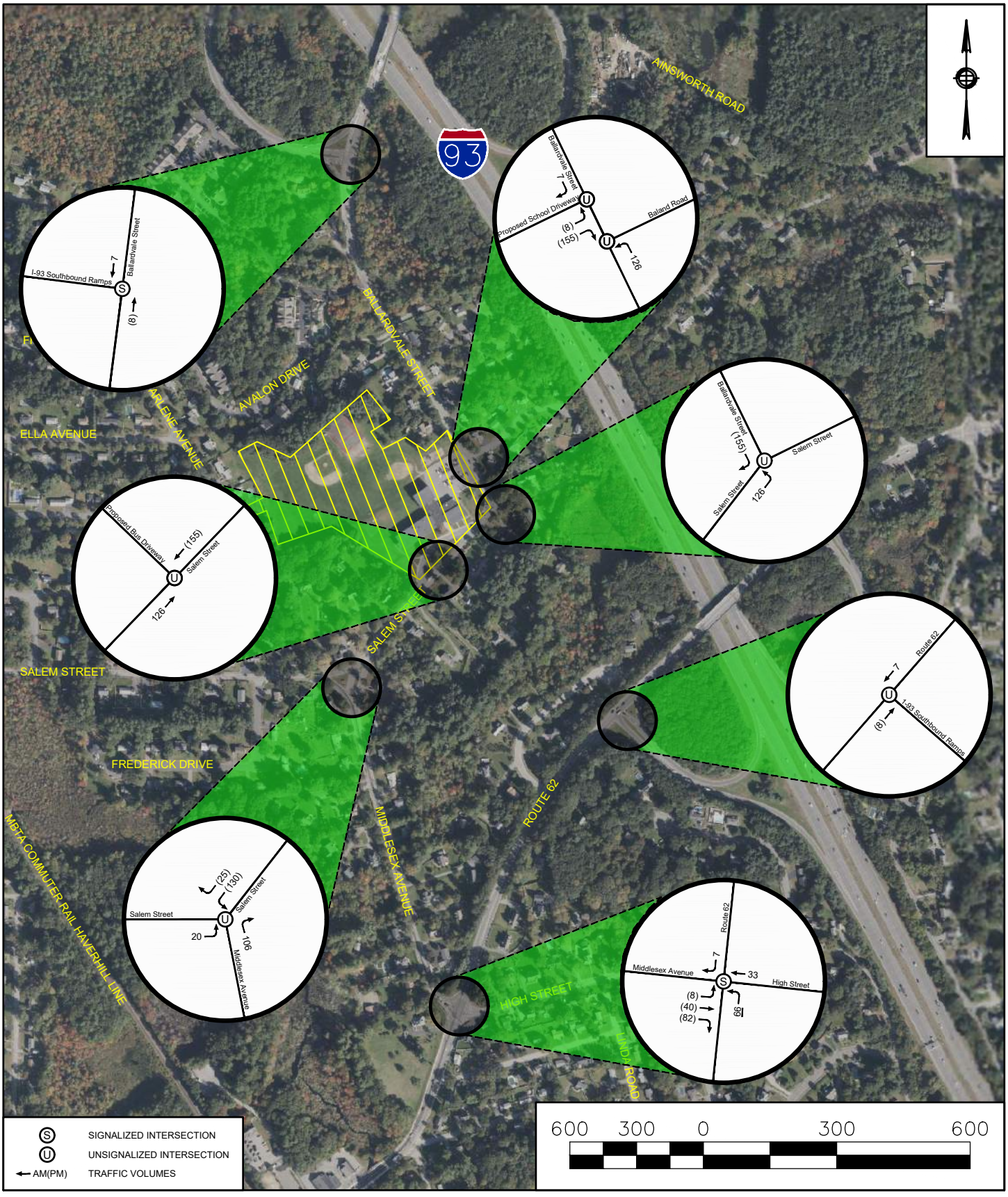


Figure 11 - PM Passenger Car Trip Assignment

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

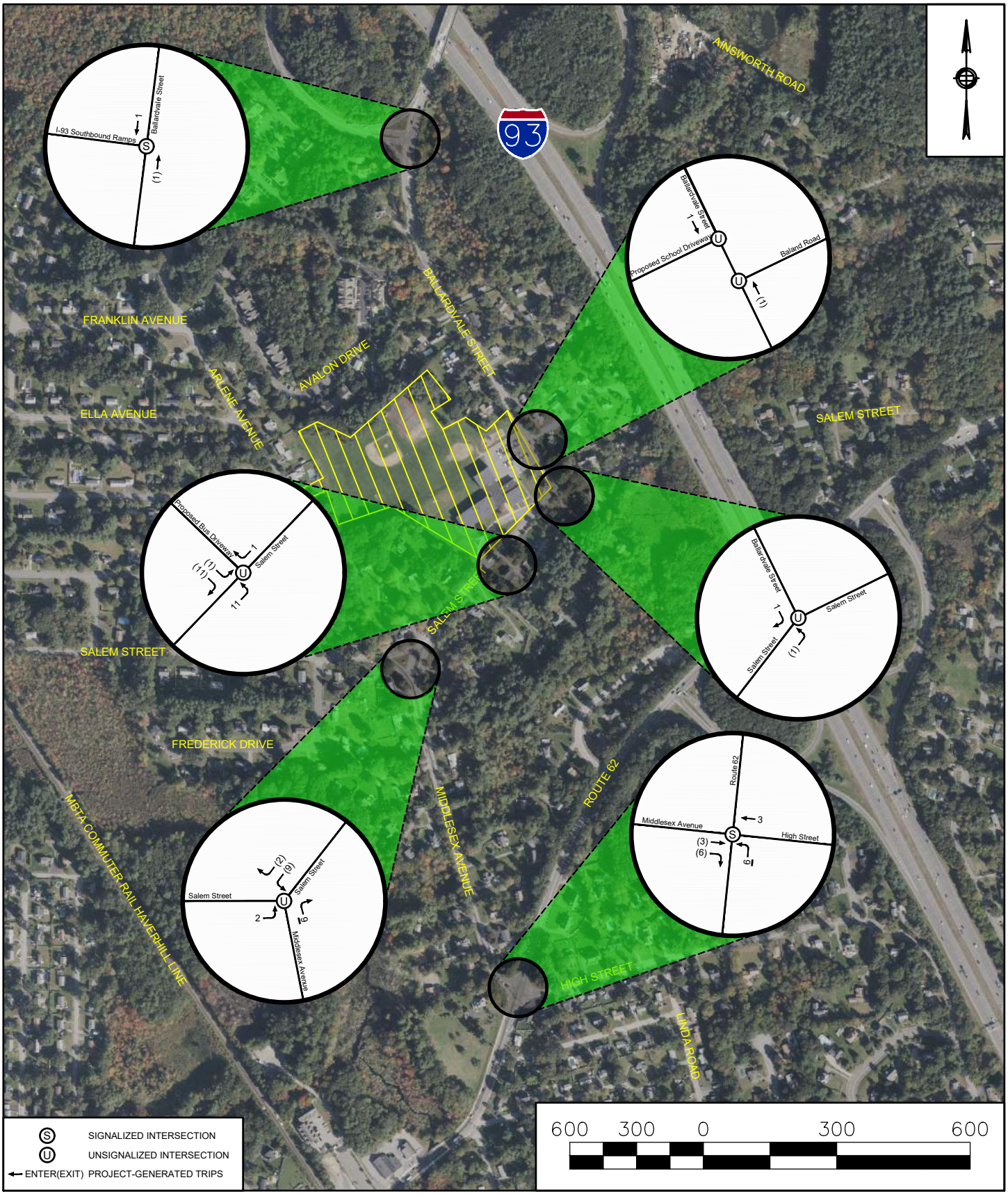


Figure 12 - AM Bus Trip Assignment

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

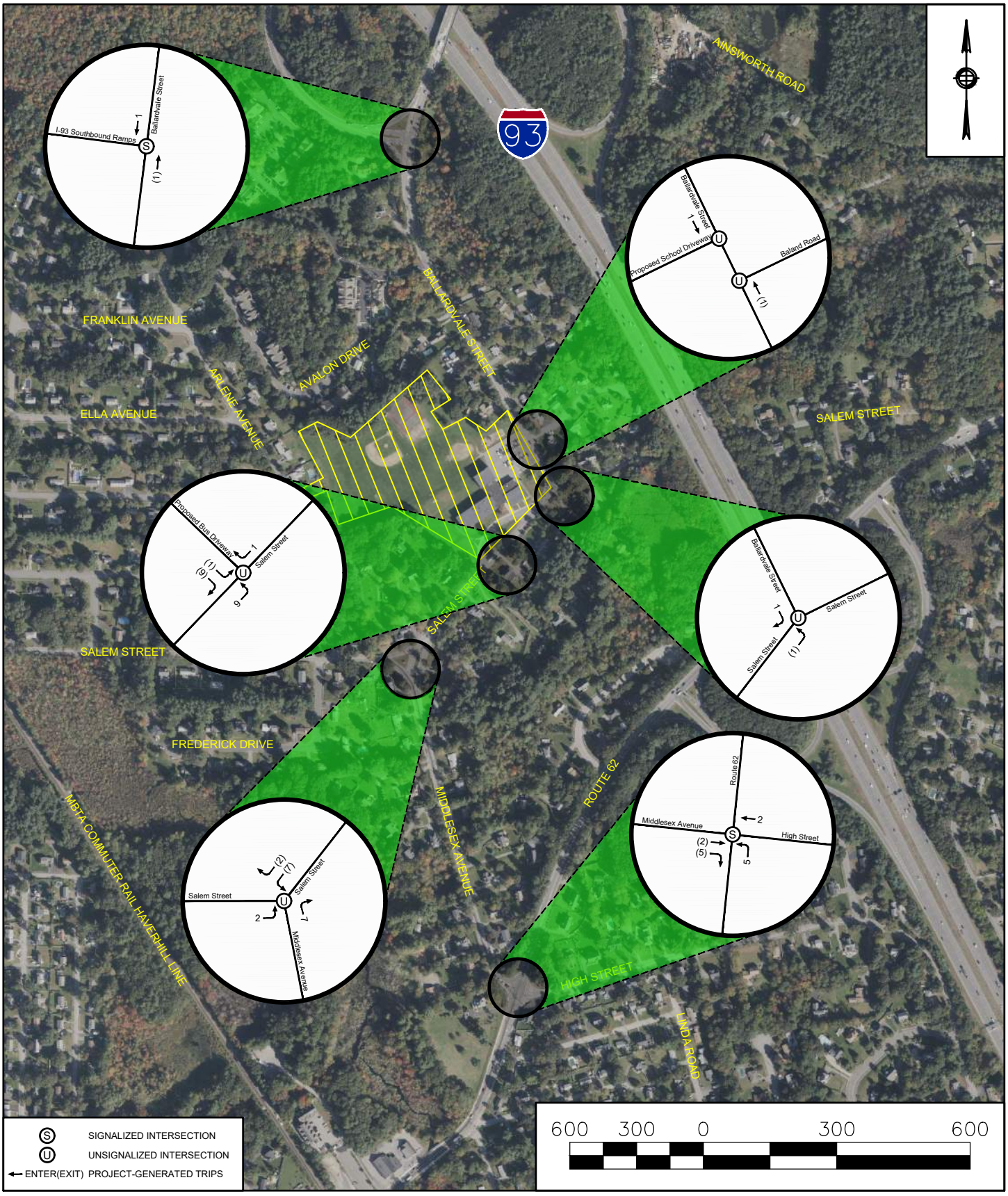


Figure 13 - PM Bus Trip Assignment

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

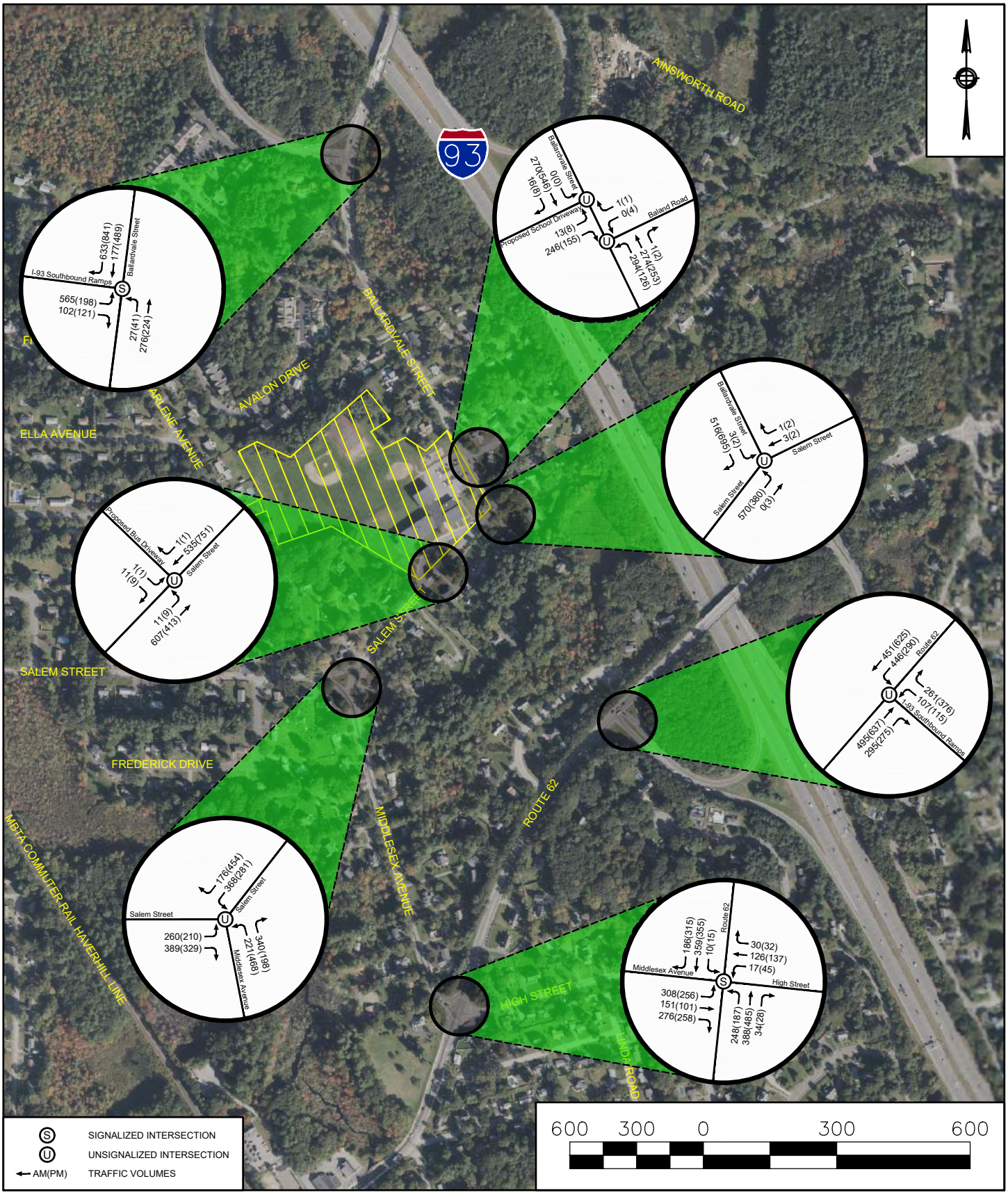


Figure 14 - 2031 Build Weekday Peak Hour Traffic Volumes

North Intermediate School
320 Salem Street
Wilmington, MA

Data Source: BingMaps
Nitsch Project #: 15428

Nitsch Engineering

7.6 Parking Generation and Adequacy

Nitsch used the Institute of Transportation Engineers' (ITE) publication *Parking Generation Manual, 6th Edition* to estimate the parking demand for the proposed development. Parking generation rates for the proposed school were based on Land Use Code (LUC) 520 (Elementary School). The calculated parking demand for the combined school with projected student population of 855 students is 120 spaces. The parking generation worksheet is provided in Appendix G.

As shown in Table 9, the 193 striped parking spaces exceed the 120 parking spaces recommended by ITE and thereby provide adequate capacity for the required parking demand.

Table 9 - Proposed Parking Summary

Parking Spaces Provided	ITE Parking Generation for LUC 520
193 Striped	120

8 Traffic Analysis

8.1 Evaluation Criteria

Traffic operations at intersections are evaluated using the performance measures of average vehicular delay, level of service (LOS), volume-to-capacity (v/c) ratio, and average and 95th percentile queue lengths.

LOS is a qualitative measure that describes operating conditions through letter designations, from A to F. It is defined for intersections in terms of average control delay per vehicle. LOS A indicates the most favorable condition, with minimum traffic delay. LOS F represents the worst condition where there is significant traffic delay. LOS D or better is typically considered desirable for peak-hour operation in urban and suburban settings. The delay designations for each LOS level differ slightly between signalized and unsignalized intersections due to driver expectations and behavior. Table 10 summarizes the LOS criteria for intersections as used in this analysis.

Table 10 - Intersection Level of Service Criteria

Level of Service	Average Control Delay (sec/veh)	
	Signalized	Unsignalized
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50
Source: HCM 6th Edition		

For signalized intersections, LOS is reported by lane group, by approach, and for the entire intersection. For unsignalized intersections, the analysis assumes that the traffic on the mainline is not affected by traffic on the side street. As such, an unsignalized intersection's LOS is generally reported for left-turns on the mainline and all side street movements, and an overall intersection LOS is not always determined.

The v/c ratio is a measure of congestion at an intersection approach. The capacity of a facility is the maximum hourly rate at which persons or vehicles can be expected to traverse a point or a uniform section of a lane or roadway under prevailing roadway, traffic, and control conditions. A v/c ratio below one indicates that the intersection approach has adequate capacity to serve the arriving traffic demand. A v/c ratio that approaches or exceeds 1.0 indicates traffic congestion or poor operating conditions. In that situation, vehicles arrive faster than they can be served, so queue lengths can theoretically grow indefinitely, which is the unstable condition.

Since arrival volumes fluctuate throughout the peak hour, queue lengths vary. The average (50th percentile) queue length represents the maximum back of queue on a typical cycle for a signalized intersection. Average queue lengths are not reported for unsignalized intersections. The 95th percentile queue, reported for both signalized and unsignalized intersections, occurs with 95th percentile traffic volumes, and its length commonly denotes the farthest extent of the vehicle queue.

8.2 Capacity Analyses

We performed capacity analyses for the study intersections under 2024 Existing conditions, 2031 No-Build conditions, and 2031 Build conditions during the weekday morning and afternoon peak hours using Trafficware's Synchro 12 software. Synchro uses, in part, the traffic operational analysis methodology of the Transportation Research Board's *Highway Capacity Manual* (HCM).[1]

Since HCM 6th Edition does not support exclusive pedestrian phases, we generated the results of the capacity analyses using Synchro's Percentile Delay Method for delay, v/c ratio, and queue lengths, supported by HCM 2000 Edition methodology for unsignalized intersection analysis and Synchro's Lane, Volumes, and Timings for signalized intersection analysis. To analyze the roundabout considered under mitigated conditions, we used the Georgia Department of Transportation (GDOT) Roundabout Analysis Tool, which uses HCM 6 roundabout methodology. The Synchro output and GDOT result sheets for the capacity analyses are included in Appendix I.

8.2.1 2024 Existing Conditions Capacity Analysis

The first analysis evaluated traffic operations with 2024 existing traffic volumes under existing geometric conditions and signal timing/phasing. We derived peak hour factors (PHFs) and heavy vehicle percentages from the TMC data. We applied PHFs on an approach-by-approach basis, and we applied heavy vehicle percentages by lane group. Table 11 summarizes the capacity analysis results for the 2024 Existing conditions.

[1] *Highway Capacity Manual 6th Edition (HCM 6th)*, Transportation Research Board, Washington, D.C., 2016.

Table 11 - Capacity Analysis Summary: 2024 Existing Conditions

Location	Direction / Movement[a]	Weekday Morning Peak Hour					Weekday Afternoon Peak Hour				
		v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th	v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th
Middlesex Avenue at Salem Street *[unsignalized]*	Salem St EB - L	0.13	6.6	A	-	11	1.21	140.5	F	-	534
	Middlesex Ave NB - L	0.26	7.7	A	-	26	0.90	45.7	E	-	268
	Overall	***-***	***5.3***	***A***	***-***	***-***	***-***	***58.6***	***F***	***-***	***-***
Salem Street at Ballardvale Street *[unsignalized]*	Salem St WB - LR	0.02	12.9	B	-	1	0.02	13.9	B	-	1
	Ballardvale St SB - L	0.00	0.1	A	-	0	0.00	0.0	A	-	0
	Overall	***-***	***0.2***	***A***	***-***	***-***	***-***	***0.1***	***A***	***-***	***-***
Ballardvale Street at School Driveway/ Baland Road *[unsignalized]*	School Driveway EB - LTR	0.14	12.1	B	-	12	0.42	22.4	C	-	51
	Baland Rd WB - LTR	0.01	9.9	A	-	0	0.04	25.3	D	-	3
	Ballardvale St NB - L	0.04	1.4	A	-	3	0.04	1.4	A	-	3
	Overall	***-***	***2.0***	***A***	***-***	***-***	***-***	***3.6***	***A***	***-***	***-***
Route 62 at I-93 Southbound Ramps [unsignalized]	I-93 SB Ramp WB - LT	3.72	Err	F	-	Err	2.58	771.2	F	-	969
	Route 62 SB - LR	0.42	8.6	A	-	53	0.27	5.9	A	-	27
	Overall	***-***	***1782 .9***	***F***	***-***	***-***	***-***	***157.9***	***F***	***-***	***-***
Ballardvale Street at I-93 Southbound Ramps *[signalized]*	I-93 SB Ramp EB - L	0.24	8.1	A	78	126	0.30	19.6	B	18	68
	I-93 SB Ramp EB - R	0.06	0.1	A	0	0	0.07	0.1	A	0	0
	Ballardvale St NB - L	0.32	62.3	E	25	56	0.18	22.8	C	9	43
	Ballardvale St NB - T	0.76	57.1	E	208	265	0.29	6.7	A	33	62
	Ballardvale St SB - T	0.58	55.9	E	131	198	0.60	14.5	B	70	236
	Ballardvale St SB - R	0.37	0.6	A	0	0	0.49	1.0	A	0	0
	Overall	***0.76***	***18.5***	***B***	***-***	***-***	***0.60***	***7.5***	***A***	***-***	***-***
Route 62 at Middlesex Avenue/ High Street *[signalized]*	Middlesex Ave EB - LT	0.78	39.7	D	212	#740	0.85	46.8	D	174	#616
	Middlesex Ave EB - R	0.18	7.9	A	26	79	0.24	7.0	A	30	80
	High St WB - LT	0.18	24.9	C	41	101	0.37	26.5	C	66	195
	High St WB - R	0.07	5.0	A	0	0	0.06	3.3	A	0	4
	Middlesex Ave NB - L	0.59	60.3	E	65	204	0.59	50.7	D	65	181
	Middlesex Ave NB - TR	0.62	29.5	C	204	474	0.73	32.0	C	195	524
	Route 62 SB - L	0.15	61.2	E	7	33	0.17	53.1	D	8	39
	Route 62 SB - T	0.86	55.8	E	228	450	0.81	48.6	D	162	381
	Route 62 SB - R	0.40	15.6	B	35	112	0.57	12.9	B	28	138
	Overall	***0.86***	***35.0***	***C***	***-***	***-***	***0.85***	***32.1***	***C***	***-***	***-***

[a] Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound;
Movement: L = Left-turn, T = Through movement, R = Right-turn
[b] Overall v/c ratio is the maximum v/c ratio among lane groups
[c] Average vehicle delay (seconds)
[d] 50th and 95th percentile queue lengths (feet) based upon average vehicle length of 25 feet
~ Volume exceeds capacity, queue is theoretically infinite; queue shown is maximum after two cycles
# 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles

Under 2024 Existing conditions, the intersection of Middlesex Avenue and Salem Street operates overall at LOS A in the morning peak hour and LOS F in the afternoon peak hour. It is important to note that due to the atypical layout of this intersection, most modelling software and HCM methodology does not have the full capability to portray the actual operations of the intersection. However, the capacity issue shown in the weekday afternoon

peak hour was confirmed in the field. Additionally, conversations with the DPW indicate the intersection experiences significant queues in the morning peak hour, primarily in the southbound direction, and operates below LOS A. Significant queues were observed for the northbound direction primarily in the afternoon peak hour.

Both the unsignalized intersections of Salem Street at Ballardvale Street and Ballardvale Street at School Driveway/Baland Road operate at LOS A during both peak hours in the existing condition. During the weekday afternoon peak hour, the Baland Road westbound movement operates at LOS D and the Driveway eastbound movement operates at LOS C. All other movements operate at LOS B or better.

The unsignalized intersection of Route 62 at the I-93 Southbound Ramp operates at LOS F in both the morning and afternoon peak hour, with extremely high delays for the I-93 Southbound Ramp approach. In both the morning and afternoon vehicles exiting the highway are the significant contributor and unrelated to local school traffic.

The signalized intersection of Ballardvale Street at I-93 Southbound Ramps operates overall at LOS B during the weekday morning peak hour and LOS A during the weekday afternoon peak hour. The Ballardvale Street northbound left, northbound through, and southbound through movements operate at LOS E during the weekday morning peak hour. All other movements operate at LOS C or better during both peak hours and indicate no significant queueing.

The signalized intersection of Route 62 at Middlesex Avenue/High Street operates overall at LOS C during both peak hours. The Middlesex Avenue eastbound left/through movement operates at LOS D during both peak hours. According to conversations with the DPW, the Middlesex eastbound approaches may experience longer queues and a lower LOS than modeled. The 95th percentile volume exceeds capacity at this movement for both peak hours in the existing condition. The Middlesex Avenue northbound left and Route 62 southbound left turn movements both operate at LOS E during the weekday morning peak hour and LOS D during the weekday afternoon peak hour. The Route 62 southbound through movement operates at LOS E during the morning peak hour and D in the afternoon peak hour, and all other movements operate at LOS C or better.

8.2.2 2031 No-Build Conditions Capacity Analysis

Under future No-Build conditions, we kept lane geometry, traffic control, and signal timing parameters the same as existing and applied the future volumes determined in Section 6.3 with the same heavy vehicle percentages and PHFs as existing. Table 12 summarizes the analysis results for 2031 No-Build conditions.

Table 12 - Capacity Analysis Summary: 2031 No-Build Conditions

Location	Direction / Movement[a]	Weekday Morning Peak Hour					Weekday Afternoon Peak Hour				
		v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th	v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th
Middlesex Avenue at Salem Street *[unsignalized]*	Salem St EB - L	0.13	6.7	A	-	11	4.71	*Err*	F	-	*Err*
	Middlesex Ave NB - L	0.27	7.7	A	-	27	0.97	61.9	F	-	323
	Overall	***-***	***5.4***	***A***	***-***	***-***	***-***	***3063.7***	***F***	***-***	***-***
Salem Street at Ballardvale Street *[unsignalized]*	Salem St WB - LR	0.02	13.4	B	-	1	0.02	14.5	B	-	2
	Ballardvale St SB - L	0.00	0.1	A	-	0	0.00	0.0	A	-	0
	Overall	***-***	***0.2***	***A***	***-***	***-***	***-***	***0.1***	***A***	***-***	***-***
Ballardvale Street at School Driveway/ Baland Road *[unsignalized]*	School Driveway EB - LTR	0.14	12.4	B	-	12	0.45	24.4	C	-	56
	Baland Rd WB - LTR	0.01	10.2	B	-	0	0.05	27.3	D	-	4
	Ballardvale St NB - L	0.04	1.3	A	-	3	0.04	1.4	A	-	3
	Overall	***-***	***2.0***	***A***	***-***	***-***	***-***	***3.8***	***A***	***-***	***-***
Route 62 at I-93 Southbound Ramps [unsignalized]	I-93 SB Ramp WB - LT	5.25	Err	F	-	Err	3.32	Err	F	-	Err
	Route 62 SB - LR	0.49	10.0	B	-	68	0.32	7.1	A	-	35
	Overall	***-***	***1851.2***	***F***	***-***	***-***	***-***	***2066.0***	***F***	***-***	***-***
Ballardvale Street at I-93 Southbound Ramps *[signalized]*	I-93 SB Ramp EB - L	0.29	8.9	A	96	156	0.36	22.0	C	34	77
	I-93 SB Ramp EB - R	0.06	0.1	A	0	0	0.07	0.1	A	0	0
	Ballardvale St NB - L	0.32	62.3	E	25	56	0.19	25.3	C	14	45
	Ballardvale St NB - T	0.81	59.5	E	237	294	0.29	6.4	A	35	67
	Ballardvale St SB - T	0.57	54.1	D	137	205	0.67	17.3	B	142	262
	Ballardvale St SB - R	0.39	0.7	A	0	0	0.54	1.2	A	0	0
	Overall	***0.81***	***19.1***	***B***	***-***	***-***	***0.67***	***8.5***	***A***	***-***	***-***
Route 62 at Middlesex Avenue/ High Street *[signalized]*	Middlesex Ave EB - LT	0.82	45.2	D	240	#789	0.91	56.1	E	192	#662
	Middlesex Ave EB - R	0.19	8.7	A	31	86	0.26	7.8	A	34	92
	High St WB - LT	0.19	27.1	C	46	106	0.41	29.1	C	72	208
	High St WB - R	0.07	5.3	A	0	0	0.06	3.8	A	0	5
	Middlesex Ave NB - L	0.62	62.9	E	76	190	0.60	52.5	D	69	192
	Middlesex Ave NB - TR	0.64	29.4	C	228	522	0.74	31.9	C	214	572
	Route 62 SB - L	0.16	63.4	E	7	34	0.17	55.3	E	8	40
	Route 62 SB - T	0.86	55.1	E	255	494	0.82	48.4	D	182	420
	Route 62 SB - R	0.39	16.5	B	41	122	0.57	14.1	B	38	157
	Overall	***0.86***	***36.7***	***D***	***-***	***-***	***0.91***	***34.4***	***C***	***-***	***-***

[a] Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound;
Movement: L = Left-turn, T = Through movement, R = Right-turn
[b] Overall v/c ratio is the maximum v/c ratio among lane groups
[c] Average vehicle delay (seconds)
[d] 50th and 95th percentile queue lengths (feet) based upon average vehicle length of 25 feet
~ Volume exceeds capacity, queue is theoretically infinite; queue shown is maximum after two cycles
# 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles
Err Volume significantly exceeds capacity

Under 2031 No-Build conditions, the intersection of Middlesex Avenue and Salem Street continues to operate overall at LOS A in the morning peak hour and LOS F in the afternoon peak hour. The capacity issues shown in the existing conditions analysis and observed in the field are expected to get worse in the no-build condition. The

additional volume from the background traffic growth further increases the v/c ratio to a point that the Synchro model cannot process the volume, resulting in errors and a very high overall delay value.

Both the unsignalized intersections of Salem Street at Ballardvale Street and Ballardvale Street at School Driveway/Baland Road continue to operate at LOS A during both peak hours in the no-build condition. During the weekday afternoon peak hour, the Baland Road westbound movement operates at LOS D and the Driveway eastbound movement operates at LOS C. All other movements continue to operate at LOS B or better. The unsignalized intersection of Route 62 at the I-93 Southbound Ramp continues to operate at LOS F in both the morning and afternoon peak hour. Similar to the intersection of Middlesex Avenue and Salem Street, the added traffic between the Existing and No-Build conditions increases the v/c ratio to a point where the Synchro model cannot process the westbound left turn volume, leading to the very high overall delay.

Under 2031 No-Build conditions, the intersection of Ballardvale Street at I-93 Southbound Ramps continues to operate overall at LOS B during the weekday morning peak hour and LOS A during the weekday afternoon peak hour. The Ballardvale Street northbound left movement and northbound through movement both operate at LOS E during the weekday morning peak hour. The Ballardvale Street southbound through movement continues to operate at LOS D during the weekday morning peak hour, with all other movements operating at LOS C or better during both peak hours and no significant queueing. There are slight increases in delay at each movement due to the expected increase in vehicle traffic but no anticipated capacity issues.

The signalized intersection of Route 62 at Middlesex Avenue/High Street degrades from LOS C overall to LOS D overall during the weekday morning peak hour. The Middlesex Avenue eastbound left/through movement degrades from LOS D to LOS E during the weekday afternoon peak hour. The Middlesex Avenue northbound left and Route 62 southbound left turn and southbound through movements both operate at LOS E during the weekday morning and afternoon peak hour. All other movements operate at LOS C or better.

8.2.3 2031 Build Conditions Capacity Analysis

We performed capacity analyses for the proposed Build conditions for the additional traffic generated by the proposed school. Under these future Build conditions, we kept lane geometry, traffic control, and signal timing parameters the same as existing for intersections, with the exception of the intersection of Ballardvale Street and Baland Road, where the existing school driveway leg will be removed. We applied the future volumes determined in Section 7.5 with the same heavy vehicle percentages and PHFs as existing. We also included the two new intersections with access driveways for the proposed school: Salem Street at Proposed School Driveway and Ballardvale Street at Proposed Bus Driveway. Table 13 summarizes the analysis results for the 2031 Build conditions.

Table 13 - Capacity Analysis Summary: 2031 Build Conditions

Location	Direction / Movement[a]	Weekday Morning Peak Hour					Weekday Afternoon Peak Hour				
		v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th	v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th
Middlesex Avenue at Salem Street *[unsignalized]*	Salem St EB - L	0.25	7.5	A	-	25	Err	Err	F	-	Err
	Middlesex Ave NB - L	0.41	10.9	B	-	51	1.19	137.5	F	-	493
	Overall	***-***	***6.4***	***A***	***-***	***-***	***-***	***Err***	***F***	***-***	***-***
Salem Street at Ballardvale Street *[unsignalized]*	Salem St WB - LR	0.04	23.1	C	-	3	0.03	17.5	C	-	2
	Ballardvale St SB - L	0.00	0.1	A	-	0	0.00	0.0	A	-	0
	Overall	***-***	***0.2***	***A***	***-***	***-***	***-***	***0.1***	***A***	***-***	***-***
Ballardvale Street at School Driveway/ Baland Road *[unsignalized]*	Baland Rd WB - R	0.01	13.4	B	-	1	0.05	28.8	D	-	4
	Overall	***-***	***0.1***	***A***	***-***	***-***	***-***	***0.2***	***A***	***-***	***-***
Route 62 at I-93 Southbound Ramps [unsignalized]	I-93 SB Ramp WB - LT	5.53	Err	F	-	Err	3.85	Err	F	-	Err
	Route 62 SB - LR	0.49	10.2	B	-	70	0.32	7.2	A	-	35
	Overall	***-***	***1826.1***	***F***	***-***	***-***	***-***	***2115.1***	***F***	***-***	***-***
Ballardvale Street at I-93 Southbound Ramps *[signalized]*	I-93 SB Ramp EB - L	0.29	9.3	A	97	160	0.36	22.0	C	34	77
	I-93 SB Ramp EB - R	0.06	0.1	A	0	0	0.07	0.1	A	0	0
	Ballardvale St NB - L	0.32	62.3	E	25	56	0.19	25.3	C	14	45
	Ballardvale St NB - T	0.81	59.5	E	246	300	0.27	6.3	A	33	63
	Ballardvale St SB - T	0.58	53.5	D	143	209	0.67	17.3	B	142	262
	Ballardvale St SB - R	0.39	0.7	A	0	0	0.54	1.2	A	0	0
	Overall	***0.81***	***19.5***	***B***	***-***	***-***	***0.67***	***8.5***	***A***	***-***	***-***
Route 62 at Middlesex Avenue/ High Street *[signalized]*	Middlesex Ave EB - LT	1.47	255.6	F	~572	#1188	1.13	115.8	F	~289	#820
	Middlesex Ave EB - R	0.33	10.2	B	79	165	0.33	8.5	A	52	130
	High St WB - LT	0.61	45.7	D	148	232	0.55	35.4	D	100	#285
	High St WB - R	0.08	5.7	A	0	0	0.06	4.1	A	0	4
	Middlesex Ave NB - L	0.82	68.7	E	212	#438	0.71	55.6	E	106	271
	Middlesex Ave NB - TR	0.56	26.1	C	228	513	0.69	29.0	C	214	564
	Route 62 SB - L	0.18	73.8	E	9	35	0.18	59.1	E	9	42
	Route 62 SB - T	0.88	63.5	E	311	557	0.82	50.5	D	193	447
	Route 62 SB - R	0.43	19.2	B	54	145	0.58	14.9	B	41	170
	Overall	***1.47***	***83.3***	***F***	***-***	***-***	***1.13***	***45.3***	***D***	***-***	***-***
Salem Street at South Driveway *[unsignalized]*	Salem St EB - L	0.01	0.4	A	-	1	0.01	0.4	A	-	1
	South Driveway SB - LR	0.02	10.7	B	-	2	0.03	16.2	C	-	3
	Overall	***-***	***0.3***	***A***	***-***	***-***	***-***	***0.3***	***A***	***-***	***-***
Ballardvale Street at East Driveway *[unsignalized]*	East Driveway EB - LR	0.75	37.8	E	-	147	0.89	88.2	F	-	174
	Ballardvale St NB - L	0.44	9.8	A	-	57	0.61	17.3	C	-	101
	Overall	***-***	***13.4***	***B***	***-***	***-***	***-***	***18.2***	***C***	***-***	***-***

[a] Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound;
Movement: L = Left-turn, T = Through movement, R = Right-turn
[b] Overall v/c ratio is the maximum v/c ratio among lane groups
[c] Average vehicle delay (seconds)
[d] 50th and 95th percentile queue lengths (feet) based upon average vehicle length of 25 feet
~ Volume exceeds capacity, queue is theoretically infinite; queue shown is maximum after two cycles
# 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles
Err Volume significantly exceeds capacity

Under 2031 Build conditions, operations at the intersection of Middlesex Avenue and Salem Street are expected to further degrade due to the significant increase in trips traveling north and south through the intersection. The unsignalized intersection of Route 62 at the I-93 Southbound Ramp continues to operate at LOS F in both the morning and afternoon peak hour and produce errors for the ramp approaches. The modeling software shows a capacity error in place of calculating a v/c ratio or delay values, further demonstrating the limitations of the software and HCM methodology at this non-traditional intersection.

Both the unsignalized intersections of Salem Street at Ballardvale Street and Ballardvale Street at Baland Road continue to operate at LOS A during both peak hours in the build condition, indicating no operational issues. Operations at the intersection of Ballardvale Street and Baland Road improve slightly due to the absence of the existing school driveway leg.

Under Build conditions, the intersection of Ballardvale Street at I-93 Southbound Ramps continues to operate overall at LOS B during the weekday morning peak hour and LOS A during the weekday afternoon peak hour. The Ballardvale Street northbound left movement and northbound through movement both operate at LOS E during the weekday morning peak hour. The Ballardvale Street southbound through movement continues to operate at LOS D during the weekday morning peak hour, with all other movements operating at LOS C or better during both peak hours and no significant queueing. The proposed school adds very few trips to the intersection and consequently has little impact on delay for each movement.

The signalized intersection of Route 62 at Middlesex Avenue/High Street degrades from LOS D to LOS F overall during the morning peak hour and LOS C to LOS D overall during the weekday afternoon peak hour. The Middlesex Avenue eastbound left/through movement degrades to LOS F during both peak hours. The Route 62 southbound left movement degrades from LOS D to LOS E during the weekday afternoon peak hour. The High Street westbound through left movement degrades from LOS C to LOS D during the weekday afternoon peak hour. All other movements operate at LOS C or better.

The two proposed intersections at the proposed school's driveway each operate overall at LOS C or better in the morning and afternoon peak hour. The eastbound movement at the east driveway onto Ballardvale Street operates at LOS F during the weekday afternoon peak hour, which is typical during the busy dismissal period at a large school. Any queuing at this intersection will occur onsite, with no spillover to the surrounding local roadways.

This Build condition analysis indicates no issues at either proposed site driveway. However, existing capacity issues present at the intersection of Salem Street at Middlesex Avenue and Route 62 at Middlesex Avenue/High Street are expected to worsen under the proposed Build condition, however not nearly as great of an impact as the existing to no-build conditions.

8.2.4 2031 Build Conditions (With Mitigation) Capacity Analysis

The 2031 Build Conditions capacity analysis indicated a capacity issue at the signalized intersection of Route 62 at Middlesex Avenue/High Street and at the unsignalized intersection of Salem Street at Middlesex Avenue during both peak hours.

Using 2031 Build Conditions volume inputs, we analyzed the intersection of Route 62 at Middlesex Avenue/High Street under a mitigated scenario using signal retiming. Signal retiming is a cost-effective way to reduce congestion and delays. This scenario keeps the existing geometry and phasing but adjusts phase splits and cycle length. Table 14 shows the 2031 Build Conditions (With Optimized Signal Timing).

Table 14 - Capacity Analysis Summary: 2031 Build Conditions (With Optimized Signal Timing)

Location	Direction / Movement[a]	Weekday Morning Peak Hour					Weekday Afternoon Peak Hour				
		v/c Ratio[b]	Delay[c]	LOS	Queue[d]		v/c Ratio[b]	Delay[c]	LOS	Queue[d]	
					50th	95th				50th	95th
Route 62 at Middlesex Avenue/ High Street *[signalized]*	Middlesex Ave EB - LT	1.07	96.2	F	~479	#890	0.88	53.2	D	323	#640
	Middlesex Ave EB - R	0.31	6.9	A	63	97	0.31	6.8	A	61	86
	High St WB - LT	0.36	26.1	C	120	159	0.40	26.5	C	121	207
	High St WB - R	0.06	0.2	A	0	0	0.05	0.1	A	0	0
	Middlesex Ave NB - L	1.08	129.6	F	~257	#534	0.86	86.3	F	160	#378
	Middlesex Ave NB - TR	0.69	40.1	D	306	#651	0.77	44.4	D	351	#801
	Route 62 SB - L	0.22	74.6	E	10	34	0.29	79.5	E	13	43
	Route 62 SB - T	1.03	101.7	F	353	#686	0.86	66.9	E	284	#585
	Route 62 SB - R	0.48	23.2	C	62	154	0.61	20.4	C	70	209
	Overall	***1.08***	***64.4***	***E***	***-***	***-***	***0.88***	***42.4***	***D***	***-***	***-***

[a] Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound;
Movement: L = Left-turn, T = Through movement, R = Right-turn
[b] Overall v/c ratio is the maximum v/c ratio among lane groups
[c] Average vehicle delay (seconds)
[d] 50th and 95th percentile queue lengths (feet) based upon average vehicle length of 25 feet
~ Volume exceeds capacity, queue is theoretically infinite; queue shown is maximum after two cycles
# 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles

As shown above, the optimized signal timing at the intersection of Route 62 at Middlesex Avenue/High Street indicates an improvement in operations compared to the 2031 Build Conditions. During the weekday morning peak hour, the intersection improves overall to LOS E, with delay reduced by 22 seconds. The Middlesex Avenue eastbound shared left/through movement improves with delay reduced by almost three minutes in the morning peak hour.

During the weekday afternoon peak hour, the intersection remains overall at LOS D, with delay reduced by four seconds. The Middlesex Avenue eastbound shared left/though movement improves from LOS F to LOS D, with a significant decrease in delay of over one minute.

The analysis suggests that potential capacity issues from the increased trips due to the proposed development can be mitigated at the intersection of Route 62 and Middlesex Avenue/High Street through signal retiming. Through additional coordination with the Wilmington DPW, the Middlesex Avenue eastbound right-turn lane may be extended as the short queuing capacity is leading to cars running over the grass area to bypass the eastbound through/left turn queue. As this is not final, only signal timing modifications were taken into consideration for this intersection.

Under 2024 Existing conditions, the intersection of Middlesex Avenue and Salem Street operates at LOS F in the afternoon peak hour and continues to degrade under 2031 No-Build and Build conditions. Coordination with the Wilmington DPW has indicated the intersection may become a roundabout in the future, so we modeled the intersection as a single lane roundabout using the GDOT Roundabout Analysis tool to evaluate the level of improvement with this mitigation option. Table 15 shows the 2031 Build Conditions (Single Lane Roundabout) and Table 16 shows the 2031 Build Conditions (Roundabout with Bypass Lanes).

Table 15 - Capacity Analysis Summary: 2031 Build Conditions (Single Lane Roundabout)

Location	Direction / Movement[a]	Weekday Morning Peak Hour					Weekday Afternoon Peak Hour				
		v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th	v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th
Middlesex Avenue at Salem Street *[unsignalized]*	Salem St EB – T	0.81	23.2	C	-	234	0.58	11.3	B	-	97
	Middlesex Ave NB – T	0.64	13.2	B	-	126	0.66	12.9	B	-	133
	Salem St SB - T	0.56	10.7	B	-	93	0.97	47.4	E	-	401
	Overall	***0.81***	***16.1***	***C***	***-***	***-***	***0.97***	***25.4***	***D***	***-***	***-***

[a] Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound;
Movement: L = Left-turn, T = Through movement, R = Right-turn
[b] Overall v/c ratio is the maximum v/c ratio among lane groups
[c] Average vehicle delay (seconds)
[d] 50th and 95th percentile queue lengths (feet) based upon average vehicle length of 25 feet
~ Volume exceeds capacity, queue is theoretically infinite; queue shown is maximum after two cycles
# 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles

With a single lane roundabout, the intersection degrades to an overall LOS C in the morning peak hour but improves to a LOS D in the afternoon peak hour, where more significant queuing issues are indicated. Depending on the amount of right-of-way, bypass lanes would improve operations further for the Salem Street westbound approach and Salem Street Southbound approach as shown in Table 16.

Table 16 - Capacity Analysis Summary: 2031 Build Conditions (Roundabout with Bypass Lanes)

Location	Direction / Movement[a]	Weekday Morning Peak Hour					Weekday Afternoon Peak Hour				
		v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th	v/c Ratio[b]	Delay[c]	LOS	Queue[d] 50th	Queue[d] 95th
Middlesex Avenue at Salem Street *[unsignalized]*	Salem St EB – T	0.32	7.7	A	-	37	0.23	5.8	A	-	22
	Salem St EB – R	0.49	10.4	B	-	71	0.36	7.4	A	-	41
	Middlesex Ave NB – T	0.64	13.2	B	-	126	0.66	12.9	B	-	133
	Salem St SB - T	0.38	7.5	A	-	46	0.37	8.9	A	-	44
	Salem St SB - R	0.19	5.2	A	-	18	0.60	13.9	B	-	104
	Overall	***0.64***	***10.3***	***B***	***-***	***-***	***0.66***	***10.6***	***B***	***-***	***-***

[a] Direction: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound;
Movement: L = Left-turn, T = Through movement, R = Right-turn
[b] Overall v/c ratio is the maximum v/c ratio among lane groups
[c] Average vehicle delay (seconds)
[d] 50th and 95th percentile queue lengths (feet) based upon average vehicle length of 25 feet
~ Volume exceeds capacity, queue is theoretically infinite; queue shown is maximum after two cycles
# 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles

The analysis suggests a roundabout could significantly improve operations at the intersection of Middlesex Avenue and Salem Street in the afternoon peak hour from LOS F to B overall and reducing the delay to 10.6 seconds. In the morning peak hour LOS B would be maintained for the Middlesex Avenue northbound approach and LOS A would be maintained for the Salem Street approaches. Overall, a roundabout is deemed appropriate given the operational deficiencies and significant queuing at this intersection.

9 Sight Distance

Stopping Sight Distance (SSD) is the length of the roadway ahead that is visible to the driver and should be long enough to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path. Stopping sight distance is the sum of the distance traversed by the vehicle from the instant the driver sights an object necessitating a stop to the instant the brakes are applied, and the distance needed to stop the vehicle from the instant brake application begins.

According to Case B1 in Section 9 from *AASHTO: A Policy on Geometric Design of Highways and Streets 6th edition*, Intersection Sight Distance (ISD) is the recommended length of the leg of the departure sight triangle along the major road in both directions for a vehicle stopped on the minor road waiting to depart that would cause a vehicle on the major roadway to slow down to 70% of its speed. The critical departure sight triangles for the Site Driveway(s) at Ballardvale Street and Salem Street are for traffic approaching from either the left or right. The SSD and ISD values associated with a given design speed are shown in **Error! Reference source not found.**.

Table 17 – Sight Distance Criteria

Design Speed (mph)	Design Stopping Sight Distance[1] (feet)	Recommended Intersection Sight Distance[2] (feet)
15	80	170
20	115	225
25	155	280
30	200	335
35	250	390
40	305	445
45	360	500
50	425	555
55	495	610
60	570	665
65	645	720
70	730	775
75	820	830
80	910	885

Source: *A Policy on Geometric Design of Highways and Streets, AASHTO, Washington DC (2011)*

[1]Design value based on a grade of less than 3%, a brake reaction distance predicted on a time of 2.5 seconds and a deceleration rate of 11.2 feet per second squared

[2]Recommended value based on Case B1 - a stopped passenger car to turn left onto a two-lane highway with no median and grades 3% or less

Standard practice is to use the 85th percentile speed or 5 MPH over the posted speed limit as the design speed. The posted speed limit for Ballardvale Street and Salem Street is 25 mph. Just north of the intersection of Ballardvale Street and Salem Street, there is a 20 mph posted speed limit for the southbound direction. However, a posted speed limit of 25 mph was assumed for sight distance purposes to be conservative. According to their respective speed limit, the sight distances were selected for comparison between the site-measured and the

calculated. For both streets, sight distance was measured at approximately 10 feet from the edge of pavement based on observed driving behavior. Table summarizes the sight distance evaluation.

Table 18 – Sight Distance Evaluation

Intersecting Street	Stopping Sight Distance (SSD)			Intersection Sight Distance (ISD)		
	Traveling	Calculated	Measured	Looking	Calculated	Measured
Ballardvale Street and Proposed Bus Driveway	NB	200’	375’	Left	335’	>500’
	SB	200’	> 500’	Right	335’	375’
Salem Street and Proposed School Driveway	EB	200’	> 500’	Left	335’	425’
	WB	200’	425’	Right	335’	350’

As shown in Table 18, the geometries of the adjacent roadways provide ample sight distance. The SSD is adequate for both the northbound and southbound traffic on Ballardvale Street and the eastbound and westbound traffic on Salem Street, and the ISD is also adequate for vehicles exiting the Site Driveways onto Ballardvale Street and Salem Street.

10 Conclusions and Recommendations

10.1 Conclusions

Nitsch has prepared this Traffic Impact Study (TIS) for the proposed redevelopment of the North Intermediate school at 320 Salem Street in Wilmington, MA.

We studied six existing intersections, two signalized and four unsignalized, to establish the impact the proposed school would have on intersection traffic operations.

The crash data over the last five years available from MassDOT indicates that all six study intersections have crash rates below the District 4 and statewide averages. No fatalities occurred amongst the crashes identified.

For future conditions, we projected the existing traffic volumes within the study area over a 7-year period to the horizon year 2031 using an annual growth rate of 0.25%, based on expected regional growth and added vehicle trips expected to be generated by four development projects in the study area.

We used ITE trip generation and enrollment data to estimate trips generated by the development with adjustments made to account for the C.A.R.E.S. program. We distributed the new vehicle trips through the roadway network using the assumed travel routes based on a student population density map and applied a separate distribution to buses based on their existing routes.

We performed a vehicle capacity analysis to compare the weekday morning and afternoon peak hours of the 2024 Existing conditions, 2031 No-Build conditions, and 2031 Build Conditions for each of the study intersections. Under existing conditions, our analysis indicates operational issues at the intersection of Salem Street and Middlesex Avenue. The delay and v/c ratios for the study intersections are expected to significantly increase under 2031 No-Build Conditions, and they would continue to increase under 2031 Build Conditions. At the intersection of Route 62 and Middlesex Avenue/High Street, traffic generated from the proposed development causes the Middlesex Avenue eastbound shared through/left movement to operate at LOS F during both peak hours under the 2031 Build Conditions. The proposed site driveways are expected to operate at acceptable LOS D or better.

Stopping sight distance and intersection sight distance was evaluated at the proposed driveways, with all driveways meeting or exceeding the minimum required sight distance.

10.2 Recommendations

The proposed school is expected to cause operational issues at the intersection of Route 62 and Middlesex Avenue/High Street. We performed a vehicle capacity analysis at that intersection under 2031 Build Conditions using optimized signal timing, which improves delays during both peak hours and improves the LOS from F to E in the morning peak hour. Nitsch recommends that this intersection be retimed as part of the project to minimize delay from the added traffic.

The existing conditions analysis indicates a capacity issue at the intersection of Salem Street and Middlesex Avenue. Based off an initial capacity analysis review, a roundabout may be an appropriate control strategy to increase capacity at this intersection and can improve operations in the afternoon peak hour from LOS F to LOS D with a single lane or LOS B with bypass lanes, and improve delays and queuing significantly.

APPENDIX CONTENTS

Appendix	Description
A	Traffic Count Data
B	MassDOT's 2023 Weekday Seasonal Adjustment Factors
C	Crash Rate Worksheets
D	Additional Developments' Traffic Studies
E	Site Plan Alternatives
F	C.A.R.E.S Enrollment Data
G	Trip and Parking Generation Worksheets
H	School Catchment Map
I	Capacity Analysis

Appendix A: Traffic Count Data

Ballardvale Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-A

Count Date: **Wednesday, October 23, 2024**
Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	2	0	0	0	2
12:15 AM	0	0	2	0	0	0	2
12:30 AM	0	0	3	0	0	0	3
12:45 AM	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	1	0	0	0	1
1:30 AM	0	0	2	0	0	0	2
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	0	0	0	0	0
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	0	0	0	0	0
3:15 AM	0	0	3	0	0	0	3
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	5	0	0	0	5
4:00 AM	0	0	5	0	0	0	5
4:15 AM	0	0	7	0	0	0	7
4:30 AM	0	0	5	0	0	0	5
4:45 AM	0	0	9	0	0	0	9
5:00 AM	0	0	6	0	2	0	8
5:15 AM	0	0	8	0	1	0	9
5:30 AM	0	0	21	0	2	0	23
5:45 AM	0	0	32	0	1	0	33
6:00 AM	0	0	20	1	0	0	21
6:15 AM	0	0	28	0	0	0	28
6:30 AM	0	1	35	0	0	0	36
6:45 AM	0	0	59	0	1	0	60
7:00 AM	0	1	55	0	0	0	56
7:15 AM	0	0	95	0	1	2	98
7:30 AM	0	0	75	1	1	0	77
7:45 AM	0	2	99	0	0	0	101
8:00 AM	0	0	74	0	2	0	76
8:15 AM	0	0	71	1	1	0	73
8:30 AM	1	1	72	0	3	0	77
8:45 AM	0	0	96	0	4	0	100
9:00 AM	0	0	68	0	3	0	71
9:15 AM	0	1	43	0	2	0	46
9:30 AM	0	0	37	0	2	0	39
9:45 AM	0	0	35	0	6	0	41
10:00 AM	0	0	24	0	1	0	25
10:15 AM	0	0	32	0	2	0	34
10:30 AM	0	0	27	0	2	0	29
10:45 AM	0	1	34	0	2	1	38
11:00 AM	0	0	36	0	1	0	37
11:15 AM	0	0	40	0	2	0	42
11:30 AM	0	1	34	0	0	0	35
11:45 AM	0	0	38	0	0	0	38
AM Total	**1**	**8**	**1346**	**3**	**42**	**3**	**1403**
Percentage	**0.07%**	**0.57%**	**95.94%**	**0.21%**	**2.99%**	**0.21%**	
AM Peak	**7:45 AM**	**7:00 AM**	**7:15 AM**	**7:30 AM**	**9:00 AM**	**6:30 AM**	**7:15 AM**
Volume	**1**	**3**	**343**	**2**	**13**	**2**	**352**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	45	0	2	0	47
12:15 PM	0	1	35	1	3	1	41
12:30 PM	0	1	54	0	0	1	56
12:45 PM	0	0	54	0	1	0	55
1:00 PM	0	0	41	0	1	0	42
1:15 PM	0	2	39	0	3	0	44
1:30 PM	0	0	40	1	1	0	42
1:45 PM	0	0	41	0	0	0	41
2:00 PM	0	1	33	0	1	0	35
2:15 PM	0	0	44	1	1	0	46
2:30 PM	0	0	51	0	2	0	53
2:45 PM	0	0	66	0	1	0	67
3:00 PM	0	1	52	0	2	0	55
3:15 PM	0	1	79	1	2	0	83
3:30 PM	0	0	67	0	1	0	68
3:45 PM	0	0	66	0	0	1	67
4:00 PM	0	0	70	0	1	0	71
4:15 PM	0	0	60	0	1	0	61
4:30 PM	1	1	69	0	0	0	71
4:45 PM	0	0	72	0	0	0	72
5:00 PM	0	1	71	0	0	0	72
5:15 PM	0	0	67	0	0	0	67
5:30 PM	0	1	68	0	0	0	69
5:45 PM	0	0	56	0	0	1	57
6:00 PM	0	0	57	0	2	0	59
6:15 PM	0	1	45	0	1	0	47
6:30 PM	0	0	29	0	0	0	29
6:45 PM	0	0	31	0	0	0	31
7:00 PM	0	0	26	0	0	0	26
7:15 PM	0	1	27	0	0	0	28
7:30 PM	0	0	24	0	0	0	24
7:45 PM	0	0	22	0	0	0	22
8:00 PM	0	0	14	0	0	1	15
8:15 PM	0	0	28	0	0	0	28
8:30 PM	0	0	22	0	0	0	22
8:45 PM	0	0	15	0	0	0	15
9:00 PM	0	0	10	0	0	0	10
9:15 PM	0	0	12	0	0	0	12
9:30 PM	0	0	6	0	0	0	6
9:45 PM	0	0	11	0	0	0	11
10:00 PM	0	0	9	0	0	0	9
10:15 PM	0	0	7	0	0	0	7
10:30 PM	0	0	3	0	0	0	3
10:45 PM	0	0	4	0	0	0	4
11:00 PM	0	0	1	0	0	0	1
11:15 PM	0	0	9	0	0	0	9
11:30 PM	0	0	3	0	0	0	3
11:45 PM	0	0	1	0	0	0	1
PM Total	**1**	**12**	**1756**	**4**	**26**	**5**	**1804**
Percentage	**0.06%**	**0.67%**	**97.34%**	**0.22%**	**1.44%**	**0.28%**	
PM Peak	**3:45 PM**	**12:30 PM**	**3:15 PM**	**1:30 PM**	**2:30 PM**	**12:00 PM**	**3:15 PM**
Volume	**1**	**3**	**282**	**2**	**7**	**2**	**289**
Day Total	**2**	**20**	**3102**	**7**	**68**	**8**	**3207**
Percentage	**0.06%**	**0.62%**	**96.73%**	**0.22%**	**2.12%**	**0.25%**	

Ballardvale Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-A

Count Date: **Thursday, October 24, 2024**
Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	4	0	0	0	4
12:15 AM	0	0	1	0	0	0	1
12:30 AM	0	0	1	0	0	0	1
12:45 AM	0	0	2	0	0	0	2
1:00 AM	0	0	1	0	0	0	1
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	1	0	0	0	1
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	1	0	0	0	1
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	1	0	0	0	1
3:00 AM	0	0	1	0	0	0	1
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	1	0	0	0	1
3:45 AM	0	0	6	0	0	0	6
4:00 AM	0	0	1	0	0	0	1
4:15 AM	0	0	4	0	0	0	4
4:30 AM	0	0	2	0	0	0	2
4:45 AM	0	0	8	0	0	0	8
5:00 AM	0	1	4	0	0	0	5
5:15 AM	0	0	14	0	0	0	14
5:30 AM	0	0	18	0	0	0	18
5:45 AM	0	0	26	0	1	0	27
6:00 AM	0	0	22	0	0	0	22
6:15 AM	0	0	30	0	0	0	30
6:30 AM	0	0	34	0	0	0	34
6:45 AM	0	0	52	0	0	0	52
7:00 AM	0	1	62	0	0	0	63
7:15 AM	0	0	71	0	0	0	71
7:30 AM	0	1	77	0	2	0	80
7:45 AM	0	1	89	0	2	0	92
8:00 AM	0	0	56	0	2	1	59
8:15 AM	0	0	73	0	0	0	73
8:30 AM	0	0	56	0	2	0	58
8:45 AM	0	0	92	0	1	0	93
9:00 AM	0	0	49	0	1	0	50
9:15 AM	0	1	40	0	1	0	42
9:30 AM	0	0	49	1	2	0	52
9:45 AM	0	0	32	0	1	0	33
10:00 AM	0	0	44	0	3	0	47
10:15 AM	0	1	22	1	3	0	27
10:30 AM	0	0	19	0	1	0	20
10:45 AM	0	0	29	0	3	0	32
11:00 AM	0	0	45	0	2	0	47
11:15 AM	0	0	27	0	2	0	29
11:30 AM	0	1	31	0	1	0	33
11:45 AM	0	0	37	0	0	0	37
AM Total	**0**	**7**	**1238**	**2**	**30**	**1**	**1278**
Percentage	**0.00%**	**0.55%**	**96.87%**	**0.16%**	**2.35%**	**0.08%**	
AM Peak	**12:00 AM**	**7:00 AM**	**7:00 AM**	**9:30 AM**	**10:00 AM**	**7:15 AM**	**7:00 AM**
Volume	**0**	**3**	**299**	**2**	**10**	**1**	**306**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	36	0	0	0	36
12:15 PM	0	0	50	0	0	0	50
12:30 PM	0	0	46	0	1	0	47
12:45 PM	0	0	48	0	0	0	48
1:00 PM	0	0	43	0	3	0	46
1:15 PM	0	0	51	0	1	0	52
1:30 PM	0	0	48	1	4	0	53
1:45 PM	0	1	43	0	1	0	45
2:00 PM	0	0	35	0	3	0	38
2:15 PM	0	0	41	1	0	0	42
2:30 PM	0	0	45	0	1	0	46
2:45 PM	0	0	55	0	0	0	55
3:00 PM	0	0	63	0	3	0	66
3:15 PM	0	0	67	0	2	0	69
3:30 PM	0	0	83	0	1	0	84
3:45 PM	0	0	54	1	0	0	55
4:00 PM	0	0	64	0	0	0	64
4:15 PM	0	0	79	0	1	1	81
4:30 PM	0	0	67	0	4	0	71
4:45 PM	0	0	79	0	0	0	79
5:00 PM	0	0	76	0	0	0	76
5:15 PM	0	0	65	1	0	0	66
5:30 PM	0	0	72	0	0	0	72
5:45 PM	0	0	72	0	1	0	73
6:00 PM	0	1	46	0	0	0	47
6:15 PM	0	0	42	0	0	0	42
6:30 PM	0	0	34	0	0	0	34
6:45 PM	0	0	23	0	0	0	23
7:00 PM	0	0	26	0	0	0	26
7:15 PM	0	0	27	0	0	0	27
7:30 PM	0	0	25	0	0	0	25
7:45 PM	0	0	30	0	0	0	30
8:00 PM	0	0	18	0	0	0	18
8:15 PM	0	0	22	0	0	0	22
8:30 PM	0	0	29	0	0	0	29
8:45 PM	0	0	19	0	0	0	19
9:00 PM	0	0	13	0	0	0	13
9:15 PM	0	0	9	0	0	0	9
9:30 PM	0	0	7	0	0	0	7
9:45 PM	0	0	4	0	0	0	4
10:00 PM	0	0	6	0	0	0	6
10:15 PM	0	0	7	0	0	0	7
10:30 PM	0	0	4	0	0	0	4
10:45 PM	0	0	7	0	0	0	7
11:00 PM	0	0	3	0	0	0	3
11:15 PM	0	0	3	0	0	0	3
11:30 PM	0	0	4	0	0	0	4
11:45 PM	0	0	1	0	0	0	1
PM Total	**0**	**2**	**1791**	**4**	**26**	**1**	**1824**
Percentage	**0.00%**	**0.11%**	**98.19%**	**0.22%**	**1.43%**	**0.05%**	
PM Peak	**12:00 PM**	**1:00 PM**	**4:15 PM**	**1:30 PM**	**1:00 PM**	**3:30 PM**	**4:15 PM**
Volume	**0**	**1**	**301**	**2**	**9**	**1**	**307**
Day Total	**0**	**9**	**3029**	**6**	**56**	**2**	**3102**
Percentage	**0.00%**	**0.29%**	**97.65%**	**0.19%**	**1.81%**	**0.06%**	

Ballardvale Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-A

Count Date: **Wednesday, October 23, 2024**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	2	0	0	0	2
12:15 AM	0	0	5	0	1	0	6
12:30 AM	0	0	2	0	0	0	2
12:45 AM	0	0	3	0	0	0	3
1:00 AM	0	0	1	0	0	0	1
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0
1:45 AM	0	0	6	0	0	0	6
2:00 AM	0	0	5	0	0	0	5
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	2	0	0	0	2
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	5	0	0	0	5
3:15 AM	0	0	1	0	0	0	1
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	5	0	0	0	5
4:00 AM	0	0	2	0	0	0	2
4:15 AM	0	0	6	0	0	0	6
4:30 AM	0	0	1	0	0	0	1
4:45 AM	0	0	5	0	0	0	5
5:00 AM	0	0	2	0	0	0	2
5:15 AM	0	0	6	0	0	0	6
5:30 AM	0	0	9	0	1	0	10
5:45 AM	0	0	16	0	1	0	17
6:00 AM	0	1	17	1	1	0	20
6:15 AM	0	0	29	0	1	0	30
6:30 AM	0	0	51	1	1	0	53
6:45 AM	0	0	74	0	1	0	75
7:00 AM	0	1	115	2	2	0	120
7:15 AM	0	1	87	0	0	1	89
7:30 AM	0	0	76	1	4	0	81
7:45 AM	0	0	76	0	0	0	76
8:00 AM	0	0	65	0	1	2	68
8:15 AM	0	0	73	0	3	1	77
8:30 AM	0	0	136	1	3	0	140
8:45 AM	0	0	94	0	2	1	97
9:00 AM	0	0	115	1	5	2	123
9:15 AM	0	0	42	0	1	0	43
9:30 AM	0	0	45	0	5	1	51
9:45 AM	0	0	50	0	4	0	54
10:00 AM	0	0	42	0	4	0	46
10:15 AM	0	0	31	0	2	0	33
10:30 AM	0	0	35	0	4	0	39
10:45 AM	0	0	37	0	2	1	40
11:00 AM	0	0	52	0	1	0	53
11:15 AM	0	0	49	0	4	0	53
11:30 AM	0	0	67	0	2	0	69
11:45 AM	0	0	67	0	1	0	68
AM Total	**0**	**3**	**1615**	**7**	**57**	**9**	**1691**
Percentage	**0.00%**	**0.18%**	**95.51%**	**0.41%**	**3.37%**	**0.53%**	
AM Peak	**12:00 AM**	**6:30 AM**	**8:15 AM**	**6:15 AM**	**9:00 AM**	**8:00 AM**	**8:15 AM**
Volume	**0**	**2**	**418**	**3**	**15**	**4**	**437**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	1	77	0	3	0	81
12:15 PM	0	0	74	0	2	0	76
12:30 PM	0	0	67	0	0	0	67
12:45 PM	0	1	52	0	0	0	53
1:00 PM	0	0	63	0	2	1	66
1:15 PM	0	0	55	0	2	0	57
1:30 PM	0	0	86	0	2	0	88
1:45 PM	1	0	75	1	1	0	78
2:00 PM	0	2	107	0	4	0	113
2:15 PM	0	0	73	0	1	0	74
2:30 PM	0	0	89	0	1	0	90
2:45 PM	0	0	82	0	0	0	82
3:00 PM	0	0	85	2	0	0	87
3:15 PM	0	1	131	0	3	0	135
3:30 PM	0	1	115	1	2	0	119
3:45 PM	0	2	142	0	1	0	145
4:00 PM	0	0	140	0	1	2	143
4:15 PM	1	0	167	1	2	0	171
4:30 PM	0	3	169	0	0	0	172
4:45 PM	0	1	130	0	3	0	134
5:00 PM	1	1	162	0	0	1	165
5:15 PM	0	1	143	0	1	0	145
5:30 PM	0	1	95	0	0	0	96
5:45 PM	0	2	99	0	1	0	102
6:00 PM	0	0	85	0	1	0	86
6:15 PM	0	2	66	0	0	0	68
6:30 PM	0	2	72	0	1	1	76
6:45 PM	0	0	53	1	0	0	54
7:00 PM	0	0	39	0	0	2	41
7:15 PM	0	0	49	0	1	0	50
7:30 PM	0	0	42	0	1	0	43
7:45 PM	0	0	50	0	0	0	50
8:00 PM	0	0	38	0	0	0	38
8:15 PM	0	0	33	0	0	0	33
8:30 PM	0	1	24	0	0	0	25
8:45 PM	0	1	33	0	0	0	34
9:00 PM	0	0	29	0	0	0	29
9:15 PM	0	1	24	0	0	0	25
9:30 PM	0	0	16	0	0	0	16
9:45 PM	0	0	11	0	0	0	11
10:00 PM	0	0	9	0	0	0	9
10:15 PM	0	0	11	0	0	0	11
10:30 PM	0	0	9	0	0	0	9
10:45 PM	0	0	11	0	0	0	11
11:00 PM	0	0	13	0	0	0	13
11:15 PM	0	0	3	0	0	0	3
11:30 PM	0	0	11	0	0	0	11
11:45 PM	0	0	4	0	0	0	4
PM Total	**3**	**24**	**3213**	**6**	**36**	**7**	**3289**
Percentage	**0.09%**	**0.73%**	**97.69%**	**0.18%**	**1.09%**	**0.21%**	
PM Peak	**4:15 PM**	**4:30 PM**	**4:15 PM**	**2:45 PM**	**1:15 PM**	**6:15 PM**	**4:15 PM**
Volume	**2**	**6**	**628**	**3**	**9**	**3**	**642**
Day Total	**3**	**27**	**4828**	**13**	**93**	**16**	**4980**
Percentage	**0.06%**	**0.54%**	**96.95%**	**0.26%**	**1.87%**	**0.32%**	

Ballardvale Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-A

Count Date: **Thursday, October 24, 2024**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	5	0	0	0	5
12:15 AM	0	0	3	0	0	0	3
12:30 AM	0	0	2	0	0	0	2
12:45 AM	0	0	2	0	0	0	2
1:00 AM	0	0	2	0	0	0	2
1:15 AM	0	0	2	0	0	0	2
1:30 AM	0	0	1	0	0	0	1
1:45 AM	0	0	0	0	0	0	0
2:00 AM	0	0	4	0	0	0	4
2:15 AM	0	0	2	0	0	0	2
2:30 AM	0	0	1	0	0	0	1
2:45 AM	0	0	0	0	0	0	0
3:00 AM	0	0	5	0	0	0	5
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	1	0	0	0	1
4:00 AM	0	0	3	0	0	0	3
4:15 AM	0	0	3	0	1	0	4
4:30 AM	0	0	3	0	0	0	3
4:45 AM	0	0	4	0	0	0	4
5:00 AM	0	0	2	0	0	0	2
5:15 AM	0	0	5	0	0	0	5
5:30 AM	0	0	13	1	2	0	16
5:45 AM	0	0	17	0	1	0	18
6:00 AM	0	0	16	1	0	0	17
6:15 AM	0	0	25	0	1	0	26
6:30 AM	0	0	46	0	1	0	47
6:45 AM	0	0	68	1	2	0	71
7:00 AM	0	0	53	1	1	0	55
7:15 AM	0	0	66	0	0	0	66
7:30 AM	0	0	73	1	2	0	76
7:45 AM	0	0	67	0	1	0	68
8:00 AM	0	1	67	0	1	0	69
8:15 AM	0	1	70	0	4	1	76
8:30 AM	0	0	57	0	1	0	58
8:45 AM	0	0	73	2	0	0	75
9:00 AM	0	0	45	0	1	0	46
9:15 AM	0	0	45	0	0	0	45
9:30 AM	0	0	44	0	2	1	47
9:45 AM	0	0	33	0	0	0	33
10:00 AM	0	0	33	0	7	0	40
10:15 AM	0	1	37	0	2	0	40
10:30 AM	0	1	41	0	5	0	47
10:45 AM	0	0	47	0	2	1	50
11:00 AM	0	1	44	0	2	0	47
11:15 AM	0	0	66	0	5	1	72
11:30 AM	0	0	55	0	3	0	58
11:45 AM	0	1	71	0	0	0	72
AM Total	**0**	**6**	**1325**	**7**	**47**	**4**	**1389**
Percentage	**0.00%**	**0.43%**	**95.39%**	**0.50%**	**3.38%**	**0.29%**	
AM Peak	**12:00 AM**	**10:15 AM**	**7:30 AM**	**6:45 AM**	**10:00 AM**	**10:30 AM**	**7:30 AM**
Volume	**0**	**3**	**277**	**3**	**16**	**2**	**289**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	1	82	0	2	0	85
12:15 PM	0	0	74	0	4	0	78
12:30 PM	0	0	72	0	3	0	75
12:45 PM	0	0	61	0	2	0	63
1:00 PM	0	0	63	0	2	0	65
1:15 PM	0	0	67	1	1	0	69
1:30 PM	0	1	81	0	1	0	83
1:45 PM	0	0	66	1	0	0	67
2:00 PM	0	1	73	1	0	0	75
2:15 PM	0	0	74	0	1	0	75
2:30 PM	1	0	83	0	0	0	84
2:45 PM	0	1	73	0	0	0	74
3:00 PM	0	0	100	2	1	1	104
3:15 PM	0	0	133	0	1	0	134
3:30 PM	0	0	131	0	3	0	134
3:45 PM	0	0	154	1	1	1	157
4:00 PM	0	1	134	1	1	0	137
4:15 PM	0	1	169	1	0	0	171
4:30 PM	0	0	170	0	3	0	173
4:45 PM	0	1	146	0	0	0	147
5:00 PM	0	1	159	0	2	0	162
5:15 PM	0	1	110	0	2	0	113
5:30 PM	0	1	106	0	0	0	107
5:45 PM	0	1	93	0	0	0	94
6:00 PM	0	0	87	1	0	0	88
6:15 PM	0	0	86	0	0	0	86
6:30 PM	0	0	58	0	0	1	59
6:45 PM	0	0	57	0	1	0	58
7:00 PM	0	0	48	0	0	0	48
7:15 PM	0	0	36	0	1	0	37
7:30 PM	0	0	47	0	2	0	49
7:45 PM	0	0	41	0	0	0	41
8:00 PM	0	0	47	0	0	0	47
8:15 PM	0	0	36	0	0	0	36
8:30 PM	0	0	40	0	0	0	40
8:45 PM	0	0	21	0	0	0	21
9:00 PM	0	0	23	0	0	0	23
9:15 PM	0	0	29	0	0	0	29
9:30 PM	0	0	16	0	0	0	16
9:45 PM	0	0	13	0	0	0	13
10:00 PM	0	0	27	0	0	0	27
10:15 PM	0	0	8	0	0	0	8
10:30 PM	0	0	9	0	0	0	9
10:45 PM	0	0	9	0	0	0	9
11:00 PM	0	0	10	0	0	0	10
11:15 PM	0	0	8	0	0	0	8
11:30 PM	0	0	11	0	0	0	11
11:45 PM	0	0	4	0	0	0	4
PM Total	**1**	**11**	**3245**	**9**	**34**	**3**	**3303**
Percentage	**0.03%**	**0.33%**	**98.24%**	**0.27%**	**1.03%**	**0.09%**	
PM Peak	**1:45 PM**	**4:45 PM**	**4:15 PM**	**1:15 PM**	**12:00 PM**	**3:00 PM**	**4:15 PM**
Volume	**1**	**4**	**644**	**3**	**11**	**2**	**653**
Day Total	**1**	**17**	**4570**	**16**	**81**	**7**	**4692**
Percentage	**0.02%**	**0.36%**	**97.40%**	**0.34%**	**1.73%**	**0.15%**	

Ballardvale Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File # **2540244 ATR-A**

Direction: **NB**

Weekly Report

Day	Wednesday		Thursday												Week	
Date	10/23/24		10/24/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	2	47	4	36	0	0	0	0	0	0	0	0	0	0	3	42
12:15	2	41	1	50	0	0	0	0	0	0	0	0	0	0	2	46
12:30	3	56	1	47	0	0	0	0	0	0	0	0	0	0	2	52
12:45	0	55	2	48	0	0	0	0	0	0	0	0	0	0	1	52
1:00	0	42	1	46	0	0	0	0	0	0	0	0	0	0	1	44
1:15	1	44	0	52	0	0	0	0	0	0	0	0	0	0	1	48
1:30	2	42	1	53	0	0	0	0	0	0	0	0	0	0	2	48
1:45	1	41	1	45	0	0	0	0	0	0	0	0	0	0	1	43
2:00	0	35	1	38	0	0	0	0	0	0	0	0	0	0	1	37
2:15	1	46	1	42	0	0	0	0	0	0	0	0	0	0	1	44
2:30	1	53	1	46	0	0	0	0	0	0	0	0	0	0	1	50
2:45	2	67	1	55	0	0	0	0	0	0	0	0	0	0	2	61
3:00	0	55	1	66	0	0	0	0	0	0	0	0	0	0	1	61
3:15	3	83	0	69	0	0	0	0	0	0	0	0	0	0	2	76
3:30	3	68	1	84	0	0	0	0	0	0	0	0	0	0	2	76
3:45	5	67	6	55	0	0	0	0	0	0	0	0	0	0	6	61
4:00	5	71	1	64	0	0	0	0	0	0	0	0	0	0	3	68
4:15	7	61	4	81	0	0	0	0	0	0	0	0	0	0	6	71
4:30	5	71	2	71	0	0	0	0	0	0	0	0	0	0	4	71
4:45	9	72	8	79	0	0	0	0	0	0	0	0	0	0	9	76
5:00	8	72	5	76	0	0	0	0	0	0	0	0	0	0	7	74
5:15	9	67	14	66	0	0	0	0	0	0	0	0	0	0	12	67
5:30	23	69	18	72	0	0	0	0	0	0	0	0	0	0	21	71
5:45	33	57	27	73	0	0	0	0	0	0	0	0	0	0	30	65
6:00	21	59	22	47	0	0	0	0	0	0	0	0	0	0	22	53
6:15	28	47	30	42	0	0	0	0	0	0	0	0	0	0	29	45
6:30	36	29	34	34	0	0	0	0	0	0	0	0	0	0	35	32
6:45	60	31	52	23	0	0	0	0	0	0	0	0	0	0	56	27
7:00	56	26	63	26	0	0	0	0	0	0	0	0	0	0	60	26
7:15	98	28	71	27	0	0	0	0	0	0	0	0	0	0	85	28
7:30	77	24	80	25	0	0	0	0	0	0	0	0	0	0	79	25
7:45	101	22	92	30	0	0	0	0	0	0	0	0	0	0	97	26
8:00	76	15	59	18	0	0	0	0	0	0	0	0	0	0	68	17
8:15	73	28	73	22	0	0	0	0	0	0	0	0	0	0	73	25
8:30	77	22	58	29	0	0	0	0	0	0	0	0	0	0	68	26
8:45	100	15	93	19	0	0	0	0	0	0	0	0	0	0	97	17
9:00	71	10	50	13	0	0	0	0	0	0	0	0	0	0	61	12
9:15	46	12	42	9	0	0	0	0	0	0	0	0	0	0	44	11
9:30	39	6	52	7	0	0	0	0	0	0	0	0	0	0	46	7
9:45	41	11	33	4	0	0	0	0	0	0	0	0	0	0	37	8
10:00	25	9	47	6	0	0	0	0	0	0	0	0	0	0	36	8
10:15	34	7	27	7	0	0	0	0	0	0	0	0	0	0	31	7
10:30	29	3	20	4	0	0	0	0	0	0	0	0	0	0	25	4
10:45	38	4	32	7	0	0	0	0	0	0	0	0	0	0	35	6
11:00	37	1	47	3	0	0	0	0	0	0	0	0	0	0	42	2
11:15	42	9	29	3	0	0	0	0	0	0	0	0	0	0	36	6
11:30	35	3	33	4	0	0	0	0	0	0	0	0	0	0	34	4
11:45	38	1	37	1	0	0	0	0	0	0	0	0	0	0	38	1
Total	**1403**	**1804**	**1278**	**1824**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1341**	**1814**
Day Total	**3207**		**3102**		**0**		**0**		**0**		**0**		**0**		**3155**	
Peak HR	**7:15 AM**	**3:15 PM**	**7:00 AM**	**4:15 PM**											**7:15 AM**	**4:15 PM**
Volume	**352**	**289**	**306**	**307**											**327**	**292**

Ballardvale Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File # 2540244 ATR-A

Direction: SB

Weekly Report

Day	Wednesday		Thursday												Week	
Date	10/23/24		10/24/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	2	81	5	85	0	0	0	0	0	0	0	0	0	0	4	83
12:15	6	76	3	78	0	0	0	0	0	0	0	0	0	0	5	77
12:30	2	67	2	75	0	0	0	0	0	0	0	0	0	0	2	71
12:45	3	53	2	63	0	0	0	0	0	0	0	0	0	0	3	58
1:00	1	66	2	65	0	0	0	0	0	0	0	0	0	0	2	66
1:15	0	57	2	69	0	0	0	0	0	0	0	0	0	0	1	63
1:30	0	88	1	83	0	0	0	0	0	0	0	0	0	0	1	86
1:45	6	78	0	67	0	0	0	0	0	0	0	0	0	0	3	73
2:00	5	113	4	75	0	0	0	0	0	0	0	0	0	0	5	94
2:15	1	74	2	75	0	0	0	0	0	0	0	0	0	0	2	75
2:30	2	90	1	84	0	0	0	0	0	0	0	0	0	0	2	87
2:45	2	82	0	74	0	0	0	0	0	0	0	0	0	0	1	78
3:00	5	87	5	104	0	0	0	0	0	0	0	0	0	0	5	96
3:15	1	135	0	134	0	0	0	0	0	0	0	0	0	0	1	135
3:30	3	119	3	134	0	0	0	0	0	0	0	0	0	0	3	127
3:45	5	145	1	157	0	0	0	0	0	0	0	0	0	0	3	151
4:00	2	143	3	137	0	0	0	0	0	0	0	0	0	0	3	140
4:15	6	171	4	171	0	0	0	0	0	0	0	0	0	0	5	171
4:30	1	172	3	173	0	0	0	0	0	0	0	0	0	0	2	173
4:45	5	134	4	147	0	0	0	0	0	0	0	0	0	0	5	141
5:00	2	165	2	162	0	0	0	0	0	0	0	0	0	0	2	164
5:15	6	145	5	113	0	0	0	0	0	0	0	0	0	0	6	129
5:30	10	96	16	107	0	0	0	0	0	0	0	0	0	0	13	102
5:45	17	102	18	94	0	0	0	0	0	0	0	0	0	0	18	98
6:00	20	86	17	88	0	0	0	0	0	0	0	0	0	0	19	87
6:15	30	68	26	86	0	0	0	0	0	0	0	0	0	0	28	77
6:30	53	76	47	59	0	0	0	0	0	0	0	0	0	0	50	68
6:45	75	54	71	58	0	0	0	0	0	0	0	0	0	0	73	56
7:00	120	41	55	48	0	0	0	0	0	0	0	0	0	0	88	45
7:15	89	50	66	37	0	0	0	0	0	0	0	0	0	0	78	44
7:30	81	43	76	49	0	0	0	0	0	0	0	0	0	0	79	46
7:45	76	50	68	41	0	0	0	0	0	0	0	0	0	0	72	46
8:00	68	38	69	47	0	0	0	0	0	0	0	0	0	0	69	43
8:15	77	33	76	36	0	0	0	0	0	0	0	0	0	0	77	35
8:30	140	25	58	40	0	0	0	0	0	0	0	0	0	0	99	33
8:45	97	34	75	21	0	0	0	0	0	0	0	0	0	0	86	28
9:00	123	29	46	23	0	0	0	0	0	0	0	0	0	0	85	26
9:15	43	25	45	29	0	0	0	0	0	0	0	0	0	0	44	27
9:30	51	16	47	16	0	0	0	0	0	0	0	0	0	0	49	16
9:45	54	11	33	13	0	0	0	0	0	0	0	0	0	0	44	12
10:00	46	9	40	27	0	0	0	0	0	0	0	0	0	0	43	18
10:15	33	11	40	8	0	0	0	0	0	0	0	0	0	0	37	10
10:30	39	9	47	9	0	0	0	0	0	0	0	0	0	0	43	9
10:45	40	11	50	9	0	0	0	0	0	0	0	0	0	0	45	10
11:00	53	13	47	10	0	0	0	0	0	0	0	0	0	0	50	12
11:15	53	3	72	8	0	0	0	0	0	0	0	0	0	0	63	6
11:30	69	11	58	11	0	0	0	0	0	0	0	0	0	0	64	11
11:45	68	4	72	4	0	0	0	0	0	0	0	0	0	0	70	4
Total	**1691**	**3289**	**1389**	**3303**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1540**	**3296**
Day Total	**4980**		**4692**		**0**		**0**		**0**		**0**		**0**		**4836**	
Peak HR	**8:15 AM**	**4:15 PM**	**7:30 AM**	**4:15 PM**											**8:15 AM**	**4:15 PM**
Volume	**437**	**642**	**289**	**653**											**346**	**648**

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-B

Count Date: **Wednesday, October 23, 2024**
Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	14	0	0	0	14
12:15 AM	0	0	7	0	0	0	7
12:30 AM	0	0	5	0	0	0	5
12:45 AM	0	0	2	0	0	0	2
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	3	0	0	0	3
1:45 AM	0	0	2	0	0	0	2
2:00 AM	0	0	3	0	0	0	3
2:15 AM	0	0	4	0	0	0	4
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	1	0	0	0	1
3:15 AM	0	0	2	0	0	0	2
3:30 AM	0	0	2	0	0	0	2
3:45 AM	0	0	5	0	0	0	5
4:00 AM	0	0	2	0	1	0	3
4:15 AM	0	0	4	0	0	0	4
4:30 AM	0	0	1	0	0	0	1
4:45 AM	0	0	3	0	0	0	3
5:00 AM	0	0	2	0	0	0	2
5:15 AM	0	0	4	0	0	0	4
5:30 AM	0	0	7	0	0	0	7
5:45 AM	0	0	20	0	1	0	21
6:00 AM	0	0	27	0	0	0	27
6:15 AM	0	0	21	0	1	0	22
6:30 AM	0	0	28	0	0	0	28
6:45 AM	0	0	45	0	0	1	46
7:00 AM	0	0	44	1	1	0	46
7:15 AM	1	0	56	0	0	0	57
7:30 AM	0	0	59	0	2	0	61
7:45 AM	0	0	75	0	0	0	75
8:00 AM	0	0	90	0	3	1	94
8:15 AM	0	0	83	0	3	1	87
8:30 AM	0	0	82	0	2	1	85
8:45 AM	0	0	68	5	2	0	75
9:00 AM	0	0	75	4	2	0	81
9:15 AM	0	2	66	0	5	0	73
9:30 AM	0	0	67	0	4	0	71
9:45 AM	0	0	49	0	1	0	50
10:00 AM	0	0	55	0	0	0	55
10:15 AM	0	0	63	0	3	0	66
10:30 AM	0	0	61	0	1	0	62
10:45 AM	0	0	58	0	4	0	62
11:00 AM	0	0	66	0	0	0	66
11:15 AM	0	0	68	0	6	0	74
11:30 AM	0	0	53	0	1	0	54
11:45 AM	0	0	81	0	1	0	82
AM Total	**1**	**2**	**1538**	**10**	**44**	**4**	**1599**
Percentage	**0.06%**	**0.13%**	**96.19%**	**0.63%**	**2.75%**	**0.25%**	
AM Peak	**6:30 AM**	**8:30 AM**	**7:45 AM**	**8:15 AM**	**8:45 AM**	**7:45 AM**	**7:45 AM**
Volume	**1**	**2**	**330**	**9**	**13**	**3**	**341**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	1	97	0	3	0	101
12:15 PM	0	0	76	1	5	0	82
12:30 PM	0	1	89	0	2	0	92
12:45 PM	0	0	82	0	2	0	84
1:00 PM	0	0	77	0	3	0	80
1:15 PM	1	1	75	0	3	0	80
1:30 PM	0	0	69	0	1	0	70
1:45 PM	0	0	87	0	3	0	90
2:00 PM	0	1	90	0	0	0	91
2:15 PM	0	0	127	0	1	0	128
2:30 PM	0	0	110	0	3	0	113
2:45 PM	0	0	141	0	1	0	142
3:00 PM	0	1	169	2	2	0	174
3:15 PM	0	1	134	4	1	0	140
3:30 PM	0	2	147	1	4	0	154
3:45 PM	1	0	144	1	0	0	146
4:00 PM	0	1	153	0	2	0	156
4:15 PM	0	0	146	0	0	0	146
4:30 PM	0	0	141	0	0	0	141
4:45 PM	0	2	164	0	0	0	166
5:00 PM	0	2	159	0	0	0	161
5:15 PM	0	1	149	0	1	0	151
5:30 PM	1	1	141	0	1	0	144
5:45 PM	0	1	126	0	0	0	127
6:00 PM	0	1	97	1	2	0	101
6:15 PM	0	1	105	0	0	0	106
6:30 PM	0	1	81	0	0	0	82
6:45 PM	0	0	82	0	0	0	82
7:00 PM	0	0	59	0	0	0	59
7:15 PM	0	0	76	0	0	0	76
7:30 PM	0	1	77	0	0	0	78
7:45 PM	0	0	64	0	0	0	64
8:00 PM	0	0	63	0	0	0	63
8:15 PM	0	0	67	0	0	0	67
8:30 PM	0	0	46	0	0	0	46
8:45 PM	0	2	45	0	0	0	47
9:00 PM	0	0	45	0	0	1	46
9:15 PM	0	0	39	0	0	0	39
9:30 PM	0	0	19	0	0	0	19
9:45 PM	0	1	17	0	0	0	18
10:00 PM	0	0	18	0	0	0	18
10:15 PM	0	0	20	0	0	0	20
10:30 PM	0	0	25	0	0	0	25
10:45 PM	0	0	13	0	0	0	13
11:00 PM	0	0	21	0	0	1	22
11:15 PM	0	0	26	0	0	0	26
11:30 PM	0	0	8	0	0	0	8
11:45 PM	0	0	11	0	0	0	11
PM Total	**3**	**23**	**4017**	**10**	**40**	**2**	**4095**
Percentage	**0.07%**	**0.56%**	**98.10%**	**0.24%**	**0.98%**	**0.05%**	
PM Peak	**12:30 PM**	**4:45 PM**	**4:30 PM**	**3:00 PM**	**12:00 PM**	**8:15 PM**	**4:45 PM**
Volume	**1**	**6**	**613**	**8**	**12**	**1**	**622**
Day Total	**4**	**25**	**5555**	**20**	**84**	**6**	**5694**
Percentage	**0.07%**	**0.44%**	**97.56%**	**0.35%**	**1.48%**	**0.11%**	

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-B

Count Date: **Thursday, October 24, 2024**
Direction: **NB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	13	0	0	0	13
12:15 AM	0	0	7	0	0	0	7
12:30 AM	0	0	5	0	0	0	5
12:45 AM	0	0	4	0	0	0	4
1:00 AM	0	0	2	0	0	0	2
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	5	0	0	0	5
1:45 AM	0	0	2	0	0	0	2
2:00 AM	0	0	2	0	0	0	2
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	2	0	0	0	2
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	2	0	0	0	2
3:15 AM	0	0	1	0	0	0	1
3:30 AM	0	0	3	0	0	0	3
3:45 AM	0	0	4	0	0	0	4
4:00 AM	0	0	3	0	1	0	4
4:15 AM	0	0	0	0	0	0	0
4:30 AM	0	0	4	0	0	0	4
4:45 AM	0	0	3	0	0	0	3
5:00 AM	0	1	7	0	0	0	8
5:15 AM	0	0	8	0	0	0	8
5:30 AM	0	0	17	0	0	0	17
5:45 AM	0	0	17	1	1	1	20
6:00 AM	0	0	15	0	0	0	15
6:15 AM	0	0	21	0	0	0	21
6:30 AM	0	0	31	0	0	0	31
6:45 AM	0	0	40	0	0	0	40
7:00 AM	0	0	43	0	0	0	43
7:15 AM	0	0	54	1	0	0	55
7:30 AM	0	1	58	0	1	0	60
7:45 AM	0	0	73	0	1	0	74
8:00 AM	0	0	64	0	1	0	65
8:15 AM	0	0	84	0	0	0	84
8:30 AM	0	0	80	0	1	0	81
8:45 AM	0	0	84	5	1	0	90
9:00 AM	0	0	68	3	0	0	71
9:15 AM	0	1	52	0	5	0	58
9:30 AM	0	0	58	0	2	0	60
9:45 AM	0	0	50	1	1	0	52
10:00 AM	0	0	59	0	0	0	59
10:15 AM	0	0	55	0	4	0	59
10:30 AM	0	0	44	0	1	0	45
10:45 AM	0	0	51	0	1	0	52
11:00 AM	0	1	74	0	3	0	78
11:15 AM	0	0	60	0	2	0	62
11:30 AM	0	0	78	0	2	0	80
11:45 AM	0	0	56	0	3	0	59
AM Total	**0**	**4**	**1466**	**11**	**31**	**1**	**1513**
Percentage	**0.00%**	**0.26%**	**96.89%**	**0.73%**	**2.05%**	**0.07%**	
AM Peak	**12:00 AM**	**4:15 AM**	**8:15 AM**	**8:15 AM**	**11:00 AM**	**5:00 AM**	**8:15 AM**
Volume	**0**	**1**	**316**	**8**	**10**	**1**	**326**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	83	0	3	0	86
12:15 PM	1	0	87	0	2	0	90
12:30 PM	0	0	72	0	2	0	74
12:45 PM	0	0	76	0	2	0	78
1:00 PM	0	0	76	0	3	0	79
1:15 PM	0	0	81	0	0	0	81
1:30 PM	0	0	76	1	1	0	78
1:45 PM	0	0	106	0	4	0	110
2:00 PM	0	0	111	0	1	0	112
2:15 PM	0	0	118	0	2	0	120
2:30 PM	0	0	118	1	1	0	120
2:45 PM	0	0	144	1	1	0	146
3:00 PM	0	0	130	2	1	0	133
3:15 PM	0	0	150	4	2	0	156
3:30 PM	0	1	140	2	0	0	143
3:45 PM	1	0	140	0	0	0	141
4:00 PM	0	0	129	0	0	0	129
4:15 PM	0	0	144	0	1	0	145
4:30 PM	0	0	118	1	3	0	122
4:45 PM	0	0	135	1	0	0	136
5:00 PM	0	0	150	0	0	0	150
5:15 PM	0	0	145	0	0	0	145
5:30 PM	0	0	145	0	0	0	145
5:45 PM	0	2	150	0	0	0	152
6:00 PM	0	1	105	0	1	0	107
6:15 PM	0	0	107	1	0	0	108
6:30 PM	0	1	96	0	1	0	98
6:45 PM	0	0	86	0	0	0	86
7:00 PM	0	0	79	0	0	0	79
7:15 PM	0	0	66	0	0	0	66
7:30 PM	0	0	80	0	0	0	80
7:45 PM	0	0	67	1	1	0	69
8:00 PM	0	0	64	0	1	0	65
8:15 PM	0	0	62	0	0	0	62
8:30 PM	0	0	49	0	1	0	50
8:45 PM	0	0	48	0	0	0	48
9:00 PM	0	0	35	0	0	0	35
9:15 PM	0	0	41	0	0	0	41
9:30 PM	0	0	28	0	0	0	28
9:45 PM	0	0	26	0	0	0	26
10:00 PM	0	0	34	0	0	0	34
10:15 PM	0	0	26	0	0	0	26
10:30 PM	0	0	27	0	0	0	27
10:45 PM	0	0	21	0	0	0	21
11:00 PM	0	0	13	0	1	0	14
11:15 PM	0	0	16	0	0	0	16
11:30 PM	0	0	19	0	0	0	19
11:45 PM	0	0	16	0	0	1	17
PM Total	**2**	**5**	**4035**	**15**	**35**	**1**	**4093**
Percentage	**0.05%**	**0.12%**	**98.58%**	**0.37%**	**0.86%**	**0.02%**	
PM Peak	**12:00 PM**	**5:45 PM**	**5:00 PM**	**2:45 PM**	**12:00 PM**	**11:00 PM**	**5:00 PM**
Volume	**1**	**4**	**590**	**9**	**9**	**1**	**592**
Day Total	**2**	**9**	**5501**	**26**	**66**	**2**	**5606**
Percentage	**0.04%**	**0.16%**	**98.13%**	**0.46%**	**1.18%**	**0.04%**	

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-B

Count Date: **Wednesday, October 23, 2024**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	4	0	0	0	4
12:15 AM	0	0	6	0	1	0	7
12:30 AM	0	0	2	0	0	0	2
12:45 AM	0	0	1	0	0	0	1
1:00 AM	0	0	3	0	0	0	3
1:15 AM	0	0	0	1	0	0	1
1:30 AM	0	0	2	0	0	0	2
1:45 AM	0	0	4	0	0	0	4
2:00 AM	0	0	3	0	0	0	3
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	3	0	0	0	3
3:00 AM	0	0	3	0	0	0	3
3:15 AM	0	0	2	0	0	0	2
3:30 AM	0	0	6	0	0	0	6
3:45 AM	0	0	3	0	0	0	3
4:00 AM	0	0	7	0	0	0	7
4:15 AM	0	0	17	0	0	0	17
4:30 AM	0	0	21	0	1	0	22
4:45 AM	0	0	34	0	0	0	34
5:00 AM	0	0	36	0	0	0	36
5:15 AM	0	0	47	0	0	0	47
5:30 AM	0	0	95	0	0	0	95
5:45 AM	0	0	109	0	3	0	112
6:00 AM	0	0	108	0	3	0	111
6:15 AM	0	0	122	0	4	0	126
6:30 AM	0	0	148	0	1	0	149
6:45 AM	0	0	179	1	2	0	182
7:00 AM	0	1	177	0	2	0	180
7:15 AM	0	2	162	0	2	0	166
7:30 AM	0	0	172	1	3	0	176
7:45 AM	0	1	157	1	2	0	161
8:00 AM	0	0	125	0	4	2	131
8:15 AM	0	0	131	1	5	2	139
8:30 AM	0	0	151	1	2	0	154
8:45 AM	0	0	143	5	3	0	151
9:00 AM	0	0	121	1	6	0	128
9:15 AM	0	0	112	0	3	0	115
9:30 AM	0	0	96	0	3	0	99
9:45 AM	0	0	105	0	2	0	107
10:00 AM	0	0	92	1	4	0	97
10:15 AM	0	1	72	0	1	0	74
10:30 AM	0	0	100	0	2	0	102
10:45 AM	0	0	82	0	0	0	82
11:00 AM	0	1	86	0	2	0	89
11:15 AM	0	0	98	0	1	0	99
11:30 AM	0	0	94	0	2	0	96
11:45 AM	0	0	76	0	4	1	81
AM Total	**0**	**6**	**3321**	**13**	**68**	**5**	**3413**
Percentage	**0.00%**	**0.18%**	**97.30%**	**0.38%**	**1.99%**	**0.15%**	
AM Peak	**12:00 AM**	**7:00 AM**	**6:45 AM**	**8:15 AM**	**8:15 AM**	**7:30 AM**	**6:45 AM**
Volume	**0**	**4**	**690**	**8**	**16**	**4**	**704**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	1	82	0	1	1	85
12:15 PM	0	0	107	0	2	0	109
12:30 PM	0	1	100	0	3	0	104
12:45 PM	0	1	68	0	0	0	69
1:00 PM	0	0	81	0	4	1	86
1:15 PM	0	0	84	0	3	0	87
1:30 PM	0	0	119	1	2	0	122
1:45 PM	0	0	93	0	1	0	94
2:00 PM	0	1	108	0	1	0	110
2:15 PM	0	0	87	0	0	0	87
2:30 PM	0	0	91	0	0	0	91
2:45 PM	0	0	85	0	1	0	86
3:00 PM	0	0	85	1	2	1	89
3:15 PM	0	0	125	2	4	0	131
3:30 PM	1	0	112	7	3	0	123
3:45 PM	0	1	116	0	1	1	119
4:00 PM	0	0	109	2	3	1	115
4:15 PM	1	0	135	1	1	0	138
4:30 PM	0	0	132	0	1	1	134
4:45 PM	0	1	141	0	2	0	144
5:00 PM	0	3	135	0	1	0	139
5:15 PM	0	1	140	1	0	1	143
5:30 PM	0	1	105	0	0	0	106
5:45 PM	1	2	102	1	0	0	106
6:00 PM	0	1	109	0	2	0	112
6:15 PM	0	1	103	0	0	0	104
6:30 PM	1	2	96	0	1	0	100
6:45 PM	0	0	69	0	1	0	70
7:00 PM	0	0	59	0	0	0	59
7:15 PM	0	0	56	0	1	0	57
7:30 PM	0	0	56	0	0	0	56
7:45 PM	0	0	59	0	0	0	59
8:00 PM	0	0	39	0	0	0	39
8:15 PM	0	0	49	0	0	0	49
8:30 PM	0	0	42	0	0	0	42
8:45 PM	0	2	38	0	1	0	41
9:00 PM	0	0	42	0	0	0	42
9:15 PM	0	0	36	0	0	0	36
9:30 PM	0	0	25	0	0	0	25
9:45 PM	0	1	18	0	0	0	19
10:00 PM	0	0	10	0	0	0	10
10:15 PM	0	0	17	0	0	0	17
10:30 PM	0	0	9	0	0	0	9
10:45 PM	0	0	7	0	0	0	7
11:00 PM	0	0	5	0	0	0	5
11:15 PM	0	0	4	0	0	0	4
11:30 PM	0	0	5	0	0	0	5
11:45 PM	0	0	2	0	0	0	2
PM Total	**4**	**20**	**3497**	**16**	**42**	**7**	**3586**
Percentage	**0.11%**	**0.56%**	**97.52%**	**0.45%**	**1.17%**	**0.20%**	
PM Peak	**3:30 PM**	**5:00 PM**	**4:30 PM**	**3:15 PM**	**3:15 PM**	**3:45 PM**	**4:30 PM**
Volume	**2**	**7**	**548**	**11**	**11**	**3**	**560**
Day Total	**4**	**26**	**6818**	**29**	**110**	**12**	**6999**
Percentage	**0.06%**	**0.37%**	**97.41%**	**0.41%**	**1.57%**	**0.17%**	

Middlesex Avenue
south of Salem Street
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PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-B

Count Date: **Thursday, October 24, 2024**
Direction: **SB**

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	3	0	0	0	3
12:15 AM	0	0	2	0	0	0	2
12:30 AM	0	0	3	0	0	0	3
12:45 AM	0	0	1	0	0	0	1
1:00 AM	0	0	1	0	0	0	1
1:15 AM	0	0	1	0	0	0	1
1:30 AM	0	0	2	0	1	0	3
1:45 AM	0	0	1	0	0	0	1
2:00 AM	0	0	2	0	0	0	2
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	3	0	0	0	3
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	4	0	0	0	4
3:45 AM	0	0	9	0	0	0	9
4:00 AM	0	0	10	0	0	0	10
4:15 AM	0	0	16	0	1	0	17
4:30 AM	0	0	30	0	0	0	30
4:45 AM	0	0	38	0	0	0	38
5:00 AM	0	0	43	0	0	0	43
5:15 AM	0	0	55	0	0	0	55
5:30 AM	0	0	87	0	3	0	90
5:45 AM	0	0	97	0	2	0	99
6:00 AM	0	0	86	1	0	0	87
6:15 AM	0	0	89	0	0	0	89
6:30 AM	0	0	99	1	1	0	101
6:45 AM	0	0	176	1	4	1	182
7:00 AM	0	0	165	0	2	0	167
7:15 AM	0	0	140	0	0	0	140
7:30 AM	0	0	160	1	5	0	166
7:45 AM	0	1	138	0	2	0	141
8:00 AM	0	0	143	0	2	0	145
8:15 AM	0	3	135	0	6	1	145
8:30 AM	0	0	116	0	1	0	117
8:45 AM	0	0	131	7	1	0	139
9:00 AM	0	0	92	1	0	0	93
9:15 AM	0	0	87	0	1	1	89
9:30 AM	0	0	82	0	1	0	83
9:45 AM	0	0	83	0	3	0	86
10:00 AM	0	0	72	0	7	0	79
10:15 AM	0	0	75	0	1	0	76
10:30 AM	0	1	81	0	5	0	87
10:45 AM	0	0	61	0	2	0	63
11:00 AM	0	2	68	0	2	0	72
11:15 AM	0	0	110	0	5	0	115
11:30 AM	0	0	86	0	3	1	90
11:45 AM	0	0	96	1	1	0	98
AM Total	**0**	**7**	**2986**	**13**	**62**	**4**	**3072**
Percentage	**0.00%**	**0.23%**	**97.20%**	**0.42%**	**2.02%**	**0.13%**	
AM Peak	**12:00 AM**	**7:30 AM**	**6:45 AM**	**8:15 AM**	**9:45 AM**	**6:00 AM**	**6:45 AM**
Volume	**0**	**4**	**641**	**8**	**16**	**1**	**655**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	1	0	103	0	1	0	105
12:15 PM	0	0	91	0	3	0	94
12:30 PM	0	0	99	0	1	0	100
12:45 PM	0	0	103	0	0	0	103
1:00 PM	0	0	79	0	0	0	79
1:15 PM	0	0	93	0	2	0	95
1:30 PM	0	1	94	1	2	0	98
1:45 PM	0	0	85	0	0	0	85
2:00 PM	0	0	84	1	0	0	85
2:15 PM	0	0	94	0	1	0	95
2:30 PM	0	1	86	0	1	0	88
2:45 PM	0	0	97	0	1	0	98
3:00 PM	0	0	103	1	0	0	104
3:15 PM	0	0	121	3	3	0	127
3:30 PM	0	0	106	5	1	0	112
3:45 PM	0	0	132	1	0	0	133
4:00 PM	0	0	111	0	0	0	111
4:15 PM	0	1	141	1	0	0	143
4:30 PM	0	0	161	0	2	0	163
4:45 PM	0	0	149	0	2	0	151
5:00 PM	0	1	156	0	0	0	157
5:15 PM	0	1	138	0	2	0	141
5:30 PM	0	1	115	0	1	0	117
5:45 PM	0	0	97	0	0	0	97
6:00 PM	0	0	108	0	2	0	110
6:15 PM	0	0	106	0	1	1	108
6:30 PM	0	0	102	0	0	0	102
6:45 PM	0	0	68	0	0	0	68
7:00 PM	0	0	57	0	0	0	57
7:15 PM	0	0	51	0	1	0	52
7:30 PM	0	0	48	0	0	1	49
7:45 PM	0	0	56	0	0	0	56
8:00 PM	0	0	51	0	0	0	51
8:15 PM	0	1	53	1	0	0	55
8:30 PM	0	0	42	0	1	0	43
8:45 PM	0	0	32	0	2	0	34
9:00 PM	0	0	37	0	0	0	37
9:15 PM	0	0	39	0	0	0	39
9:30 PM	0	0	21	0	0	0	21
9:45 PM	0	0	24	0	0	0	24
10:00 PM	0	0	22	0	0	0	22
10:15 PM	0	0	19	0	0	0	19
10:30 PM	0	0	15	0	0	0	15
10:45 PM	0	0	10	0	0	0	10
11:00 PM	0	0	14	0	0	0	14
11:15 PM	0	0	8	0	0	0	8
11:30 PM	0	0	10	0	0	0	10
11:45 PM	0	0	9	0	0	0	9
PM Total	**1**	**7**	**3640**	**14**	**30**	**2**	**3694**
Percentage	**0.03%**	**0.19%**	**98.54%**	**0.38%**	**0.81%**	**0.05%**	
PM Peak	**12:00 PM**	**4:45 PM**	**4:15 PM**	**3:00 PM**	**4:30 PM**	**5:30 PM**	**4:15 PM**
Volume	**1**	**3**	**607**	**10**	**6**	**1**	**614**
Day Total	**1**	**14**	**6626**	**27**	**92**	**6**	**6766**
Percentage	**0.01%**	**0.21%**	**97.93%**	**0.40%**	**1.36%**	**0.09%**	

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File # **2540244 ATR-B**

Direction: **NB**

Weekly Report

Day	Wednesday		Thursday												Week	
Date	10/23/24		10/24/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	14	101	13	86	0	0	0	0	0	0	0	0	0	0	14	94
12:15	7	82	7	90	0	0	0	0	0	0	0	0	0	0	7	86
12:30	5	92	5	74	0	0	0	0	0	0	0	0	0	0	5	83
12:45	2	84	4	78	0	0	0	0	0	0	0	0	0	0	3	81
1:00	0	80	2	79	0	0	0	0	0	0	0	0	0	0	1	80
1:15	0	80	0	81	0	0	0	0	0	0	0	0	0	0	0	81
1:30	3	70	5	78	0	0	0	0	0	0	0	0	0	0	4	74
1:45	2	90	2	110	0	0	0	0	0	0	0	0	0	0	2	100
2:00	3	91	2	112	0	0	0	0	0	0	0	0	0	0	3	102
2:15	4	128	1	120	0	0	0	0	0	0	0	0	0	0	3	124
2:30	3	113	2	120	0	0	0	0	0	0	0	0	0	0	3	117
2:45	2	142	2	146	0	0	0	0	0	0	0	0	0	0	2	144
3:00	1	174	2	133	0	0	0	0	0	0	0	0	0	0	2	154
3:15	2	140	1	156	0	0	0	0	0	0	0	0	0	0	2	148
3:30	2	154	3	143	0	0	0	0	0	0	0	0	0	0	3	149
3:45	5	146	4	141	0	0	0	0	0	0	0	0	0	0	5	144
4:00	3	156	4	129	0	0	0	0	0	0	0	0	0	0	4	143
4:15	4	146	0	145	0	0	0	0	0	0	0	0	0	0	2	146
4:30	1	141	4	122	0	0	0	0	0	0	0	0	0	0	3	132
4:45	3	166	3	136	0	0	0	0	0	0	0	0	0	0	3	151
5:00	2	161	8	150	0	0	0	0	0	0	0	0	0	0	5	156
5:15	4	151	8	145	0	0	0	0	0	0	0	0	0	0	6	148
5:30	7	144	17	145	0	0	0	0	0	0	0	0	0	0	12	145
5:45	21	127	20	152	0	0	0	0	0	0	0	0	0	0	21	140
6:00	27	101	15	107	0	0	0	0	0	0	0	0	0	0	21	104
6:15	22	106	21	108	0	0	0	0	0	0	0	0	0	0	22	107
6:30	28	82	31	98	0	0	0	0	0	0	0	0	0	0	30	90
6:45	46	82	40	86	0	0	0	0	0	0	0	0	0	0	43	84
7:00	46	59	43	79	0	0	0	0	0	0	0	0	0	0	45	69
7:15	57	76	55	66	0	0	0	0	0	0	0	0	0	0	56	71
7:30	61	78	60	80	0	0	0	0	0	0	0	0	0	0	61	79
7:45	75	64	74	69	0	0	0	0	0	0	0	0	0	0	75	67
8:00	94	63	65	65	0	0	0	0	0	0	0	0	0	0	80	64
8:15	87	67	84	62	0	0	0	0	0	0	0	0	0	0	86	65
8:30	85	46	81	50	0	0	0	0	0	0	0	0	0	0	83	48
8:45	75	47	90	48	0	0	0	0	0	0	0	0	0	0	83	48
9:00	81	46	71	35	0	0	0	0	0	0	0	0	0	0	76	41
9:15	73	39	58	41	0	0	0	0	0	0	0	0	0	0	66	40
9:30	71	19	60	28	0	0	0	0	0	0	0	0	0	0	66	24
9:45	50	18	52	26	0	0	0	0	0	0	0	0	0	0	51	22
10:00	55	18	59	34	0	0	0	0	0	0	0	0	0	0	57	26
10:15	66	20	59	26	0	0	0	0	0	0	0	0	0	0	63	23
10:30	62	25	45	27	0	0	0	0	0	0	0	0	0	0	54	26
10:45	62	13	52	21	0	0	0	0	0	0	0	0	0	0	57	17
11:00	66	22	78	14	0	0	0	0	0	0	0	0	0	0	72	18
11:15	74	26	62	16	0	0	0	0	0	0	0	0	0	0	68	21
11:30	54	8	80	19	0	0	0	0	0	0	0	0	0	0	67	14
11:45	82	11	59	17	0	0	0	0	0	0	0	0	0	0	71	14
Total	**1599**	**4095**	**1513**	**4093**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1556**	**4094**
Day Total	**5694**		**5606**		**0**		**0**		**0**		**0**		**0**		**5650**	
Peak HR	**7:45 AM**	**4:45 PM**	**8:15 AM**	**5:00 PM**											**8:00 AM**	**4:45 PM**
Volume	**341**	**622**	**326**	**592**											**331**	**599**

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File # **2540244 ATR-B**

Direction: **SB**

Weekly Report

Day	Wednesday		Thursday												Week	
Date	10/23/24		10/24/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	4	85	3	105	0	0	0	0	0	0	0	0	0	0	4	95
12:15	7	109	2	94	0	0	0	0	0	0	0	0	0	0	5	102
12:30	2	104	3	100	0	0	0	0	0	0	0	0	0	0	3	102
12:45	1	69	1	103	0	0	0	0	0	0	0	0	0	0	1	86
1:00	3	86	1	79	0	0	0	0	0	0	0	0	0	0	2	83
1:15	1	87	1	95	0	0	0	0	0	0	0	0	0	0	1	91
1:30	2	122	3	98	0	0	0	0	0	0	0	0	0	0	3	110
1:45	4	94	1	85	0	0	0	0	0	0	0	0	0	0	3	90
2:00	3	110	2	85	0	0	0	0	0	0	0	0	0	0	3	98
2:15	1	87	1	95	0	0	0	0	0	0	0	0	0	0	1	91
2:30	3	91	4	88	0	0	0	0	0	0	0	0	0	0	4	90
2:45	3	86	2	98	0	0	0	0	0	0	0	0	0	0	3	92
3:00	3	89	3	104	0	0	0	0	0	0	0	0	0	0	3	97
3:15	2	131	0	127	0	0	0	0	0	0	0	0	0	0	1	129
3:30	6	123	4	112	0	0	0	0	0	0	0	0	0	0	5	118
3:45	3	119	9	133	0	0	0	0	0	0	0	0	0	0	6	126
4:00	7	115	10	111	0	0	0	0	0	0	0	0	0	0	9	113
4:15	17	138	17	143	0	0	0	0	0	0	0	0	0	0	17	141
4:30	22	134	30	163	0	0	0	0	0	0	0	0	0	0	26	149
4:45	34	144	38	151	0	0	0	0	0	0	0	0	0	0	36	148
5:00	36	139	43	157	0	0	0	0	0	0	0	0	0	0	40	148
5:15	47	143	55	141	0	0	0	0	0	0	0	0	0	0	51	142
5:30	95	106	90	117	0	0	0	0	0	0	0	0	0	0	93	112
5:45	112	106	99	97	0	0	0	0	0	0	0	0	0	0	106	102
6:00	111	112	87	110	0	0	0	0	0	0	0	0	0	0	99	111
6:15	126	104	89	108	0	0	0	0	0	0	0	0	0	0	108	106
6:30	149	100	101	102	0	0	0	0	0	0	0	0	0	0	125	101
6:45	182	70	182	68	0	0	0	0	0	0	0	0	0	0	182	69
7:00	180	59	167	57	0	0	0	0	0	0	0	0	0	0	174	58
7:15	166	57	140	52	0	0	0	0	0	0	0	0	0	0	153	55
7:30	176	56	166	49	0	0	0	0	0	0	0	0	0	0	171	53
7:45	161	59	141	56	0	0	0	0	0	0	0	0	0	0	151	58
8:00	131	39	145	51	0	0	0	0	0	0	0	0	0	0	138	45
8:15	139	49	145	55	0	0	0	0	0	0	0	0	0	0	142	52
8:30	154	42	117	43	0	0	0	0	0	0	0	0	0	0	136	43
8:45	151	41	139	34	0	0	0	0	0	0	0	0	0	0	145	38
9:00	128	42	93	37	0	0	0	0	0	0	0	0	0	0	111	40
9:15	115	36	89	39	0	0	0	0	0	0	0	0	0	0	102	38
9:30	99	25	83	21	0	0	0	0	0	0	0	0	0	0	91	23
9:45	107	19	86	24	0	0	0	0	0	0	0	0	0	0	97	22
10:00	97	10	79	22	0	0	0	0	0	0	0	0	0	0	88	16
10:15	74	17	76	19	0	0	0	0	0	0	0	0	0	0	75	18
10:30	102	9	87	15	0	0	0	0	0	0	0	0	0	0	95	12
10:45	82	7	63	10	0	0	0	0	0	0	0	0	0	0	73	9
11:00	89	5	72	14	0	0	0	0	0	0	0	0	0	0	81	10
11:15	99	4	115	8	0	0	0	0	0	0	0	0	0	0	107	6
11:30	96	5	90	10	0	0	0	0	0	0	0	0	0	0	93	8
11:45	81	2	98	9	0	0	0	0	0	0	0	0	0	0	90	6
Total	**3413**	**3586**	**3072**	**3694**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3243**	**3640**
Day Total	**6999**		**6766**		**0**		**0**		**0**		**0**		**0**		**6883**	
Peak HR	**6:45 AM**	**4:30 PM**	**6:45 AM**	**4:15 PM**											**6:45 AM**	**4:30 PM**
Volume	**704**	**560**	**655**	**614**											**680**	**586**

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-C

Count Date: Wednesday, October 23, 2024
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	11	0	0	0	11
12:15 AM	0	0	3	0	0	0	3
12:30 AM	0	0	6	0	0	0	6
12:45 AM	0	0	2	0	0	1	3
1:00 AM	0	0	4	0	0	0	4
1:15 AM	0	0	2	0	0	0	2
1:30 AM	0	0	4	0	2	0	6
1:45 AM	0	0	5	0	0	0	5
2:00 AM	0	0	4	1	0	0	5
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	4	0	0	0	4
2:45 AM	0	0	9	0	0	0	9
3:00 AM	0	0	5	0	0	0	5
3:15 AM	0	0	10	0	0	0	10
3:30 AM	0	0	6	0	0	0	6
3:45 AM	0	0	10	0	0	0	10
4:00 AM	0	0	9	0	0	0	9
4:15 AM	0	0	21	0	0	0	21
4:30 AM	0	0	27	0	1	0	28
4:45 AM	0	0	48	0	1	0	49
5:00 AM	0	0	47	0	3	1	51
5:15 AM	0	0	55	0	2	0	57
5:30 AM	0	0	113	0	0	0	113
5:45 AM	0	0	124	0	3	0	127
6:00 AM	0	0	127	0	1	0	128
6:15 AM	0	0	138	0	1	0	139
6:30 AM	0	0	145	0	1	0	146
6:45 AM	0	0	168	1	2	1	172
7:00 AM	0	0	119	0	3	0	122
7:15 AM	0	2	161	1	4	0	168
7:30 AM	0	0	187	0	4	0	191
7:45 AM	0	0	181	0	6	1	188
8:00 AM	0	0	184	0	12	1	197
8:15 AM	0	0	164	4	10	0	178
8:30 AM	0	0	132	1	3	1	137
8:45 AM	0	0	125	0	1	1	127
9:00 AM	0	0	146	0	4	1	151
9:15 AM	0	0	149	0	3	1	153
9:30 AM	0	0	122	0	8	2	132
9:45 AM	0	0	131	0	9	2	142
10:00 AM	0	0	119	0	15	3	137
10:15 AM	0	0	137	0	8	0	145
10:30 AM	0	0	157	0	3	0	160
10:45 AM	0	0	136	0	8	2	146
11:00 AM	0	1	121	0	4	2	128
11:15 AM	0	0	141	0	7	3	151
11:30 AM	0	0	153	0	3	0	156
11:45 AM	0	0	112	0	16	6	134
AM Total	**0**	**3**	**3985**	**8**	**148**	**29**	**4173**
Percentage	**0.00%**	**0.07%**	**95.49%**	**0.19%**	**3.55%**	**0.69%**	
AM Peak	**12:00 AM**	**6:30 AM**	**7:30 AM**	**7:45 AM**	**9:30 AM**	**11:00 AM**	**7:30 AM**
Volume	**0**	**2**	**716**	**5**	**40**	**11**	**754**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	1	127	0	4	1	133
12:15 PM	0	0	143	1	3	0	147
12:30 PM	0	0	146	0	4	3	153
12:45 PM	0	1	129	0	2	1	133
1:00 PM	0	1	141	0	10	1	153
1:15 PM	0	1	140	1	5	0	147
1:30 PM	0	0	132	0	5	1	138
1:45 PM	0	0	146	0	4	3	153
2:00 PM	0	1	132	0	3	1	137
2:15 PM	0	0	118	0	5	0	123
2:30 PM	0	1	129	0	5	0	135
2:45 PM	0	0	155	2	2	1	160
3:00 PM	0	0	169	0	5	2	176
3:15 PM	0	0	165	0	4	0	169
3:30 PM	0	0	167	1	1	0	169
3:45 PM	0	1	160	0	1	0	162
4:00 PM	0	0	192	0	4	2	198
4:15 PM	0	1	190	2	4	1	198
4:30 PM	0	0	178	0	4	1	183
4:45 PM	0	1	221	0	3	1	226
5:00 PM	0	1	187	0	1	1	190
5:15 PM	0	1	208	0	1	1	211
5:30 PM	0	2	196	0	2	0	200
5:45 PM	0	1	175	1	0	0	177
6:00 PM	0	1	166	0	1	0	168
6:15 PM	0	0	150	0	2	0	152
6:30 PM	0	1	143	0	0	0	144
6:45 PM	0	0	91	0	0	0	91
7:00 PM	1	0	112	0	1	0	114
7:15 PM	0	0	90	0	1	1	92
7:30 PM	0	0	82	0	2	0	84
7:45 PM	0	0	76	0	0	0	76
8:00 PM	0	0	67	0	1	0	68
8:15 PM	0	0	82	0	0	0	82
8:30 PM	0	0	62	0	0	0	62
8:45 PM	0	0	41	0	1	1	43
9:00 PM	0	1	61	0	0	0	62
9:15 PM	0	1	47	0	0	0	48
9:30 PM	0	0	35	0	0	0	35
9:45 PM	0	0	31	0	0	0	31
10:00 PM	0	0	24	0	0	0	24
10:15 PM	0	0	23	0	0	0	23
10:30 PM	0	0	17	0	0	0	17
10:45 PM	0	0	11	0	0	0	11
11:00 PM	0	0	25	0	0	0	25
11:15 PM	0	0	14	0	0	0	14
11:30 PM	0	0	7	0	0	0	7
11:45 PM	0	0	3	0	0	0	3
PM Total	**1**	**18**	**5306**	**8**	**91**	**23**	**5447**
Percentage	**0.02%**	**0.33%**	**97.41%**	**0.15%**	**1.67%**	**0.42%**	
PM Peak	**6:15 PM**	**4:45 PM**	**4:45 PM**	**2:45 PM**	**1:00 PM**	**12:00 PM**	**4:45 PM**
Volume	**1**	**5**	**812**	**3**	**24**	**5**	**827**
Day Total	**1**	**21**	**9291**	**16**	**239**	**52**	**9620**
Percentage	**0.01%**	**0.22%**	**96.58%**	**0.17%**	**2.48%**	**0.54%**	

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-C

Count Date: Thursday, October 24, 2024
Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	4	0	0	1	5
12:15 AM	0	0	3	0	0	0	3
12:30 AM	0	0	4	0	0	0	4
12:45 AM	0	0	7	0	0	0	7
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	1	0	0	0	1
1:30 AM	0	0	5	0	1	0	6
1:45 AM	0	1	2	0	0	0	3
2:00 AM	0	0	2	0	0	0	2
2:15 AM	0	0	3	0	0	0	3
2:30 AM	0	0	6	0	0	0	6
2:45 AM	0	0	4	0	0	0	4
3:00 AM	0	0	5	0	0	0	5
3:15 AM	0	0	4	0	1	0	5
3:30 AM	0	0	7	0	1	0	8
3:45 AM	0	0	11	0	2	0	13
4:00 AM	0	0	13	0	0	0	13
4:15 AM	0	0	20	0	0	0	20
4:30 AM	0	0	31	0	1	0	32
4:45 AM	0	1	44	0	1	0	46
5:00 AM	0	1	54	0	2	0	57
5:15 AM	0	0	69	0	0	2	71
5:30 AM	0	0	108	0	1	0	109
5:45 AM	0	0	114	0	1	0	115
6:00 AM	0	0	131	0	2	0	133
6:15 AM	0	0	163	0	0	0	163
6:30 AM	0	0	153	0	1	0	154
6:45 AM	0	0	172	1	7	1	181
7:00 AM	0	0	153	0	2	0	155
7:15 AM	0	0	182	1	3	1	187
7:30 AM	0	0	167	0	6	2	175
7:45 AM	1	0	186	0	9	1	197
8:00 AM	0	0	180	0	8	0	188
8:15 AM	0	2	170	3	8	0	183
8:30 AM	0	0	147	1	4	0	152
8:45 AM	0	0	152	0	6	0	158
9:00 AM	0	0	127	0	6	3	136
9:15 AM	0	0	134	0	5	2	141
9:30 AM	0	0	140	0	4	6	150
9:45 AM	0	0	133	0	9	1	143
10:00 AM	1	0	107	0	6	2	116
10:15 AM	0	0	106	0	5	4	115
10:30 AM	0	0	130	0	8	1	139
10:45 AM	0	0	100	1	9	3	113
11:00 AM	0	1	128	0	7	2	138
11:15 AM	0	0	142	0	8	6	156
11:30 AM	0	0	151	0	4	1	156
11:45 AM	0	0	133	0	3	0	136
AM Total	**2**	**6**	**4008**	**7**	**141**	**39**	**4203**
Percentage	**0.05%**	**0.14%**	**95.36%**	**0.17%**	**3.35%**	**0.93%**	
AM Peak	**7:00 AM**	**4:15 AM**	**7:15 AM**	**7:45 AM**	**10:30 AM**	**9:30 AM**	**7:15 AM**
Volume	**1**	**2**	**715**	**4**	**32**	**13**	**747**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	159	0	2	1	162
12:15 PM	0	0	127	0	2	2	131
12:30 PM	0	0	144	0	3	0	147
12:45 PM	0	1	157	0	7	2	167
1:00 PM	0	1	157	0	5	4	167
1:15 PM	0	0	139	1	4	0	144
1:30 PM	0	0	158	0	3	1	162
1:45 PM	0	0	128	0	2	1	131
2:00 PM	0	0	155	0	4	1	160
2:15 PM	0	1	175	0	10	1	187
2:30 PM	1	0	151	0	6	1	159
2:45 PM	0	0	138	1	5	2	146
3:00 PM	0	0	176	0	1	2	179
3:15 PM	0	0	148	0	2	0	150
3:30 PM	0	0	176	2	2	0	180
3:45 PM	0	0	184	1	2	1	188
4:00 PM	0	0	180	0	1	0	181
4:15 PM	0	1	187	1	2	0	191
4:30 PM	0	2	207	0	4	0	213
4:45 PM	0	0	217	0	2	0	219
5:00 PM	0	2	185	0	1	0	188
5:15 PM	0	0	203	0	4	1	208
5:30 PM	0	0	214	0	5	0	219
5:45 PM	0	0	157	0	0	0	157
6:00 PM	0	0	155	0	2	0	157
6:15 PM	0	0	139	0	1	1	141
6:30 PM	0	1	136	0	2	0	139
6:45 PM	0	0	113	1	1	0	115
7:00 PM	0	0	101	0	4	0	105
7:15 PM	0	1	104	0	0	0	105
7:30 PM	0	0	90	0	1	1	92
7:45 PM	0	0	78	0	1	0	79
8:00 PM	0	0	76	0	0	0	76
8:15 PM	0	0	76	1	0	0	77
8:30 PM	0	0	68	0	1	0	69
8:45 PM	0	0	52	0	2	0	54
9:00 PM	0	0	64	0	0	0	64
9:15 PM	0	0	54	0	0	0	54
9:30 PM	0	0	33	0	0	0	33
9:45 PM	0	0	26	0	1	0	27
10:00 PM	0	0	38	0	0	0	38
10:15 PM	0	0	38	0	0	0	38
10:30 PM	0	0	26	0	0	0	26
10:45 PM	0	0	26	0	0	0	26
11:00 PM	0	0	28	0	0	0	28
11:15 PM	0	0	14	0	0	0	14
11:30 PM	0	0	14	0	0	0	14
11:45 PM	0	0	16	0	0	0	16
PM Total	**1**	**10**	**5587**	**8**	**95**	**22**	**5723**
Percentage	**0.02%**	**0.17%**	**97.62%**	**0.14%**	**1.66%**	**0.38%**	
PM Peak	**1:45 PM**	**4:15 PM**	**4:45 PM**	**3:30 PM**	**2:00 PM**	**12:15 PM**	**4:45 PM**
Volume	**1**	**5**	**819**	**4**	**25**	**8**	**834**
Day Total	**3**	**16**	**9595**	**15**	**236**	**61**	**9926**
Percentage	**0.03%**	**0.16%**	**96.67%**	**0.15%**	**2.38%**	**0.61%**	

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: 2540244 ATR-C

Count Date: Wednesday, October 23, 2024
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	13	0	0	0	13
12:15 AM	0	0	8	0	0	0	8
12:30 AM	0	0	6	0	0	1	7
12:45 AM	0	0	3	0	0	0	3
1:00 AM	0	0	3	0	0	0	3
1:15 AM	0	0	1	0	0	0	1
1:30 AM	0	0	5	0	0	0	5
1:45 AM	0	0	3	0	0	1	4
2:00 AM	0	0	5	0	0	0	5
2:15 AM	0	0	5	0	0	0	5
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	3	0	0	0	3
3:15 AM	0	0	6	0	0	1	7
3:30 AM	0	0	7	0	0	0	7
3:45 AM	0	0	7	0	0	0	7
4:00 AM	0	0	2	0	1	0	3
4:15 AM	0	0	7	0	1	0	8
4:30 AM	0	0	3	0	0	0	3
4:45 AM	0	0	12	0	1	1	14
5:00 AM	0	0	16	0	0	0	16
5:15 AM	0	0	22	0	0	0	22
5:30 AM	0	0	18	0	3	0	21
5:45 AM	0	0	44	0	2	0	46
6:00 AM	0	0	40	0	1	0	41
6:15 AM	0	0	57	0	5	0	62
6:30 AM	0	0	60	0	2	0	62
6:45 AM	0	0	110	1	5	1	117
7:00 AM	0	0	132	1	5	0	138
7:15 AM	0	0	105	0	1	0	106
7:30 AM	0	0	118	1	3	1	123
7:45 AM	0	1	118	0	4	1	124
8:00 AM	0	0	139	0	4	1	144
8:15 AM	0	0	153	0	4	0	157
8:30 AM	0	0	204	0	6	2	212
8:45 AM	0	0	190	0	7	1	198
9:00 AM	0	0	149	0	6	2	157
9:15 AM	0	1	121	0	7	0	129
9:30 AM	0	0	107	0	7	0	114
9:45 AM	0	0	88	0	7	3	98
10:00 AM	0	0	106	0	4	2	112
10:15 AM	0	2	91	0	8	2	103
10:30 AM	0	0	92	0	9	2	103
10:45 AM	0	0	104	0	4	2	110
11:00 AM	0	0	95	0	7	1	103
11:15 AM	0	1	89	0	8	3	101
11:30 AM	0	0	104	1	4	4	113
11:45 AM	0	0	100	0	3	0	103
AM Total	**0**	**5**	**2876**	**4**	**129**	**32**	**3046**
Percentage	**0.00%**	**0.16%**	**94.42%**	**0.13%**	**4.24%**	**1.05%**	
AM Peak	**12:00 AM**	**9:30 AM**	**8:15 AM**	**6:45 AM**	**9:45 AM**	**10:45 AM**	**8:15 AM**
Volume	**0**	**2**	**696**	**3**	**28**	**10**	**724**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	1	136	1	8	1	147
12:15 PM	0	0	107	0	17	0	124
12:30 PM	0	1	134	0	8	3	146
12:45 PM	0	0	116	0	3	0	119
1:00 PM	0	0	97	0	8	0	105
1:15 PM	0	1	112	0	6	0	119
1:30 PM	0	0	108	1	5	0	114
1:45 PM	0	0	122	0	6	1	129
2:00 PM	0	0	120	0	3	0	123
2:15 PM	0	0	159	0	1	0	160
2:30 PM	0	0	133	2	1	1	137
2:45 PM	0	0	148	0	5	1	154
3:00 PM	1	1	168	0	3	0	173
3:15 PM	0	1	125	0	2	0	128
3:30 PM	0	1	162	1	4	0	168
3:45 PM	0	1	165	1	1	0	168
4:00 PM	0	1	171	0	3	0	175
4:15 PM	0	3	168	0	0	0	171
4:30 PM	0	3	138	0	1	0	142
4:45 PM	0	1	196	0	0	0	197
5:00 PM	0	1	158	0	0	2	161
5:15 PM	0	1	154	0	3	0	158
5:30 PM	0	0	147	0	1	0	148
5:45 PM	0	1	144	0	1	0	146
6:00 PM	0	1	137	0	1	0	139
6:15 PM	1	0	125	0	0	1	127
6:30 PM	0	0	98	0	0	0	98
6:45 PM	0	1	104	0	0	0	105
7:00 PM	0	0	79	1	0	0	80
7:15 PM	0	0	87	0	2	0	89
7:30 PM	0	0	88	0	0	0	88
7:45 PM	0	0	85	0	1	0	86
8:00 PM	0	0	83	0	0	0	83
8:15 PM	0	0	83	0	2	0	85
8:30 PM	0	0	65	0	1	0	66
8:45 PM	0	2	62	0	1	0	65
9:00 PM	0	0	50	0	1	0	51
9:15 PM	0	0	54	0	0	0	54
9:30 PM	0	0	34	0	0	1	35
9:45 PM	0	1	21	0	0	1	23
10:00 PM	0	0	33	0	0	0	33
10:15 PM	0	0	24	0	0	0	24
10:30 PM	0	0	38	0	0	0	38
10:45 PM	0	0	27	0	0	0	27
11:00 PM	0	0	31	0	1	0	32
11:15 PM	0	0	29	0	0	0	29
11:30 PM	0	0	23	0	0	0	23
11:45 PM	0	0	19	0	0	0	19
PM Total	**2**	**23**	**4867**	**7**	**100**	**12**	**5011**
Percentage	**0.04%**	**0.46%**	**97.13%**	**0.14%**	**2.00%**	**0.24%**	
PM Peak	**2:15 PM**	**3:45 PM**	**4:00 PM**	**1:45 PM**	**12:00 PM**	**12:00 PM**	**4:00 PM**
Volume	**1**	**8**	**673**	**2**	**36**	**4**	**685**
Day Total	**2**	**28**	**7743**	**11**	**229**	**44**	**8057**
Percentage	**0.02%**	**0.35%**	**96.10%**	**0.14%**	**2.84%**	**0.55%**	

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PDI File #: 2540244 ATR-C

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Count Date: Thursday, October 24, 2024
Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	12	0	0	0	12
12:15 AM	0	0	10	0	0	0	10
12:30 AM	0	0	4	0	1	0	5
12:45 AM	0	0	4	0	0	0	4
1:00 AM	0	0	5	0	0	0	5
1:15 AM	0	0	3	0	0	0	3
1:30 AM	0	0	7	0	0	0	7
1:45 AM	0	0	2	0	0	0	2
2:00 AM	0	0	3	0	0	0	3
2:15 AM	0	0	1	0	0	0	1
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	4	0	0	0	4
3:00 AM	0	0	4	0	0	0	4
3:15 AM	0	0	4	0	1	0	5
3:30 AM	0	0	8	0	0	0	8
3:45 AM	0	0	5	0	2	0	7
4:00 AM	0	0	5	0	1	0	6
4:15 AM	0	0	4	0	0	0	4
4:30 AM	0	0	9	0	0	0	9
4:45 AM	0	0	10	0	0	0	10
5:00 AM	0	1	18	0	0	0	19
5:15 AM	0	0	23	0	0	0	23
5:30 AM	0	0	30	0	1	0	31
5:45 AM	0	0	39	1	2	0	42
6:00 AM	0	0	39	0	1	1	41
6:15 AM	0	0	75	0	1	0	76
6:30 AM	0	0	67	0	2	1	70
6:45 AM	0	0	82	1	4	2	89
7:00 AM	0	0	97	1	6	0	104
7:15 AM	0	0	105	0	4	4	113
7:30 AM	0	0	120	1	2	0	123
7:45 AM	0	0	146	0	7	1	154
8:00 AM	0	0	119	0	4	1	124
8:15 AM	0	0	122	0	4	2	128
8:30 AM	0	0	149	0	3	1	153
8:45 AM	0	0	108	1	6	0	115
9:00 AM	0	0	106	0	4	3	113
9:15 AM	0	1	89	0	5	2	97
9:30 AM	0	0	84	0	5	3	92
9:45 AM	0	0	96	0	11	5	112
10:00 AM	0	0	75	0	2	1	78
10:15 AM	0	0	99	0	4	1	104
10:30 AM	0	1	92	0	1	1	95
10:45 AM	0	0	102	0	6	5	113
11:00 AM	0	0	98	1	7	1	107
11:15 AM	0	0	89	0	5	1	95
11:30 AM	0	0	105	0	3	1	109
11:45 AM	0	1	112	1	6	1	121
AM Total	**0**	**4**	**2593**	**7**	**111**	**38**	**2753**
Percentage	**0.00%**	**0.15%**	**94.19%**	**0.25%**	**4.03%**	**1.38%**	
AM Peak	**12:00 AM**	**4:15 AM**	**7:45 AM**	**6:45 AM**	**9:00 AM**	**9:00 AM**	**7:45 AM**
Volume	**0**	**1**	**536**	**3**	**25**	**13**	**559**

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	128	0	11	3	142
12:15 PM	0	0	106	0	4	1	111
12:30 PM	0	0	119	0	9	1	129
12:45 PM	0	0	119	0	5	2	126
1:00 PM	0	0	129	0	7	0	136
1:15 PM	0	0	135	0	2	0	137
1:30 PM	0	1	127	2	6	1	137
1:45 PM	0	1	150	0	5	1	157
2:00 PM	0	0	140	0	6	1	147
2:15 PM	0	0	153	0	11	2	166
2:30 PM	0	0	146	1	1	2	150
2:45 PM	0	0	151	1	7	1	160
3:00 PM	0	0	144	1	0	0	145
3:15 PM	0	0	159	1	2	0	162
3:30 PM	1	0	154	0	0	2	157
3:45 PM	1	1	165	1	1	1	170
4:00 PM	0	0	156	2	1	1	160
4:15 PM	1	0	167	0	4	0	172
4:30 PM	0	0	147	1	0	0	148
4:45 PM	0	0	153	0	1	1	155
5:00 PM	0	0	150	0	1	0	151
5:15 PM	0	0	186	0	1	0	187
5:30 PM	1	0	166	0	2	1	170
5:45 PM	0	0	179	0	0	0	179
6:00 PM	0	0	131	0	0	1	132
6:15 PM	0	1	128	1	0	0	130
6:30 PM	0	0	115	0	1	0	116
6:45 PM	0	0	106	1	0	0	107
7:00 PM	0	0	105	0	0	0	105
7:15 PM	1	0	88	0	0	0	89
7:30 PM	0	0	96	0	0	0	96
7:45 PM	0	0	90	0	1	0	91
8:00 PM	0	0	73	0	2	0	75
8:15 PM	0	0	61	0	0	0	61
8:30 PM	0	0	61	0	1	0	62
8:45 PM	0	0	59	0	1	0	60
9:00 PM	0	0	43	0	0	0	43
9:15 PM	0	0	56	0	0	0	56
9:30 PM	0	0	39	0	0	0	39
9:45 PM	0	0	40	0	0	0	40
10:00 PM	0	0	51	0	1	0	52
10:15 PM	0	0	42	0	0	0	42
10:30 PM	0	0	38	0	0	0	38
10:45 PM	0	0	31	0	0	0	31
11:00 PM	0	0	17	0	1	0	18
11:15 PM	0	0	18	0	0	0	18
11:30 PM	0	0	31	0	0	0	31
11:45 PM	0	0	15	0	1	0	16
PM Total	**5**	**4**	**5063**	**12**	**96**	**22**	**5202**
Percentage	**0.10%**	**0.08%**	**97.33%**	**0.23%**	**1.85%**	**0.42%**	
PM Peak	**3:30 PM**	**1:00 PM**	**5:00 PM**	**2:30 PM**	**12:00 PM**	**12:00 PM**	**5:00 PM**
Volume	**3**	**2**	**681**	**4**	**29**	**7**	**687**
Day Total	**5**	**8**	**7656**	**19**	**207**	**60**	**7955**
Percentage	**0.06%**	**0.10%**	**96.24%**	**0.24%**	**2.60%**	**0.75%**	

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File # **2540244 ATR-C**

Direction: **NB**

Weekly Report

Day	Wednesday		Thursday												Week	
Date	10/23/24		10/24/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	11	133	5	162	0	0	0	0	0	0	0	0	0	0	8	148
12:15	3	147	3	131	0	0	0	0	0	0	0	0	0	0	3	139
12:30	6	153	4	147	0	0	0	0	0	0	0	0	0	0	5	150
12:45	3	133	7	167	0	0	0	0	0	0	0	0	0	0	5	150
1:00	4	153	0	167	0	0	0	0	0	0	0	0	0	0	2	160
1:15	2	147	1	144	0	0	0	0	0	0	0	0	0	0	2	146
1:30	6	138	6	162	0	0	0	0	0	0	0	0	0	0	6	150
1:45	5	153	3	131	0	0	0	0	0	0	0	0	0	0	4	142
2:00	5	137	2	160	0	0	0	0	0	0	0	0	0	0	4	149
2:15	1	123	3	187	0	0	0	0	0	0	0	0	0	0	2	155
2:30	4	135	6	159	0	0	0	0	0	0	0	0	0	0	5	147
2:45	9	160	4	146	0	0	0	0	0	0	0	0	0	0	7	153
3:00	5	176	5	179	0	0	0	0	0	0	0	0	0	0	5	178
3:15	10	169	5	150	0	0	0	0	0	0	0	0	0	0	8	160
3:30	6	169	8	180	0	0	0	0	0	0	0	0	0	0	7	175
3:45	10	162	13	188	0	0	0	0	0	0	0	0	0	0	12	175
4:00	9	198	13	181	0	0	0	0	0	0	0	0	0	0	11	190
4:15	21	198	20	191	0	0	0	0	0	0	0	0	0	0	21	195
4:30	28	183	32	213	0	0	0	0	0	0	0	0	0	0	30	198
4:45	49	226	46	219	0	0	0	0	0	0	0	0	0	0	48	223
5:00	51	190	57	188	0	0	0	0	0	0	0	0	0	0	54	189
5:15	57	211	71	208	0	0	0	0	0	0	0	0	0	0	64	210
5:30	113	200	109	219	0	0	0	0	0	0	0	0	0	0	111	210
5:45	127	177	115	157	0	0	0	0	0	0	0	0	0	0	121	167
6:00	128	168	133	157	0	0	0	0	0	0	0	0	0	0	131	163
6:15	139	152	163	141	0	0	0	0	0	0	0	0	0	0	151	147
6:30	146	144	154	139	0	0	0	0	0	0	0	0	0	0	150	142
6:45	172	91	181	115	0	0	0	0	0	0	0	0	0	0	177	103
7:00	122	114	155	105	0	0	0	0	0	0	0	0	0	0	139	110
7:15	168	92	187	105	0	0	0	0	0	0	0	0	0	0	178	99
7:30	191	84	175	92	0	0	0	0	0	0	0	0	0	0	183	88
7:45	188	76	197	79	0	0	0	0	0	0	0	0	0	0	193	78
8:00	197	68	188	76	0	0	0	0	0	0	0	0	0	0	193	72
8:15	178	82	183	77	0	0	0	0	0	0	0	0	0	0	181	80
8:30	137	62	152	69	0	0	0	0	0	0	0	0	0	0	145	66
8:45	127	43	158	54	0	0	0	0	0	0	0	0	0	0	143	49
9:00	151	62	136	64	0	0	0	0	0	0	0	0	0	0	144	63
9:15	153	48	141	54	0	0	0	0	0	0	0	0	0	0	147	51
9:30	132	35	150	33	0	0	0	0	0	0	0	0	0	0	141	34
9:45	142	31	143	27	0	0	0	0	0	0	0	0	0	0	143	29
10:00	137	24	116	38	0	0	0	0	0	0	0	0	0	0	127	31
10:15	145	23	115	38	0	0	0	0	0	0	0	0	0	0	130	31
10:30	160	17	139	26	0	0	0	0	0	0	0	0	0	0	150	22
10:45	146	11	113	26	0	0	0	0	0	0	0	0	0	0	130	19
11:00	128	25	138	28	0	0	0	0	0	0	0	0	0	0	133	27
11:15	151	14	156	14	0	0	0	0	0	0	0	0	0	0	154	14
11:30	156	7	156	14	0	0	0	0	0	0	0	0	0	0	156	11
11:45	134	3	136	16	0	0	0	0	0	0	0	0	0	0	135	10
Total	**4173**	**5447**	**4203**	**5723**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4188**	**5585**
Day Total	**9620**		**9926**		**0**		**0**		**0**		**0**		**0**		**9773**	
Peak HR	**7:30 AM**	**4:45 PM**	**7:15 AM**	**4:45 PM**											**7:30 AM**	**4:45 PM**
Volume	**754**	**827**	**747**	**834**											**749**	**831**

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File # **2540244 ATR-C**

Direction: **SB**

Weekly Report

Day	Wednesday		Thursday												Week	
Date	10/23/24		10/24/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	13	147	12	142	0	0	0	0	0	0	0	0	0	0	13	145
12:15	8	124	10	111	0	0	0	0	0	0	0	0	0	0	9	118
12:30	7	146	5	129	0	0	0	0	0	0	0	0	0	0	6	138
12:45	3	119	4	126	0	0	0	0	0	0	0	0	0	0	4	123
1:00	3	105	5	136	0	0	0	0	0	0	0	0	0	0	4	121
1:15	1	119	3	137	0	0	0	0	0	0	0	0	0	0	2	128
1:30	5	114	7	137	0	0	0	0	0	0	0	0	0	0	6	126
1:45	4	129	2	157	0	0	0	0	0	0	0	0	0	0	3	143
2:00	5	123	3	147	0	0	0	0	0	0	0	0	0	0	4	135
2:15	5	160	1	166	0	0	0	0	0	0	0	0	0	0	3	163
2:30	3	137	3	150	0	0	0	0	0	0	0	0	0	0	3	144
2:45	2	154	4	160	0	0	0	0	0	0	0	0	0	0	3	157
3:00	3	173	4	145	0	0	0	0	0	0	0	0	0	0	4	159
3:15	7	128	5	162	0	0	0	0	0	0	0	0	0	0	6	145
3:30	7	168	8	157	0	0	0	0	0	0	0	0	0	0	8	163
3:45	7	168	7	170	0	0	0	0	0	0	0	0	0	0	7	169
4:00	3	175	6	160	0	0	0	0	0	0	0	0	0	0	5	168
4:15	8	171	4	172	0	0	0	0	0	0	0	0	0	0	6	172
4:30	3	142	9	148	0	0	0	0	0	0	0	0	0	0	6	145
4:45	14	197	10	155	0	0	0	0	0	0	0	0	0	0	12	176
5:00	16	161	19	151	0	0	0	0	0	0	0	0	0	0	18	156
5:15	22	158	23	187	0	0	0	0	0	0	0	0	0	0	23	173
5:30	21	148	31	170	0	0	0	0	0	0	0	0	0	0	26	159
5:45	46	146	42	179	0	0	0	0	0	0	0	0	0	0	44	163
6:00	41	139	41	132	0	0	0	0	0	0	0	0	0	0	41	136
6:15	62	127	76	130	0	0	0	0	0	0	0	0	0	0	69	129
6:30	62	98	70	116	0	0	0	0	0	0	0	0	0	0	66	107
6:45	117	105	89	107	0	0	0	0	0	0	0	0	0	0	103	106
7:00	138	80	104	105	0	0	0	0	0	0	0	0	0	0	121	93
7:15	106	89	113	89	0	0	0	0	0	0	0	0	0	0	110	89
7:30	123	88	123	96	0	0	0	0	0	0	0	0	0	0	123	92
7:45	124	86	154	91	0	0	0	0	0	0	0	0	0	0	139	89
8:00	144	83	124	75	0	0	0	0	0	0	0	0	0	0	134	79
8:15	157	85	128	61	0	0	0	0	0	0	0	0	0	0	143	73
8:30	212	66	153	62	0	0	0	0	0	0	0	0	0	0	183	64
8:45	198	65	115	60	0	0	0	0	0	0	0	0	0	0	157	63
9:00	157	51	113	43	0	0	0	0	0	0	0	0	0	0	135	47
9:15	129	54	97	56	0	0	0	0	0	0	0	0	0	0	113	55
9:30	114	35	92	39	0	0	0	0	0	0	0	0	0	0	103	37
9:45	98	23	112	40	0	0	0	0	0	0	0	0	0	0	105	32
10:00	112	33	78	52	0	0	0	0	0	0	0	0	0	0	95	43
10:15	103	24	104	42	0	0	0	0	0	0	0	0	0	0	104	33
10:30	103	38	95	38	0	0	0	0	0	0	0	0	0	0	99	38
10:45	110	27	113	31	0	0	0	0	0	0	0	0	0	0	112	29
11:00	103	32	107	18	0	0	0	0	0	0	0	0	0	0	105	25
11:15	101	29	95	18	0	0	0	0	0	0	0	0	0	0	98	24
11:30	113	23	109	31	0	0	0	0	0	0	0	0	0	0	111	27
11:45	103	19	121	16	0	0	0	0	0	0	0	0	0	0	112	18
Total	**3046**	**5011**	**2753**	**5202**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2900**	**5107**
Day Total	**8057**		**7955**		**0**		**0**		**0**		**0**		**0**		**8006**	
Peak HR	**8:15 AM**	**4:00 PM**	**7:45 AM**	**5:00 PM**											**8:15 AM**	**3:30 PM**
Volume	**724**	**685**	**559**	**687**											**617**	**671**

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	37	40	0	77	14	52	0	66	104	51	0	155	298
8:15 AM	34	41	0	75	27	58	0	85	105	52	1	158	318
8:30 AM	33	31	0	64	17	63	0	80	83	38	0	121	265
8:45 AM	30	48	0	78	46	44	0	90	90	57	0	147	315
Total	134	160	0	294	104	217	0	321	382	198	1	581	1196
9:00 AM	26	30	0	56	20	50	0	70	64	32	0	96	222
9:15 AM	25	16	0	41	10	46	0	56	77	33	0	110	207
9:30 AM	22	25	0	47	16	44	0	60	72	37	0	109	216
9:45 AM	19	15	0	34	12	39	0	51	73	22	0	95	180
Total	92	86	0	178	58	179	0	237	286	124	0	410	825
Grand Total	226	246	0	472	162	396	0	558	668	322	1	991	2021
Approach %	47.9	52.1	0.0		29.0	71.0	0.0		67.4	32.5	0.1		
Total %	11.2	12.2	0.0	23.4	8.0	19.6	0.0	27.6	33.1	15.9	0.0	49.0	
Exiting Leg Total				484				914				623	2021
Cars	216	233	0	449	151	388	0	539	658	312	1	971	1959
% Cars	95.6	94.7	0.0	95.1	93.2	98.0	0.0	96.6	98.5	96.9	100.0	98.0	96.9
Exiting Leg Total				463				891				605	1959
Heavy Vehicles	10	13	0	23	11	8	0	19	10	10	0	20	62
% Heavy Vehicles	4.4	5.3	0.0	4.9	6.8	2.0	0.0	3.4	1.5	3.1	0.0	2.0	3.1
Exiting Leg Total				21				23				18	62

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	37	40	0	77	14	52	0	66	104	51	0	155	298
8:15 AM	34	41	0	75	27	58	0	85	105	52	1	158	318
8:30 AM	33	31	0	64	17	63	0	80	83	38	0	121	265
8:45 AM	30	48	0	78	46	44	0	90	90	57	0	147	315
Total Volume	134	160	0	294	104	217	0	321	382	198	1	581	1196
% Approach Total	45.6	54.4	0.0		32.4	67.6	0.0		65.7	34.1	0.2		
PHF	0.905	0.833	0.000	0.942	0.565	0.861	0.000	0.892	0.910	0.868	0.250	0.919	0.940
Cars	132	148	0	280	97	215	0	312	375	190	1	566	1158
Cars %	98.5	92.5	0.0	95.2	93.3	99.1	0.0	97.2	98.2	96.0	100.0	97.4	96.8
Heavy Vehicles	2	12	0	14	7	2	0	9	7	8	0	15	38
Heavy Vehicles %	1.5	7.5	0.0	4.8	6.7	0.9	0.0	2.8	1.8	4.0	0.0	2.6	3.2
Cars Enter Leg	132	148	0	280	97	215	0	312	375	190	1	566	1158
Heavy Enter Leg	2	12	0	14	7	2	0	9	7	8	0	15	38
Total Entering Leg	134	160	0	294	104	217	0	321	382	198	1	581	1196
Cars Exiting Leg				287				523				348	1158
Heavy Exiting Leg				15				19				4	38
Total Exiting Leg				302				542				352	1196

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Cars**

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	36	40	0	76	14	51	0	65	102	48	0	150	291
8:15 AM	34	37	0	71	27	58	0	85	102	52	1	155	311
8:30 AM	32	30	0	62	17	62	0	79	82	36	0	118	259
8:45 AM	30	41	0	71	39	44	0	83	89	54	0	143	297
Total	132	148	0	280	97	215	0	312	375	190	1	566	1158
9:00 AM	21	29	0	50	17	50	0	67	64	31	0	95	212
9:15 AM	25	16	0	41	10	42	0	52	76	33	0	109	202
9:30 AM	19	25	0	44	15	44	0	59	72	36	0	108	211
9:45 AM	19	15	0	34	12	37	0	49	71	22	0	93	176
Total	84	85	0	169	54	173	0	227	283	122	0	405	801
Grand Total	216	233	0	449	151	388	0	539	658	312	1	971	1959
Approach %	48.1	51.9	0.0		28.0	72.0	0.0		67.8	32.1	0.1		
Total %	11.0	11.9	0.0	22.9	7.7	19.8	0.0	27.5	33.6	15.9	0.1	49.6	
Exiting Leg Total				463				891				605	1959

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	36	40	0	76	14	51	0	65	102	48	0	150	291
8:15 AM	34	37	0	71	27	58	0	85	102	52	1	155	311
8:30 AM	32	30	0	62	17	62	0	79	82	36	0	118	259
8:45 AM	30	41	0	71	39	44	0	83	89	54	0	143	297
Total Volume	132	148	0	280	97	215	0	312	375	190	1	566	1158
% Approach Total	47.1	52.9	0.0		31.1	68.9	0.0		66.3	33.6	0.2		
PHF	0.917	0.902	0.000	0.921	0.622	0.867	0.000	0.918	0.919	0.880	0.250	0.913	0.931
Entering Leg	132	148	0	280	97	215	0	312	375	190	1	566	1158
Exiting Leg				287				523				348	1158
Total				567				835				914	2316

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	1	0	1	2	3	0	5	7
8:15 AM	0	4	0	4	0	0	0	0	3	0	0	3	7
8:30 AM	1	1	0	2	0	1	0	1	1	2	0	3	6
8:45 AM	0	7	0	7	7	0	0	7	1	3	0	4	18
Total	2	12	0	14	7	2	0	9	7	8	0	15	38
9:00 AM	5	1	0	6	3	0	0	3	0	1	0	1	10
9:15 AM	0	0	0	0	0	4	0	4	1	0	0	1	5
9:30 AM	3	0	0	3	1	0	0	1	0	1	0	1	5
9:45 AM	0	0	0	0	0	2	0	2	2	0	0	2	4
Total	8	1	0	9	4	6	0	10	3	2	0	5	24
Grand Total	10	13	0	23	11	8	0	19	10	10	0	20	62
Approach %	43.5	56.5	0.0		57.9	42.1	0.0		50.0	50.0	0.0		
Total %	16.1	21.0	0.0	37.1	17.7	12.9	0.0	30.6	16.1	16.1	0.0	32.3	
Exiting Leg Total				21				23				18	62
Buses	4	8	0	12	8	0	0	8	0	2	0	2	22
% Buses	40.0	61.5	0.0	52.2	72.7	0.0	0.0	42.1	0.0	20.0	0.0	10.0	35.5
Exiting Leg Total				10				8				4	22
Single-Unit Trucks	6	4	0	10	3	6	0	9	9	7	0	16	35
% Single-Unit	60.0	30.8	0.0	43.5	27.3	75.0	0.0	47.4	90.0	70.0	0.0	80.0	56.5
Exiting Leg Total				10				13				12	35
Articulated Trucks	0	1	0	1	0	2	0	2	1	1	0	2	5
% Articulated	0.0	7.7	0.0	4.3	0.0	25.0	0.0	10.5	10.0	10.0	0.0	10.0	8.1
Exiting Leg Total				1				2				2	5

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:15 AM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:15 AM	0	4	0	4	0	0	0	0	3	0	0	3	7
8:30 AM	1	1	0	2	0	1	0	1	1	2	0	3	6
8:45 AM	0	7	0	7	7	0	0	7	1	3	0	4	18
9:00 AM	5	1	0	6	3	0	0	3	0	1	0	1	10
Total Volume	6	13	0	19	10	1	0	11	5	6	0	11	41
% Approach Total	31.6	68.4	0.0		90.9	9.1	0.0		45.5	54.5	0.0		
PHF	0.300	0.464	0.000	0.679	0.357	0.250	0.000	0.393	0.417	0.500	0.000	0.688	0.569
Buses	4	8	0	12	8	0	0	8	0	2	0	2	22
Buses %	66.7	61.5	0.0	63.2	80.0	0.0	0.0	72.7	0.0	33.3	0.0	18.2	53.7
Single-Unit Trucks	2	4	0	6	2	0	0	2	5	4	0	9	17
Single-Unit %	33.3	30.8	0.0	31.6	20.0	0.0	0.0	18.2	100.0	66.7	0.0	81.8	41.5
Articulated Trucks	0	1	0	1	0	1	0	1	0	0	0	0	2
Articulated %	0.0	7.7	0.0	5.3	0.0	100.0	0.0	9.1	0.0	0.0	0.0	0.0	4.9
Buses	4	8	0	12	8	0	0	8	0	2	0	2	22
Single-Unit Trucks	2	4	0	6	2	0	0	2	5	4	0	9	17
Articulated Trucks	0	1	0	1	0	1	0	1	0	0	0	0	2
Total Entering Leg	6	13	0	19	10	1	0	11	5	6	0	11	41
Buses				10				8				4	22
Single-Unit Trucks				6				9				2	17
Articulated Trucks				0				1				1	2
Total Exiting Leg				16				18				7	41

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Buses

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	7	0	7	5	0	0	5	0	2	0	2	14
Total	0	7	0	7	5	0	0	5	0	2	0	2	14
9:00 AM	4	1	0	5	3	0	0	3	0	0	0	0	8
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	1	0	5	3	0	0	3	0	0	0	0	8
Grand Total	4	8	0	12	8	0	0	8	0	2	0	2	22
Approach %	33.3	66.7	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	18.2	36.4	0.0	54.5	36.4	0.0	0.0	36.4	0.0	9.1	0.0	9.1	
Exiting Leg Total				10				8				4	22

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:15 AM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	7	0	7	5	0	0	5	0	2	0	2	14
9:00 AM	4	1	0	5	3	0	0	3	0	0	0	0	8
Total Volume	4	8	0	12	8	0	0	8	0	2	0	2	22
% Approach Total	33.3	66.7	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.286	0.000	0.429	0.400	0.000	0.000	0.400	0.000	0.250	0.000	0.250	0.393
Entering Leg	4	8	0	12	8	0	0	8	0	2	0	2	22
Exiting Leg				10				8				4	22
Total				22				16				6	44

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	1	0	1	2	2	0	4	6
8:15 AM	0	3	0	3	0	0	0	0	3	0	0	3	6
8:30 AM	1	1	0	2	0	0	0	0	1	2	0	3	5
8:45 AM	0	0	0	0	2	0	0	2	1	1	0	2	4
Total	2	4	0	6	2	1	0	3	7	5	0	12	21
9:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
9:15 AM	0	0	0	0	0	3	0	3	1	0	0	1	4
9:30 AM	3	0	0	3	1	0	0	1	0	1	0	1	5
9:45 AM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total	4	0	0	4	1	5	0	6	2	2	0	4	14
Grand Total	6	4	0	10	3	6	0	9	9	7	0	16	35
Approach %	60.0	40.0	0.0		33.3	66.7	0.0		56.3	43.8	0.0		
Total %	17.1	11.4	0.0	28.6	8.6	17.1	0.0	25.7	25.7	20.0	0.0	45.7	
Exiting Leg Total				10				13				12	35

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	1	0	1	2	2	0	4	6
8:15 AM	0	3	0	3	0	0	0	0	3	0	0	3	6
8:30 AM	1	1	0	2	0	0	0	0	1	2	0	3	5
8:45 AM	0	0	0	0	2	0	0	2	1	1	0	2	4
Total Volume	2	4	0	6	2	1	0	3	7	5	0	12	21
% Approach Total	33.3	66.7	0.0		66.7	33.3	0.0		58.3	41.7	0.0		
PHF	0.500	0.333	0.000	0.500	0.250	0.250	0.000	0.375	0.583	0.625	0.000	0.750	0.875
Entering Leg	2	4	0	6	2	1	0	3	7	5	0	12	21
Exiting Leg				7				11				3	21
Total				13				14				15	42

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class:

Articulated Trucks

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	1	0	1	0	1	0	1	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	1	0	1	1	0	0	1	2
Grand Total	0	1	0	1	0	2	0	2	1	1	0	2	5
Approach %	0.0	100.0	0.0		0.0	100.0	0.0		50.0	50.0	0.0		
Total %	0.0	20.0	0.0	20.0	0.0	40.0	0.0	40.0	20.0	20.0	0.0	40.0	
Exiting Leg Total				1				2				2	5

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	1	0	1	0	1	0	1	3
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.250	0.750
Entering Leg	0	1	0	1	0	1	0	1	0	1	0	1	3
Exiting Leg				1				1				1	3
Total				2				2				2	6

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						1						0						0	1

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:30 AM	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Exiting Leg						1						0						0	1
Total						1						1						0	2

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	
Exiting Leg Total						0						0						1	1

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:30 AM	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Exiting Leg						0						0						1	1
Total						0						0						2	2

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class:

Cars and Heavy Vehicles (Combined)

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	67	19	0	86	15	104	0	119	69	34	1	104	309
2:45 PM	42	26	0	68	22	126	0	148	76	36	0	112	328
Total	109	45	0	154	37	230	0	267	145	70	1	216	637
3:00 PM	73	30	0	103	33	104	0	137	76	36	0	112	352
3:15 PM	87	49	0	136	35	113	0	148	74	41	0	115	399
3:30 PM	102	39	0	141	30	120	0	150	75	54	0	129	420
3:45 PM	108	40	0	148	21	119	0	140	92	36	0	128	416
Total	370	158	0	528	119	456	0	575	317	167	0	484	1587
4:00 PM	106	41	0	147	19	104	0	123	70	45	0	115	385
4:15 PM	100	58	0	158	35	117	0	152	86	51	0	137	447
Total	206	99	0	305	54	221	0	275	156	96	0	252	832
Grand Total	685	302	0	987	210	907	0	1117	618	333	1	952	3056
Approach %	69.4	30.6	0.0		18.8	81.2	0.0		64.9	35.0	0.1		
Total %	22.4	9.9	0.0	32.3	6.9	29.7	0.0	36.6	20.2	10.9	0.0	31.2	
Exiting Leg Total				543				920				1593	3056
Cars	675	292	0	967	200	899	0	1099	613	324	1	938	3004
% Cars	98.5	96.7	0.0	98.0	95.2	99.1	0.0	98.4	99.2	97.3	100.0	98.5	98.3
Exiting Leg Total				524				905				1575	3056
Heavy Vehicles	10	10	0	20	10	8	0	18	5	9	0	14	52
% Heavy Vehicles	1.5	3.3	0.0	2.0	4.8	0.9	0.0	1.6	0.8	2.7	0.0	1.5	1.7
Exiting Leg Total				19				15				18	52

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
3:30 PM	102	39	0	141	30	120	0	150	75	54	0	129	420
3:45 PM	108	40	0	148	21	119	0	140	92	36	0	128	416
4:00 PM	106	41	0	147	19	104	0	123	70	45	0	115	385
4:15 PM	100	58	0	158	35	117	0	152	86	51	0	137	447
Total Volume	416	178	0	594	105	460	0	565	323	186	0	509	1668
% Approach Total	70.0	30.0	0.0		18.6	81.4	0.0		63.5	36.5	0.0		
PHF	0.963	0.767	0.000	0.940	0.750	0.958	0.000	0.929	0.878	0.861	0.000	0.929	0.933
Cars	409	172	0	581	103	458	0	561	322	182	0	504	1646
Cars %	98.3	96.6	0.0	97.8	98.1	99.6	0.0	99.3	99.7	97.8	0.0	99.0	98.7
Heavy Vehicles	7	6	0	13	2	2	0	4	1	4	0	5	22
Heavy Vehicles %	1.7	3.4	0.0	2.2	1.9	0.4	0.0	0.7	0.3	2.2	0.0	1.0	1.3
Cars Enter Leg	409	172	0	581	103	458	0	561	322	182	0	504	1646
Heavy Enter Leg	7	6	0	13	2	2	0	4	1	4	0	5	22
Total Entering Leg	416	178	0	594	105	460	0	565	323	186	0	509	1668
Cars Exiting Leg				285				494				867	1646
Heavy Exiting Leg				6				7				9	22
Total Exiting Leg				291				501				876	1668

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Cars**

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	66	19	0	85	15	102	0	117	68	33	1	102	304
2:45 PM	42	26	0	68	22	123	0	145	75	36	0	111	324
Total	108	45	0	153	37	225	0	262	143	69	1	213	628
3:00 PM	72	30	0	102	30	104	0	134	75	34	0	109	345
3:15 PM	86	45	0	131	30	112	0	142	73	39	0	112	385
3:30 PM	98	34	0	132	29	119	0	148	74	52	0	126	406
3:45 PM	107	40	0	147	21	118	0	139	92	35	0	127	413
Total	363	149	0	512	110	453	0	563	314	160	0	474	1549
4:00 PM	104	40	0	144	19	104	0	123	70	45	0	115	382
4:15 PM	100	58	0	158	34	117	0	151	86	50	0	136	445
Total	204	98	0	302	53	221	0	274	156	95	0	251	827
Grand Total	675	292	0	967	200	899	0	1099	613	324	1	938	3004
Approach %	69.8	30.2	0.0		18.2	81.8	0.0		65.4	34.5	0.1		
Total %	22.5	9.7	0.0	32.2	6.7	29.9	0.0	36.6	20.4	10.8	0.0	31.2	
Exiting Leg Total				524				905				1575	3004

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
3:30 PM	98	34	0	132	29	119	0	148	74	52	0	126	406
3:45 PM	107	40	0	147	21	118	0	139	92	35	0	127	413
4:00 PM	104	40	0	144	19	104	0	123	70	45	0	115	382
4:15 PM	100	58	0	158	34	117	0	151	86	50	0	136	445
Total Volume	409	172	0	581	103	458	0	561	322	182	0	504	1646
% Approach Total	70.4	29.6	0.0		18.4	81.6	0.0		63.9	36.1	0.0		
PHF	0.956	0.741	0.000	0.919	0.757	0.962	0.000	0.929	0.875	0.875	0.000	0.926	0.925
Entering Leg	409	172	0	581	103	458	0	561	322	182	0	504	1646
Exiting Leg				285				494				867	1646
Total				866				1055				1371	3292

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	1	0	0	1	0	2	0	2	1	1	0	2	5
2:45 PM	0	0	0	0	0	3	0	3	1	0	0	1	4
Total	1	0	0	1	0	5	0	5	2	1	0	3	9
3:00 PM	1	0	0	1	3	0	0	3	1	2	0	3	7
3:15 PM	1	4	0	5	5	1	0	6	1	2	0	3	14
3:30 PM	4	5	0	9	1	1	0	2	1	2	0	3	14
3:45 PM	1	0	0	1	0	1	0	1	0	1	0	1	3
Total	7	9	0	16	9	3	0	12	3	7	0	10	38
4:00 PM	2	1	0	3	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
Total	2	1	0	3	1	0	0	1	0	1	0	1	5
Grand Total	10	10	0	20	10	8	0	18	5	9	0	14	52
Approach %	50.0	50.0	0.0		55.6	44.4	0.0		35.7	64.3	0.0		
Total %	19.2	19.2	0.0	38.5	19.2	15.4	0.0	34.6	9.6	17.3	0.0	26.9	
Exiting Leg Total				19				15				18	52
Buses	3	8	0	11	6	4	0	10	2	3	0	5	26
% Buses	30.0	80.0	0.0	55.0	60.0	50.0	0.0	55.6	40.0	33.3	0.0	35.7	50.0
Exiting Leg Total				9				10				7	26
Single-Unit Trucks	7	2	0	9	4	4	0	8	3	4	0	7	24
% Single-Unit	70.0	20.0	0.0	45.0	40.0	50.0	0.0	44.4	60.0	44.4	0.0	50.0	46.2
Exiting Leg Total				8				5				11	24
Articulated Trucks	0	0	0	0	0	0	0	0	0	2	0	2	2
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	14.3	3.8
Exiting Leg Total				2				0				0	2

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:45 PM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:45 PM	0	0	0	0	0	3	0	3	1	0	0	1	4
3:00 PM	1	0	0	1	3	0	0	3	1	2	0	3	7
3:15 PM	1	4	0	5	5	1	0	6	1	2	0	3	14
3:30 PM	4	5	0	9	1	1	0	2	1	2	0	3	14
Total Volume	6	9	0	15	9	5	0	14	4	6	0	10	39
% Approach Total	40.0	60.0	0.0		64.3	35.7	0.0		40.0	60.0	0.0		
PHF	0.375	0.450	0.000	0.417	0.450	0.417	0.000	0.583	1.000	0.750	0.000	0.833	0.696
Buses	3	7	0	10	6	3	0	9	2	3	0	5	24
Buses %	50.0	77.8	0.0	66.7	66.7	60.0	0.0	64.3	50.0	50.0	0.0	50.0	61.5
Single-Unit Trucks	3	2	0	5	3	2	0	5	2	2	0	4	14
Single-Unit %	50.0	22.2	0.0	33.3	33.3	40.0	0.0	35.7	50.0	33.3	0.0	40.0	35.9
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	10.0	2.6
Buses	3	7	0	10	6	3	0	9	2	3	0	5	24
Single-Unit Trucks	3	2	0	5	3	2	0	5	2	2	0	4	14
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Entering Leg	6	9	0	15	9	5	0	14	4	6	0	10	39
Buses				9				9				6	24
Single-Unit Trucks				5				4				5	14
Articulated Trucks				1				0				0	1
Total Exiting Leg				15				13				11	39

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Buses

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
2:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	2
3:00 PM	1	0	0	1	2	0	0	2	1	0	0	1	4
3:15 PM	0	3	0	3	3	1	0	4	0	1	0	1	8
3:30 PM	2	4	0	6	1	1	0	2	1	2	0	3	11
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	7	0	10	6	2	0	8	2	3	0	5	23
4:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	3	8	0	11	6	4	0	10	2	3	0	5	26
Approach %	27.3	72.7	0.0		60.0	40.0	0.0		40.0	60.0	0.0		
Total %	11.5	30.8	0.0	42.3	23.1	15.4	0.0	38.5	7.7	11.5	0.0	19.2	
Exiting Leg Total				9				10				7	26

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:45 PM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
3:00 PM	1	0	0	1	2	0	0	2	1	0	0	1	4
3:15 PM	0	3	0	3	3	1	0	4	0	1	0	1	8
3:30 PM	2	4	0	6	1	1	0	2	1	2	0	3	11
Total Volume	3	7	0	10	6	3	0	9	2	3	0	5	24
% Approach Total	30.0	70.0	0.0		66.7	33.3	0.0		40.0	60.0	0.0		
PHF	0.375	0.438	0.000	0.417	0.500	0.750	0.000	0.563	0.500	0.375	0.000	0.417	0.545
Entering Leg	3	7	0	10	6	3	0	9	2	3	0	5	24
Exiting Leg				9				9				6	24
Total				19				18				11	48

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	1	0	0	1	0	1	0	1	1	1	0	2	4
2:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
Total	1	0	0	1	0	3	0	3	2	1	0	3	7
3:00 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
3:15 PM	1	1	0	2	2	0	0	2	1	1	0	2	6
3:30 PM	2	1	0	3	0	0	0	0	0	0	0	0	3
3:45 PM	1	0	0	1	0	1	0	1	0	1	0	1	3
Total	4	2	0	6	3	1	0	4	1	3	0	4	14
4:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	2	0	0	2	1	0	0	1	0	0	0	0	3
Grand Total	7	2	0	9	4	4	0	8	3	4	0	7	24
Approach %	77.8	22.2	0.0		50.0	50.0	0.0		42.9	57.1	0.0		
Total %	29.2	8.3	0.0	37.5	16.7	16.7	0.0	33.3	12.5	16.7	0.0	29.2	
Exiting Leg Total				8				5				11	24

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	1	0	0	1	0	1	0	1	1	1	0	2	4
2:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	3
3:00 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
3:15 PM	1	1	0	2	2	0	0	2	1	1	0	2	6
Total Volume	2	1	0	3	3	3	0	6	3	3	0	6	15
% Approach Total	66.7	33.3	0.0		50.0	50.0	0.0		50.0	50.0	0.0		
PHF	0.500	0.250	0.000	0.375	0.375	0.375	0.000	0.750	0.750	0.750	0.000	0.750	0.625
Entering Leg	2	1	0	3	3	3	0	6	3	3	0	6	15
Exiting Leg				6				4				5	15
Total				9				10				11	30

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Articulated Trucks**

	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	2
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	
Exiting Leg Total				2				0				0	2

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Salem Street from North				Middlesex Avenue from South				Salem Street from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	1
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	1	0	1	1
Exiting Leg				1				0				0	1
Total				1				0				1	2

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	0	1	2	0	0	0	0	2	0	0	0	0	0	0	3
Approach %	0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	33.3	0.0	0.0	0.0	33.3	66.7	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						2						1						0	3

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	2
Exiting Leg						2						0						0	2
Total						2						2						0	4

PDI File #: **240268 A**
Location: **N: Salem Street S: Middlesex Avenue**
Location: **W: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Salem Street from North						Middlesex Avenue from South						Salem Street from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class:

Cars and Heavy Vehicles (Combined)

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	69	0	0	69	0	0	0	0	0	59	0	59	128
8:15 AM	76	0	0	76	0	1	0	1	0	76	0	76	153
8:30 AM	58	0	0	58	1	1	0	2	0	57	0	57	117
8:45 AM	73	2	1	76	0	1	0	1	0	92	0	92	169
Total	276	2	1	279	1	3	0	4	0	284	0	284	567
9:00 AM	46	0	0	46	0	0	0	0	0	50	0	50	96
9:15 AM	45	0	0	45	0	0	0	0	0	43	0	43	88
9:30 AM	47	0	0	47	1	0	0	1	1	52	0	53	101
9:45 AM	32	1	0	33	0	1	0	1	0	33	0	33	67
Total	170	1	0	171	1	1	0	2	1	178	0	179	352
Grand Total	446	3	1	450	2	4	0	6	1	462	0	463	919
Approach %	99.1	0.7	0.2		33.3	66.7	0.0		0.2	99.8	0.0		
Total %	48.5	0.3	0.1	49.0	0.2	0.4	0.0	0.7	0.1	50.3	0.0	50.4	
Exiting Leg Total				465				4				450	919
Cars	433	3	1	437	2	4	0	6	1	447	0	448	891
% Cars	97.1	100.0	100.0	97.1	100.0	100.0	0.0	100.0	100.0	96.8	0.0	96.8	97.0
Exiting Leg Total				450				4				437	891
Heavy Vehicles	13	0	0	13	0	0	0	0	0	15	0	15	28
% Heavy Vehicles	2.9	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	3.2	0.0	3.2	3.0
Exiting Leg Total				15				0				13	28

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	69	0	0	69	0	0	0	0	0	59	0	59	128
8:15 AM	76	0	0	76	0	1	0	1	0	76	0	76	153
8:30 AM	58	0	0	58	1	1	0	2	0	57	0	57	117
8:45 AM	73	2	1	76	0	1	0	1	0	92	0	92	169
Total Volume	276	2	1	279	1	3	0	4	0	284	0	284	567
% Approach Total	98.9	0.7	0.4		25.0	75.0	0.0		0.0	100.0	0.0		
PHF	0.908	0.250	0.250	0.918	0.250	0.750	0.000	0.500	0.000	0.772	0.000	0.772	0.839
Cars	267	2	1	270	1	3	0	4	0	275	0	275	549
Cars %	96.7	100.0	100.0	96.8	100.0	100.0	0.0	100.0	0.0	96.8	0.0	96.8	96.8
Heavy Vehicles	9	0	0	9	0	0	0	0	0	9	0	9	18
Heavy Vehicles %	3.3	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	3.2	0.0	3.2	3.2
Cars Enter Leg	267	2	1	270	1	3	0	4	0	275	0	275	549
Heavy Enter Leg	9	0	0	9	0	0	0	0	0	9	0	9	18
Total Entering Leg	276	2	1	279	1	3	0	4	0	284	0	284	567
Cars Exiting Leg				277				2				270	549
Heavy Exiting Leg				9				0				9	18
Total Exiting Leg				286				2				279	567

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	68	0	0	68	0	0	0	0	0	56	0	56	124
8:15 AM	71	0	0	71	0	1	0	1	0	75	0	75	147
8:30 AM	57	0	0	57	1	1	0	2	0	55	0	55	114
8:45 AM	71	2	1	74	0	1	0	1	0	89	0	89	164
Total	267	2	1	270	1	3	0	4	0	275	0	275	549
9:00 AM	45	0	0	45	0	0	0	0	0	48	0	48	93
9:15 AM	45	0	0	45	0	0	0	0	0	42	0	42	87
9:30 AM	44	0	0	44	1	0	0	1	1	50	0	51	96
9:45 AM	32	1	0	33	0	1	0	1	0	32	0	32	66
Total	166	1	0	167	1	1	0	2	1	172	0	173	342
Grand Total	433	3	1	437	2	4	0	6	1	447	0	448	891
Approach %	99.1	0.7	0.2		33.3	66.7	0.0		0.2	99.8	0.0		
Total %	48.6	0.3	0.1	49.0	0.2	0.4	0.0	0.7	0.1	50.2	0.0	50.3	
Exiting Leg Total				450				4				437	891

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	68	0	0	68	0	0	0	0	0	56	0	56	124
8:15 AM	71	0	0	71	0	1	0	1	0	75	0	75	147
8:30 AM	57	0	0	57	1	1	0	2	0	55	0	55	114
8:45 AM	71	2	1	74	0	1	0	1	0	89	0	89	164
Total Volume	267	2	1	270	1	3	0	4	0	275	0	275	549
% Approach Total	98.9	0.7	0.4		25.0	75.0	0.0		0.0	100.0	0.0		
PHF	0.940	0.250	0.250	0.912	0.250	0.750	0.000	0.500	0.000	0.772	0.000	0.772	0.837
Entering Leg	267	2	1	270	1	3	0	4	0	275	0	275	549
Exiting Leg				277				2				270	549
Total				547				6				545	1098

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
8:15 AM	5	0	0	5	0	0	0	0	0	1	0	1	6
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
Total	9	0	0	9	0	0	0	0	0	9	0	9	18
9:00 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
9:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
9:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
9:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	4	0	0	4	0	0	0	0	0	6	0	6	10
Grand Total	13	0	0	13	0	0	0	0	0	15	0	15	28
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	46.4	0.0	0.0	46.4	0.0	0.0	0.0	0.0	0.0	53.6	0.0	53.6	
Exiting Leg Total				15				0				13	28
Buses	2	0	0	2	0	0	0	0	0	0	0	0	2
% Buses	15.4	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1
Exiting Leg Total				0				0				2	2
Single-Unit Trucks	10	0	0	10	0	0	0	0	0	12	0	12	22
% Single-Unit	76.9	0.0	0.0	76.9	0.0	0.0	0.0	0.0	0.0	80.0	0.0	80.0	78.6
Exiting Leg Total				12				0				10	22
Articulated Trucks	1	0	0	1	0	0	0	0	0	3	0	3	4
% Articulated	7.7	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0	14.3
Exiting Leg Total				3				0				1	4

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	0	0	0	0	3	0	3	4
8:15 AM	5	0	0	5	0	0	0	0	0	1	0	1	6
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	2	0	0	2	0	0	0	0	0	3	0	3	5
Total Volume	9	0	0	9	0	0	0	0	0	9	0	9	18
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.450	0.000	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.750
Buses	2	0	0	2	0	0	0	0	0	0	0	0	2
Buses %	22.2	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1
Single-Unit Trucks	6	0	0	6	0	0	0	0	0	6	0	6	12
Single-Unit %	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	66.7	0.0	66.7	66.7
Articulated Trucks	1	0	0	1	0	0	0	0	0	3	0	3	4
Articulated %	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	22.2
Buses	2	0	0	2	0	0	0	0	0	0	0	0	2
Single-Unit Trucks	6	0	0	6	0	0	0	0	0	6	0	6	12
Articulated Trucks	1	0	0	1	0	0	0	0	0	3	0	3	4
Total Entering Leg	9	0	0	9	0	0	0	0	0	9	0	9	18
Buses				0				0				2	2
Single-Unit Trucks				6				0				6	12
Articulated Trucks				3				0				1	4
Total Exiting Leg				9				0				9	18

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Buses**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total	2	0	0	2	0	0	0	0	0	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	0	0	2	0	0	0	0	0	0	0	0	2
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				2	2

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	2	0	0	2	0	0	0	0	0	0	0	0	2
Total Volume	2	0	0	2	0	0	0	0	0	0	0	0	2
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	2	0	0	2	0	0	0	0	0	0	0	0	2
Exiting Leg				0				0				2	2
Total				2				0				2	4

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:15 AM	4	0	0	4	0	0	0	0	0	0	0	0	4
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	6	0	0	6	0	0	0	0	0	6	0	6	12
9:00 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
9:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
9:30 AM	3	0	0	3	0	0	0	0	0	2	0	2	5
9:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	4	0	0	4	0	0	0	0	0	6	0	6	10
Grand Total	10	0	0	10	0	0	0	0	0	12	0	12	22
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	45.5	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	54.5	0.0	54.5	
Exiting Leg Total				12				0				10	22

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:15 AM	4	0	0	4	0	0	0	0	0	0	0	0	4
8:30 AM	1	0	0	1	0	0	0	0	0	2	0	2	3
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	6	0	0	6	0	0	0	0	0	6	0	6	12
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.750
Entering Leg	6	0	0	6	0	0	0	0	0	6	0	6	12
Exiting Leg				6				0				6	12
Total				12				0				12	24

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Articulated Trucks**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	0	1	0	0	0	0	0	3	0	3	4
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	1	0	0	0	0	0	3	0	3	4
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	75.0	
Exiting Leg Total				3				0				1	4

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	1	0	0	0	0	0	3	0	3	4
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.500
Entering Leg	1	0	0	1	0	0	0	0	0	3	0	3	4
Exiting Leg				3				0				1	4
Total				4				0				4	8

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	
Exiting Leg Total						0						0						1	1

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Exiting Leg						0						0						1	1
Total						0						0						2	2

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Cars and Heavy Vehicles (Combined)**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	84	0	0	84	1	0	0	1	1	45	0	46	131
2:45 PM	74	0	0	74	0	0	0	0	1	57	0	58	132
Total	158	0	0	158	1	0	0	1	2	102	0	104	263
3:00 PM	105	0	0	105	0	1	0	1	0	66	0	66	172
3:15 PM	133	0	0	133	0	1	0	1	1	69	0	70	204
3:30 PM	132	0	0	132	2	0	0	2	1	82	0	83	217
3:45 PM	155	1	0	156	0	0	0	0	1	55	0	56	212
Total	525	1	0	526	2	2	0	4	3	272	0	275	805
4:00 PM	142	1	0	143	0	1	0	1	0	65	0	65	209
4:15 PM	173	0	0	173	0	0	0	0	0	81	0	81	254
Total	315	1	0	316	0	1	0	1	0	146	0	146	463
Grand Total	998	2	0	1000	3	3	0	6	5	520	0	525	1531
Approach %	99.8	0.2	0.0		50.0	50.0	0.0		1.0	99.0	0.0		
Total %	65.2	0.1	0.0	65.3	0.2	0.2	0.0	0.4	0.3	34.0	0.0	34.3	
Exiting Leg Total				523				7				1001	1531
Cars	985	2	0	987	3	3	0	6	5	509	0	514	1507
% Cars	98.7	100.0	0.0	98.7	100.0	100.0	0.0	100.0	100.0	97.9	0.0	97.9	98.4
Exiting Leg Total				512				7				988	1507
Heavy Vehicles	13	0	0	13	0	0	0	0	0	11	0	11	24
% Heavy Vehicles	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	2.1	0.0	2.1	1.6
Exiting Leg Total				11				0				13	24

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:30 PM	132	0	0	132	2	0	0	2	1	82	0	83	217
3:45 PM	155	1	0	156	0	0	0	0	1	55	0	56	212
4:00 PM	142	1	0	143	0	1	0	1	0	65	0	65	209
4:15 PM	173	0	0	173	0	0	0	0	0	81	0	81	254
Total Volume	602	2	0	604	2	1	0	3	2	283	0	285	892
% Approach Total	99.7	0.3	0.0		66.7	33.3	0.0		0.7	99.3	0.0		
PHF	0.870	0.500	0.000	0.873	0.250	0.250	0.000	0.375	0.500	0.863	0.000	0.858	0.878
Cars	594	2	0	596	2	1	0	3	2	280	0	282	881
Cars %	98.7	100.0	0.0	98.7	100.0	100.0	0.0	100.0	100.0	98.9	0.0	98.9	98.8
Heavy Vehicles	8	0	0	8	0	0	0	0	0	3	0	3	11
Heavy Vehicles %	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.1	1.2
Cars Enter Leg	594	2	0	596	2	1	0	3	2	280	0	282	881
Heavy Enter Leg	8	0	0	8	0	0	0	0	0	3	0	3	11
Total Entering Leg	602	2	0	604	2	1	0	3	2	283	0	285	892
Cars Exiting Leg				282				4				595	881
Heavy Exiting Leg				3				0				8	11
Total Exiting Leg				285				4				603	892

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Cars**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	84	0	0	84	1	0	0	1	1	44	0	45	130
2:45 PM	74	0	0	74	0	0	0	0	1	57	0	58	132
Total	158	0	0	158	1	0	0	1	2	101	0	103	262
3:00 PM	101	0	0	101	0	1	0	1	0	63	0	63	165
3:15 PM	132	0	0	132	0	1	0	1	1	65	0	66	199
3:30 PM	129	0	0	129	2	0	0	2	1	82	0	83	214
3:45 PM	153	1	0	154	0	0	0	0	1	54	0	55	209
Total	515	1	0	516	2	2	0	4	3	264	0	267	787
4:00 PM	139	1	0	140	0	1	0	1	0	65	0	65	206
4:15 PM	173	0	0	173	0	0	0	0	0	79	0	79	252
Total	312	1	0	313	0	1	0	1	0	144	0	144	458
Grand Total	985	2	0	987	3	3	0	6	5	509	0	514	1507
Approach %	99.8	0.2	0.0		50.0	50.0	0.0		1.0	99.0	0.0		
Total %	65.4	0.1	0.0	65.5	0.2	0.2	0.0	0.4	0.3	33.8	0.0	34.1	
Exiting Leg Total				512				7				988	1507

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:30 PM	129	0	0	129	2	0	0	2	1	82	0	83	214
3:45 PM	153	1	0	154	0	0	0	0	1	54	0	55	209
4:00 PM	139	1	0	140	0	1	0	1	0	65	0	65	206
4:15 PM	173	0	0	173	0	0	0	0	0	79	0	79	252
Total Volume	594	2	0	596	2	1	0	3	2	280	0	282	881
% Approach Total	99.7	0.3	0.0		66.7	33.3	0.0		0.7	99.3	0.0		
PHF	0.858	0.500	0.000	0.861	0.250	0.250	0.000	0.375	0.500	0.854	0.000	0.849	0.874
Entering Leg	594	2	0	596	2	1	0	3	2	280	0	282	881
Exiting Leg				282				4				595	881
Total				878				7				877	1762

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
3:00 PM	4	0	0	4	0	0	0	0	0	3	0	3	7
3:15 PM	1	0	0	1	0	0	0	0	0	4	0	4	5
3:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
3:45 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
Total	10	0	0	10	0	0	0	0	0	8	0	8	18
4:00 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	3	0	0	3	0	0	0	0	0	2	0	2	5
Grand Total	13	0	0	13	0	0	0	0	0	11	0	11	24
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	54.2	0.0	0.0	54.2	0.0	0.0	0.0	0.0	0.0	45.8	0.0	45.8	
Exiting Leg Total				11				0				13	24
Buses	4	0	0	4	0	0	0	0	0	0	0	0	4
% Buses	30.8	0.0	0.0	30.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7
Exiting Leg Total				0				0				4	4
Single-Unit Trucks	8	0	0	8	0	0	0	0	0	8	0	8	16
% Single-Unit	61.5	0.0	0.0	61.5	0.0	0.0	0.0	0.0	0.0	72.7	0.0	72.7	66.7
Exiting Leg Total				8				0				8	16
Articulated Trucks	1	0	0	1	0	0	0	0	0	3	0	3	4
% Articulated	7.7	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	27.3	0.0	27.3	16.7
Exiting Leg Total				3				0				1	4

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:00 PM	4	0	0	4	0	0	0	0	0	3	0	3	7
3:15 PM	1	0	0	1	0	0	0	0	0	4	0	4	5
3:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
3:45 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
Total Volume	10	0	0	10	0	0	0	0	0	8	0	8	18
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.643
Buses	3	0	0	3	0	0	0	0	0	0	0	0	3
Buses %	30.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7
Single-Unit Trucks	6	0	0	6	0	0	0	0	0	6	0	6	12
Single-Unit %	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	75.0	66.7
Articulated Trucks	1	0	0	1	0	0	0	0	0	2	0	2	3
Articulated %	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	25.0	16.7
Buses	3	0	0	3	0	0	0	0	0	0	0	0	3
Single-Unit Trucks	6	0	0	6	0	0	0	0	0	6	0	6	12
Articulated Trucks	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Entering Leg	10	0	0	10	0	0	0	0	0	8	0	8	18
Buses				0				0				3	3
Single-Unit Trucks				6				0				6	12
Articulated Trucks				2				0				1	3
Total Exiting Leg				8				0				10	18

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Buses

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	3	0	0	3	0	0	0	0	0	0	0	0	3
4:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	0	0	0	1
Grand Total	4	0	0	4	0	0	0	0	0	0	0	0	4
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				0				4	4

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	3	0	0	3	0	0	0	0	0	0	0	0	3
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	3	0	0	3	0	0	0	0	0	0	0	0	3
Exiting Leg				0				0				3	3
Total				3				0				3	6

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
3:00 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
3:15 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
3:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
3:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	6	0	0	6	0	0	0	0	0	6	0	6	12
4:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	2	0	0	2	0	0	0	0	0	1	0	1	3
Grand Total	8	0	0	8	0	0	0	0	0	8	0	8	16
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	
Exiting Leg Total				8				0				8	16

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
3:00 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
3:15 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
3:30 PM	3	0	0	3	0	0	0	0	0	0	0	0	3
3:45 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Volume	6	0	0	6	0	0	0	0	0	6	0	6	12
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.750
Entering Leg	6	0	0	6	0	0	0	0	0	6	0	6	12
Exiting Leg				6				0				6	12
Total				12				0				12	24

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class:

Articulated Trucks

	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
3:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	2	0	2	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	1	0	0	1	0	0	0	0	0	3	0	3	4
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	75.0	
Exiting Leg Total				3				0				1	4

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Ballardvale Street from North				Salem Street from East				Salem Street from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
3:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	0	0	1	0	0	0	0	0	2	0	2	3
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.375
Entering Leg	1	0	0	1	0	0	0	0	0	2	0	2	3
Exiting Leg				2				0				1	3
Total				3				0				3	6

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
2:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	3
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	66.7	
Exiting Leg Total						2						0						1	3

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
Exiting Leg						2						0						0	2
Total						2						0						2	4

PDI File #: **240268 B**
Location: **N: Ballardvale Street S: Salem Street**
Location: **E: Salem Street**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Ballardvale Street from North						Salem Street from East						Salem Street from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PRECISION DATA INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

Cars and Heavy Vehicles (Combined)

	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	0	69	0	0	71	0	0	0	0	0	0	1	56	2	0	0	59	0	0	0	0	0	0	0	0	0	0	0	0	130
8:15 AM	1	0	74	0	0	75	1	0	0	0	0	1	0	74	2	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	152
8:30 AM	3	0	58	0	0	61	0	0	0	0	0	0	0	46	11	1	0	58	1	0	1	0	0	2	0	0	0	0	0	0	121
8:45 AM	5	0	58	0	0	63	0	0	0	0	0	0	0	68	22	0	0	90	16	0	4	0	0	20	0	0	0	0	0	0	173
Total	11	0	259	0	0	270	1	0	0	0	0	1	1	244	37	1	0	283	17	0	5	0	0	22	0	0	0	0	0	0	576
9:00 AM	2	0	37	0	0	39	0	0	0	0	0	0	0	45	8	0	0	53	9	0	3	0	0	12	0	0	0	0	0	0	104
9:15 AM	0	0	44	0	0	44	1	0	0	0	0	1	0	43	0	0	0	43	1	0	0	0	0	1	0	0	0	0	0	0	89
9:30 AM	1	0	45	0	0	46	0	0	0	0	0	0	0	53	1	0	0	54	1	0	0	0	0	1	0	0	0	0	0	0	101
9:45 AM	1	0	32	0	0	33	0	0	0	0	0	0	0	30	1	0	0	31	1	0	0	0	0	1	0	0	0	0	0	0	65
Total	4	0	158	0	0	162	1	0	0	0	0	1	0	171	10	0	0	181	12	0	3	0	0	15	0	0	0	0	0	0	359
Grand Total	15	0	417	0	0	432	2	0	0	0	0	2	1	415	47	1	0	464	29	0	8	0	0	37	0	0	0	0	0	0	935
Approach %	3.5	0.0	96.5	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.2	89.4	10.1	0.2	0.0		78.4	0.0	21.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	1.6	0.0	44.6	0.0	0.0	46.2	0.2	0.0	0.0	0.0	0.0	0.2	0.1	44.4	5.0	0.1	0.0	49.6	3.1	0.0	0.9	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						425						1						446						1						62	935
Cars	15	0	404	0	0	419	2	0	0	0	0	2	1	402	46	1	0	450	29	0	8	0	0	37	0	0	0	0	0	0	908
% Cars	100.0	0.0	96.9	0.0	0.0	97.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0	96.9	97.9	100.0	0.0	97.0	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	97.1
Exiting Leg Total						412						1						433						1						61	908
Heavy Vehicles	0	0	13	0	0	13	0	0	0	0	0	0	0	13	1	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	27
% Heavy Vehicles	0.0	0.0	3.1	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	2.1	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Exiting Leg Total						13						0						13						0						1	27

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	0	69	0	0	71	0	0	0	0	0	0	1	56	2	0	0	59	0	0	0	0	0	0	0	0	0	0	0	0	130
8:15 AM	1	0	74	0	0	75	1	0	0	0	0	1	0	74	2	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	152
8:30 AM	3	0	58	0	0	61	0	0	0	0	0	0	0	46	11	1	0	58	1	0	1	0	0	2	0	0	0	0	0	0	121
8:45 AM	5	0	58	0	0	63	0	0	0	0	0	0	0	68	22	0	0	90	16	0	4	0	0	20	0	0	0	0	0	0	173
Total Volume	11	0	259	0	0	270	1	0	0	0	0	1	1	244	37	1	0	283	17	0	5	0	0	22	0	0	0	0	0	0	576
% Approach Total	4.1	0.0	95.9	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.4	86.2	13.1	0.4	0.0		77.3	0.0	22.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.550	0.000	0.875	0.000	0.000	0.900	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.824	0.420	0.250	0.000	0.786	0.266	0.000	0.313	0.000	0.000	0.275	0.000	0.000	0.000	0.000	0.000	0.000	0.832
Cars	11	0	250	0	0	261	1	0	0	0	0	1	1	236	37	1	0	275	17	0	5	0	0	22	0	0	0	0	0	0	559
Cars %	100.0	0.0	96.5	0.0	0.0	96.7	100.0	0.0	0.0	0.0	0.0	100.0	100.0	96.7	100.0	100.0	0.0	97.2	100.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	97.0
Heavy Vehicles	0	0	9	0	0	9	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	17
Heavy Vehicles %	0.0	0.0	3.5	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Cars Enter Leg	11	0	250	0	0	261	1	0	0	0	0	1	1	236	37	1	0	275	17	0	5	0	0	22	0	0	0	0	0	0	559
Heavy Enter Leg	0	0	9	0	0	9	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	17
Total Entering Leg	11	0	259	0	0	270	1	0	0	0	0	1	1	244	37	1	0	283	17	0	5	0	0	22	0	0	0	0	0	0	576
Cars Exiting Leg						242						1						267						1						48	559
Heavy Exiting Leg						8						0						9						0						0	17
Total Exiting Leg						250						1						276						1						48	576

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

Cars

	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	0	68	0	0	70	0	0	0	0	0	0	1	53	2	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	126
8:15 AM	1	0	69	0	0	70	1	0	0	0	0	1	0	74	2	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	147
8:30 AM	3	0	57	0	0	60	0	0	0	0	0	0	0	44	11	1	0	56	1	0	1	0	0	2	0	0	0	0	0	0	118
8:45 AM	5	0	56	0	0	61	0	0	0	0	0	0	0	65	22	0	0	87	16	0	4	0	0	20	0	0	0	0	0	0	168
Total	11	0	250	0	0	261	1	0	0	0	0	1	1	236	37	1	0	275	17	0	5	0	0	22	0	0	0	0	0	0	559
9:00 AM	2	0	36	0	0	38	0	0	0	0	0	0	0	43	8	0	0	51	9	0	3	0	0	12	0	0	0	0	0	0	101
9:15 AM	0	0	44	0	0	44	1	0	0	0	0	1	0	42	0	0	0	42	1	0	0	0	0	1	0	0	0	0	0	0	88
9:30 AM	1	0	42	0	0	43	0	0	0	0	0	0	0	52	0	0	0	52	1	0	0	0	0	1	0	0	0	0	0	0	96
9:45 AM	1	0	32	0	0	33	0	0	0	0	0	0	0	29	1	0	0	30	1	0	0	0	0	1	0	0	0	0	0	0	64
Total	4	0	154	0	0	158	1	0	0	0	0	1	0	166	9	0	0	175	12	0	3	0	0	15	0	0	0	0	0	0	349
Grand Total	15	0	404	0	0	419	2	0	0	0	0	2	1	402	46	1	0	450	29	0	8	0	0	37	0	0	0	0	0	0	908
Approach %	3.6	0.0	96.4	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.2	89.3	10.2	0.2	0.0		78.4	0.0	21.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	1.7	0.0	44.5	0.0	0.0	46.1	0.2	0.0	0.0	0.0	0.0	0.2	0.1	44.3	5.1	0.1	0.0	49.6	3.2	0.0	0.9	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						412						1						433						1						61	908

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	0	68	0	0	70	0	0	0	0	0	0	1	53	2	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	126
8:15 AM	1	0	69	0	0	70	1	0	0	0	0	1	0	74	2	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0	147
8:30 AM	3	0	57	0	0	60	0	0	0	0	0	0	0	44	11	1	0	56	1	0	1	0	0	2	0	0	0	0	0	0	118
8:45 AM	5	0	56	0	0	61	0	0	0	0	0	0	0	65	22	0	0	87	16	0	4	0	0	20	0	0	0	0	0	0	168
Total Volume	11	0	250	0	0	261	1	0	0	0	0	1	1	236	37	1	0	275	17	0	5	0	0	22	0	0	0	0	0	0	559
% Approach Total	4.2	0.0	95.8	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.4	85.8	13.5	0.4	0.0		77.3	0.0	22.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.550	0.000	0.906	0.000	0.000	0.932	0.250	0.000	0.000	0.000	0.000	0.250	0.250	0.797	0.420	0.250	0.000	0.790	0.266	0.000	0.313	0.000	0.000	0.275	0.000	0.000	0.000	0.000	0.000	0.000	0.832
Entering Leg	11	0	250	0	0	261	1	0	0	0	0	1	1	236	37	1	0	275	17	0	5	0	0	22	0	0	0	0	0	0	559
Exiting Leg						242						1						267						1						48	559
Total						503						2						542						23						48	1118

PRECISION DATA INDUSTRIES, LLC
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PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	9	0	0	9	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	17
9:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	4	0	0	4	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	10
Grand Total	0	0	13	0	0	13	0	0	0	0	0	0	0	13	1	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	27
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	92.9	7.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	48.1	0.0	0.0	48.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.1	3.7	0.0	0.0	51.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						13						0						13						0						1	27
Buses	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% Buses	0.0	0.0	15.4	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4
Exiting Leg Total						0						0						2						0						0	2
Single-Unit Trucks	0	0	10	0	0	10	0	0	0	0	0	0	0	11	1	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	22
% Single-Unit	0.0	0.0	76.9	0.0	0.0	76.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.6	100.0	0.0	0.0	85.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.5
Exiting Leg Total						11						0						10						0						1	22
Articulated Trucks	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
% Articulated	0.0	0.0	7.7	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1
Exiting Leg Total						2						0						1						0						0	3

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
Total Volume	0	0	9	0	0	9	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	17
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.450	0.000	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.850
Buses	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Buses %	0.0	0.0	22.2	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8
Single-Unit Trucks	0	0	6	0	0	6	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	12
Single-Unit %	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.6
Articulated Trucks	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Articulated %	0.0	0.0	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6
Buses	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Single-Unit Trucks	0	0	6	0	0	6	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	12
Articulated Trucks	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Entering Leg	0	0	9	0	0	9	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	17
Buses						0						0						2						0						0	2
Single-Unit Trucks						6						0						6						0						0	12
Articulated Trucks						2						0						1						0						0	3
Total Exiting Leg						8						0						9						0						0	17

PRECISION DATA INDUSTRIES, LLC

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PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

Buses

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						2						0						0	2

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Exiting Leg						0						0						2						0						0	2
Total						2						0						2						0						0	4

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Single-Unit Trucks

	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	6	0	0	6	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	12
9:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	4	0	0	4	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	10
Grand Total	0	0	10	0	0	10	0	0	0	0	0	0	0	11	1	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	22
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	91.7	8.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	45.5	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	4.5	0.0	0.0	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						11						0						10						0						1	22

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	6	0	0	6	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	12
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	6	0	0	6	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	12
Exiting Leg						6						0						6						0						0	12
Total						12						0						12						0						0	24

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Articulated Trucks

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						2						0						1						0						0	3

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Exiting Leg						2						0						1						0						0	3
Total						3						0						3						0						0	6

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

Bicycles (on Roadway and Crosswalks)

	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total								0								0								0								0								0	0

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg								0								0								0								0								0	0
Total								0								0								0								0								0	0

PRECISION DATA INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

Pedestrians

	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	3	3	6
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	4	4	8
Approach %	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	50	50		0	0	0	0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	50	0	0	0	0	0	0	50	50	
Exiting Leg Total								0								0								0								4								4	8

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	3	3	6
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	66.7	33.3		0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.375	0.750
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	3	3	6
Exiting Leg								0								0								0								3								3	6
Total								0								0								0								6								6	12

PRECISION DATA INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Cars and Heavy Vehicles (Combined)

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	2	0	77	0	0	79	0	0	0	0	0	0	1	42	4	0	0	47	4	0	1	0	0	5	0	0	0	0	0	0	131
2:45 PM	2	0	72	0	0	74	0	0	0	0	0	0	0	52	4	1	0	57	2	0	1	0	0	3	0	0	0	0	0	0	134
Total	4	0	149	0	0	153	0	0	0	0	0	0	1	94	8	1	0	104	6	0	2	0	0	8	0	0	0	0	0	0	265
3:00 PM	2	0	104	0	0	106	0	0	0	0	0	0	0	51	15	0	0	66	1	0	0	0	0	1	0	0	0	0	0	0	173
3:15 PM	2	0	100	0	0	102	0	0	0	1	0	1	0	54	14	0	0	68	32	0	5	0	0	37	0	0	0	0	0	0	208
3:30 PM	2	0	128	0	0	130	1	0	0	0	0	1	0	77	8	0	0	85	10	0	11	0	0	21	0	0	0	0	0	0	237
3:45 PM	3	0	149	0	0	152	0	0	0	2	0	2	2	49	4	0	0	55	5	0	4	0	0	9	0	0	0	0	0	0	218
Total	9	0	481	0	0	490	1	0	0	3	0	4	2	231	41	0	0	274	48	0	20	0	0	68	0	0	0	0	0	0	836
4:00 PM	0	1	137	0	0	138	0	0	0	1	0	1	0	59	5	0	0	64	7	0	4	0	0	11	0	1	0	0	0	1	215
4:15 PM	2	0	156	0	0	158	0	0	0	1	0	1	0	71	10	0	0	81	17	0	1	0	0	18	0	0	0	0	0	0	258
Total	2	1	293	0	0	296	0	0	0	2	0	2	0	130	15	0	0	145	24	0	5	0	0	29	0	1	0	0	0	1	473
Grand Total	15	1	923	0	0	939	1	0	0	5	0	6	3	455	64	1	0	523	78	0	27	0	0	105	0	1	0	0	0	1	1574
Approach %	1.6	0.1	98.3	0.0	0.0		16.7	0.0	0.0	83.3	0.0		0.6	87.0	12.2	0.2	0.0		74.3	0.0	25.7	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	1.0	0.1	58.6	0.0	0.0	59.7	0.1	0.0	0.0	0.3	0.0	0.4	0.2	28.9	4.1	0.1	0.0	33.2	5.0	0.0	1.7	0.0	0.0	6.7	0.0	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total						483						3						1007						2						79	1574
Cars	15	1	910	0	0	926	1	0	0	5	0	6	3	445	63	1	0	512	77	0	27	0	0	104	0	1	0	0	0	1	1549
% Cars	100.0	100.0	98.6	0.0	0.0	98.6	100.0	0.0	0.0	100.0	0.0	100.0	100.0	97.8	98.4	100.0	0.0	97.9	98.7	0.0	100.0	0.0	0.0	99.0	0.0	100.0	0.0	0.0	0.0	100.0	98.4
Exiting Leg Total						473						3						993						2						78	1549
Heavy Vehicles	0	0	13	0	0	13	0	0	0	0	0	0	0	10	1	0	0	11	1	0	0	0	0	1	0	0	0	0	0	0	25
% Heavy Vehicles	0.0	0.0	1.4	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.6	0.0	0.0	2.1	1.3	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Exiting Leg Total						10						0						14						0						1	25

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
3:30 PM	2	0	128	0	0	130	1	0	0	0	0	1	0	77	8	0	0	85	10	0	11	0	0	21	0	0	0	0	0	0	237
3:45 PM	3	0	149	0	0	152	0	0	0	2	0	2	2	49	4	0	0	55	5	0	4	0	0	9	0	0	0	0	0	0	218
4:00 PM	0	1	137	0	0	138	0	0	0	1	0	1	0	59	5	0	0	64	7	0	4	0	0	11	0	1	0	0	0	1	215
4:15 PM	2	0	156	0	0	158	0	0	0	1	0	1	0	71	10	0	0	81	17	0	1	0	0	18	0	0	0	0	0	0	258
Total Volume	7	1	570	0	0	578	1	0	0	4	0	5	2	256	27	0	0	285	39	0	20	0	0	59	0	1	0	0	0	1	928
% Approach Total	1.2	0.2	98.6	0.0	0.0		20.0	0.0	0.0	80.0	0.0		0.7	89.8	9.5	0.0	0.0		66.1	0.0	33.9	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.583	0.250	0.913	0.000	0.000	0.915	0.250	0.000	0.000	0.500	0.000	0.625	0.250	0.831	0.675	0.000	0.000	0.838	0.574	0.000	0.455	0.000	0.000	0.702	0.000	0.250	0.000	0.000	0.000	0.250	0.899
Cars	7	1	561	0	0	569	1	0	0	4	0	5	2	253	27	0	0	282	39	0	20	0	0	59	0	1	0	0	0	1	916
Cars %	100.0	100.0	98.4	0.0	0.0	98.4	100.0	0.0	0.0	100.0	0.0	100.0	100.0	98.8	100.0	0.0	0.0	98.9	100.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	100.0	98.7
Heavy Vehicles	0	0	9	0	0	9	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Heavy Vehicles %	0.0	0.0	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Cars Enter Leg	7	1	561	0	0	569	1	0	0	4	0	5	2	253	27	0	0	282	39	0	20	0	0	59	0	1	0	0	0	1	916
Heavy Enter Leg	0	0	9	0	0	9	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	12
Total Entering Leg	7	1	570	0	0	578	1	0	0	4	0	5	2	256	27	0	0	285	39	0	20	0	0	59	0	1	0	0	0	1	928
Cars Exiting Leg						274						2						605						1						34	916
Heavy Exiting Leg						3						0						9						0						0	12
Total Exiting Leg						277						2						614						1						34	928

PRECISION DATA INDUSTRIES, LLC
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PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Cars

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	2	0	77	0	0	79	0	0	0	0	0	0	1	41	4	0	0	46	4	0	1	0	0	5	0	0	0	0	0	0	130
2:45 PM	2	0	72	0	0	74	0	0	0	0	0	0	0	52	4	1	0	57	2	0	1	0	0	3	0	0	0	0	0	0	134
Total	4	0	149	0	0	153	0	0	0	0	0	0	1	93	8	1	0	103	6	0	2	0	0	8	0	0	0	0	0	0	264
3:00 PM	2	0	100	0	0	102	0	0	0	0	0	0	0	48	15	0	0	63	1	0	0	0	0	1	0	0	0	0	0	0	166
3:15 PM	2	0	100	0	0	102	0	0	0	1	0	1	0	51	13	0	0	64	31	0	5	0	0	36	0	0	0	0	0	0	203
3:30 PM	2	0	124	0	0	126	1	0	0	0	0	1	0	77	8	0	0	85	10	0	11	0	0	21	0	0	0	0	0	0	233
3:45 PM	3	0	146	0	0	149	0	0	0	2	0	2	2	48	4	0	0	54	5	0	4	0	0	9	0	0	0	0	0	0	214
Total	9	0	470	0	0	479	1	0	0	3	0	4	2	224	40	0	0	266	47	0	20	0	0	67	0	0	0	0	0	0	816
4:00 PM	0	1	135	0	0	136	0	0	0	1	0	1	0	59	5	0	0	64	7	0	4	0	0	11	0	1	0	0	0	1	213
4:15 PM	2	0	156	0	0	158	0	0	0	1	0	1	0	69	10	0	0	79	17	0	1	0	0	18	0	0	0	0	0	0	256
Total	2	1	291	0	0	294	0	0	0	2	0	2	0	128	15	0	0	143	24	0	5	0	0	29	0	1	0	0	0	1	469
Grand Total	15	1	910	0	0	926	1	0	0	5	0	6	3	445	63	1	0	512	77	0	27	0	0	104	0	1	0	0	0	1	1549
Approach %	1.6	0.1	98.3	0.0	0.0		16.7	0.0	0.0	83.3	0.0		0.6	86.9	12.3	0.2	0.0		74.0	0.0	26.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	1.0	0.1	58.7	0.0	0.0	59.8	0.1	0.0	0.0	0.3	0.0	0.4	0.2	28.7	4.1	0.1	0.0	33.1	5.0	0.0	1.7	0.0	0.0	6.7	0.0	0.1	0.0	0.0	0.0	0.1	
Exiting Leg Total						473						3						993						2						78	1549

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
3:30 PM	2	0	124	0	0	126	1	0	0	0	0	1	0	77	8	0	0	85	10	0	11	0	0	21	0	0	0	0	0	0	233
3:45 PM	3	0	146	0	0	149	0	0	0	2	0	2	2	48	4	0	0	54	5	0	4	0	0	9	0	0	0	0	0	0	214
4:00 PM	0	1	135	0	0	136	0	0	0	1	0	1	0	59	5	0	0	64	7	0	4	0	0	11	0	1	0	0	0	1	213
4:15 PM	2	0	156	0	0	158	0	0	0	1	0	1	0	69	10	0	0	79	17	0	1	0	0	18	0	0	0	0	0	0	256
Total Volume	7	1	561	0	0	569	1	0	0	4	0	5	2	253	27	0	0	282	39	0	20	0	0	59	0	1	0	0	0	1	916
% Approach Total	1.2	0.2	98.6	0.0	0.0		20.0	0.0	0.0	80.0	0.0		0.7	89.7	9.6	0.0	0.0		66.1	0.0	33.9	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.583	0.250	0.899	0.000	0.000	0.900	0.250	0.000	0.000	0.500	0.000	0.625	0.250	0.821	0.675	0.000	0.000	0.829	0.574	0.000	0.455	0.000	0.000	0.702	0.000	0.250	0.000	0.000	0.000	0.250	0.895
Entering Leg	7	1	561	0	0	569	1	0	0	4	0	5	2	253	27	0	0	282	39	0	20	0	0	59	0	1	0	0	0	1	916
Exiting Leg						274						2						605						1						34	916
Total						843						7						887						60						35	1832

PRECISION DATA INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	5
3:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:45 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	11	0	0	11	0	0	0	0	0	0	0	7	1	0	0	8	1	0	0	0	0	1	0	0	0	0	0	0	20
4:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Grand Total	0	0	13	0	0	13	0	0	0	0	0	0	0	10	1	0	0	11	1	0	0	0	0	1	0	0	0	0	0	0	25
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	90.9	9.1	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	52.0	0.0	0.0	52.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	4.0	0.0	0.0	44.0	4.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						10						0						14						0						1	25
Buses	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
% Buses	0.0	0.0	23.1	0.0	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0
Exiting Leg Total						0						0						3						0						0	3
Single-Unit Trucks	0	0	8	0	0	8	0	0	0	0	0	0	0	7	1	0	0	8	1	0	0	0	0	1	0	0	0	0	0	0	17
% Single-Unit	0.0	0.0	61.5	0.0	0.0	61.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.0	100.0	0.0	0.0	72.7	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	68.0
Exiting Leg Total						7						0						9						0						1	17
Articulated Trucks	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
% Articulated	0.0	0.0	15.4	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
Exiting Leg Total						3						0						2						0						0	5

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street from North						Baland Road from East						Ballardvale Street from South						School Lot South Drive from Southwest						School Lot North Drive from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
3:00 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	1	0	0	0	0	1	0	0	0	0	0	0	5
3:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:45 PM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	0	11	0	0	11	0	0	0	0	0	0	0	7	1	0	0	8	1	0	0	0	0	1	0	0	0	0	0	0	20
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	87.5	12.5	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.688	0.000	0.000	0.688	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.250	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.714
Buses	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Buses %	0.0	0.0	27.3	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0
Single-Unit Trucks	0	0	6	0	0	6	0	0	0	0	0	0	0	5	1	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	13
Single-Unit %	0.0	0.0	54.5	0.0	0.0	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	100.0	0.0	0.0	75.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	65.0
Articulated Trucks	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Articulated %	0.0	0.0	18.2	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
Buses	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Single-Unit Trucks	0	0	6	0	0	6	0	0	0	0	0	0	0	5	1	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	13
Articulated Trucks	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Entering Leg	0	0	11	0	0	11	0	0	0	0	0	0	0	7	1	0	0	8	1	0	0	0	0	1	0	0	0	0	0	0	20
Buses						0						0						3						0						0	3
Single-Unit Trucks						5						0						7						0						1	13
Articulated Trucks						2						0						2						0						0	4
Total Exiting Leg						7						0						12						0						1	20

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Buses

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						3						0						0	3

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
3:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Exiting Leg						0						0						3						0						0	3
Total						3						0						3						0						0	6

PRECISION DATA INDUSTRIES, LLC
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PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Single-Unit Trucks

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	1	0	0	0	0	1	0	0	0	0	0	0	4
3:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	6	0	0	6	0	0	0	0	0	0	0	5	1	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	13
4:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	8	0	0	8	0	0	0	0	0	0	0	7	1	0	0	8	1	0	0	0	0	1	0	0	0	0	0	0	17
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	87.5	12.5	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	47.1	0.0	0.0	47.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.2	5.9	0.0	0.0	47.1	5.9	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						7						0						9						0						1	17

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
3:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	1	0	0	0	0	1	0	0	0	0	0	0	4
3:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	6	0	0	6	0	0	0	0	0	0	0	5	1	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	13
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	83.3	16.7	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.250	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.813
Entering Leg	0	0	6	0	0	6	0	0	0	0	0	0	0	5	1	0	0	6	1	0	0	0	0	1	0	0	0	0	0	0	13
Exiting Leg						5						0						7						0						1	13
Total						11						0						13						1						1	26

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Articulated Trucks

	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	5
Approach %	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						3						0						2						0						0	5

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street						Baland Road						Ballardvale Street						School Lot South Drive						School Lot North Drive						
	from North						from East						from South						from Southwest						from West						
	Right	Bear Righ	Thru	Left	U-Turn	Total	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Total
3:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
% Approach Total	0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
Exiting Leg						2						0						2						0						0	4
Total						4						0						4						0						0	8

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Bicycles (on Roadway and Crosswalks)

	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Approach %	0.0	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	0.0	33.3	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total								2								0								1								0								0	3

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Exiting Leg								2								0								0								0								0	2
Total								2								0								2								0								0	4

PRECISION DATA INDUSTRIES, LLC
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PDI File #: **240268 C**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **E: Baland Road W: School Lot North Drive SW: School Lot South Drive**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

Pedestrians

	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	9
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	5	1	6	14
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	5	1	6	14
Approach %	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	88	13		0	0	0	0	0	83	17		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	7.1	57	0	0	0	0	0	36	7.1	43	
Exiting Leg Total								0								0								0								8								6	14

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:00 PM	Ballardvale Street from North								Baland Road from East								Ballardvale Street from South								School Lot South Drive from Southwest								School Lot North Drive from West								
	Right	Bear Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	9
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	5	1	6	14
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	87.5	12.5		0.0	0.0	0.0	0.0	0.0	83.3	16.7		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.350	0.250	0.400	0.000	0.000	0.000	0.000	0.000	0.313	0.250	0.375	0.389
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	5	1	6	14
Exiting Leg								0								0								0								8								6	14
Total								0								0								0								16								12	28

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	154	42	0	196	55	6	0	61	27	106	0	133	390
8:15 AM	149	40	0	189	64	7	0	71	32	118	0	150	410
8:30 AM	152	36	0	188	49	7	0	56	23	133	1	157	401
8:45 AM	150	45	0	195	71	7	0	78	18	127	0	145	418
Total	605	163	0	768	239	27	0	266	100	484	1	585	1619
9:00 AM	129	25	0	154	43	8	0	51	12	106	0	118	323
9:15 AM	158	23	0	181	42	4	0	46	10	92	0	102	329
9:30 AM	134	35	0	169	48	3	0	51	13	76	0	89	309
9:45 AM	134	27	0	161	35	4	0	39	6	68	0	74	274
Total	555	110	0	665	168	19	0	187	41	342	0	383	1235
Grand Total	1160	273	0	1433	407	46	0	453	141	826	1	968	2854
Approach %	80.9	19.1	0.0		89.8	10.2	0.0		14.6	85.3	0.1		
Total %	40.6	9.6	0.0	50.2	14.3	1.6	0.0	15.9	4.9	28.9	0.0	33.9	
Exiting Leg Total				1233				414				1207	2854
Cars	990	259	0	1249	395	45	0	440	141	721	1	863	2552
% Cars	85.3	94.9	0.0	87.2	97.1	97.8	0.0	97.1	100.0	87.3	100.0	89.2	89.4
Exiting Leg Total				1116				400				1036	2552
Heavy Vehicles	170	14	0	184	12	1	0	13	0	105	0	105	302
% Heavy Vehicles	14.7	5.1	0.0	12.8	2.9	2.2	0.0	2.9	0.0	12.7	0.0	10.8	10.6
Exiting Leg Total				117				14				171	302

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	154	42	0	196	55	6	0	61	27	106	0	133	390
8:15 AM	149	40	0	189	64	7	0	71	32	118	0	150	410
8:30 AM	152	36	0	188	49	7	0	56	23	133	1	157	401
8:45 AM	150	45	0	195	71	7	0	78	18	127	0	145	418
Total Volume	605	163	0	768	239	27	0	266	100	484	1	585	1619
% Approach Total	78.8	21.2	0.0		89.8	10.2	0.0		17.1	82.7	0.2		
PHF	0.982	0.906	0.000	0.980	0.842	0.964	0.000	0.853	0.781	0.910	0.250	0.932	0.968
Cars	556	154	0	710	233	26	0	259	100	438	1	539	1508
Cars %	91.9	94.5	0.0	92.4	97.5	96.3	0.0	97.4	100.0	90.5	100.0	92.1	93.1
Heavy Vehicles	49	9	0	58	6	1	0	7	0	46	0	46	111
Heavy Vehicles %	8.1	5.5	0.0	7.6	2.5	3.7	0.0	2.6	0.0	9.5	0.0	7.9	6.9
Cars Enter Leg	556	154	0	710	233	26	0	259	100	438	1	539	1508
Heavy Enter Leg	49	9	0	58	6	1	0	7	0	46	0	46	111
Total Entering Leg	605	163	0	768	239	27	0	266	100	484	1	585	1619
Cars Exiting Leg				671				254				583	1508
Heavy Exiting Leg				52				9				50	111
Total Exiting Leg				723				263				633	1619

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	143	41	0	184	53	5	0	58	27	99	0	126	368
8:15 AM	134	35	0	169	64	7	0	71	32	107	0	139	379
8:30 AM	140	35	0	175	47	7	0	54	23	115	1	139	368
8:45 AM	139	43	0	182	69	7	0	76	18	117	0	135	393
Total	556	154	0	710	233	26	0	259	100	438	1	539	1508
9:00 AM	112	24	0	136	41	8	0	49	12	92	0	104	289
9:15 AM	129	22	0	151	40	4	0	44	10	74	0	84	279
9:30 AM	101	32	0	133	47	3	0	50	13	65	0	78	261
9:45 AM	92	27	0	119	34	4	0	38	6	52	0	58	215
Total	434	105	0	539	162	19	0	181	41	283	0	324	1044
Grand Total	990	259	0	1249	395	45	0	440	141	721	1	863	2552
Approach %	79.3	20.7	0.0		89.8	10.2	0.0		16.3	83.5	0.1		
Total %	38.8	10.1	0.0	48.9	15.5	1.8	0.0	17.2	5.5	28.3	0.0	33.8	
Exiting Leg Total				1116				400				1036	2552

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	143	41	0	184	53	5	0	58	27	99	0	126	368
8:15 AM	134	35	0	169	64	7	0	71	32	107	0	139	379
8:30 AM	140	35	0	175	47	7	0	54	23	115	1	139	368
8:45 AM	139	43	0	182	69	7	0	76	18	117	0	135	393
Total Volume	556	154	0	710	233	26	0	259	100	438	1	539	1508
% Approach Total	78.3	21.7	0.0		90.0	10.0	0.0		18.6	81.3	0.2		
PHF	0.972	0.895	0.000	0.965	0.844	0.929	0.000	0.852	0.781	0.936	0.250	0.969	0.959
Entering Leg	556	154	0	710	233	26	0	259	100	438	1	539	1508
Exiting Leg				671				254				583	1508
Total				1381				513				1122	3016

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	11	1	0	12	2	1	0	3	0	7	0	7	22
8:15 AM	15	5	0	20	0	0	0	0	0	11	0	11	31
8:30 AM	12	1	0	13	2	0	0	2	0	18	0	18	33
8:45 AM	11	2	0	13	2	0	0	2	0	10	0	10	25
Total	49	9	0	58	6	1	0	7	0	46	0	46	111
9:00 AM	17	1	0	18	2	0	0	2	0	14	0	14	34
9:15 AM	29	1	0	30	2	0	0	2	0	18	0	18	50
9:30 AM	33	3	0	36	1	0	0	1	0	11	0	11	48
9:45 AM	42	0	0	42	1	0	0	1	0	16	0	16	59
Total	121	5	0	126	6	0	0	6	0	59	0	59	191
Grand Total	170	14	0	184	12	1	0	13	0	105	0	105	302
Approach %	92.4	7.6	0.0		92.3	7.7	0.0		0.0	100.0	0.0		
Total %	56.3	4.6	0.0	60.9	4.0	0.3	0.0	4.3	0.0	34.8	0.0	34.8	
Exiting Leg Total				117				14				171	302
Buses	1	2	0	3	0	0	0	0	0	0	0	0	3
% Buses	0.6	14.3	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Exiting Leg Total				0				2				1	3
Single-Unit Trucks	130	11	0	141	12	0	0	12	0	48	0	48	201
% Single-Unit	76.5	78.6	0.0	76.6	100.0	0.0	0.0	92.3	0.0	45.7	0.0	45.7	66.6
Exiting Leg Total				60				11				130	201
Articulated Trucks	39	1	0	40	0	1	0	1	0	57	0	57	98
% Articulated	22.9	7.1	0.0	21.7	0.0	100.0	0.0	7.7	0.0	54.3	0.0	54.3	32.5
Exiting Leg Total				57				1				40	98

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

9:00 AM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
9:00 AM	17	1	0	18	2	0	0	2	0	14	0	14	34
9:15 AM	29	1	0	30	2	0	0	2	0	18	0	18	50
9:30 AM	33	3	0	36	1	0	0	1	0	11	0	11	48
9:45 AM	42	0	0	42	1	0	0	1	0	16	0	16	59
Total Volume	121	5	0	126	6	0	0	6	0	59	0	59	191
% Approach Total	96.0	4.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.720	0.417	0.000	0.750	0.750	0.000	0.000	0.750	0.000	0.819	0.000	0.819	0.809
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	102	5	0	107	6	0	0	6	0	28	0	28	141
Single-Unit %	84.3	100.0	0.0	84.9	100.0	0.0	0.0	100.0	0.0	47.5	0.0	47.5	73.8
Articulated Trucks	19	0	0	19	0	0	0	0	0	31	0	31	50
Articulated %	15.7	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	52.5	0.0	52.5	26.2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	102	5	0	107	6	0	0	6	0	28	0	28	141
Articulated Trucks	19	0	0	19	0	0	0	0	0	31	0	31	50
Total Entering Leg	121	5	0	126	6	0	0	6	0	59	0	59	191
Buses				0				0				0	0
Single-Unit Trucks				34				5				102	141
Articulated Trucks				31				0				19	50
Total Exiting Leg				65				5				121	191

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Buses

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	2
Total	1	2	0	3	0	0	0	0	0	0	0	0	3
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	2	0	3	0	0	0	0	0	0	0	0	3
Approach %	33.3	66.7	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
Total %	33.3	66.7	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				0				2				1	3

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	1	2	0	3	0	0	0	0	0	0	0	0	3
% Approach Total	33.3	66.7	0.0		0.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.250	0.250	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	1	2	0	3	0	0	0	0	0	0	0	0	3
Exiting Leg				0				2				1	3
Total				3				2				1	6

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Single-Unit Trucks

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	5	1	0	6	2	0	0	2	0	4	0	4	12
8:15 AM	9	4	0	13	0	0	0	0	0	5	0	5	18
8:30 AM	6	1	0	7	2	0	0	2	0	4	0	4	13
8:45 AM	8	0	0	8	2	0	0	2	0	7	0	7	17
Total	28	6	0	34	6	0	0	6	0	20	0	20	60
9:00 AM	12	1	0	13	2	0	0	2	0	7	0	7	22
9:15 AM	27	1	0	28	2	0	0	2	0	9	0	9	39
9:30 AM	27	3	0	30	1	0	0	1	0	5	0	5	36
9:45 AM	36	0	0	36	1	0	0	1	0	7	0	7	44
Total	102	5	0	107	6	0	0	6	0	28	0	28	141
Grand Total	130	11	0	141	12	0	0	12	0	48	0	48	201
Approach %	92.2	7.8	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	64.7	5.5	0.0	70.1	6.0	0.0	0.0	6.0	0.0	23.9	0.0	23.9	
Exiting Leg Total				60				11				130	201

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

9:00 AM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
9:00 AM	12	1	0	13	2	0	0	2	0	7	0	7	22
9:15 AM	27	1	0	28	2	0	0	2	0	9	0	9	39
9:30 AM	27	3	0	30	1	0	0	1	0	5	0	5	36
9:45 AM	36	0	0	36	1	0	0	1	0	7	0	7	44
Total Volume	102	5	0	107	6	0	0	6	0	28	0	28	141
% Approach Total	95.3	4.7	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.708	0.417	0.000	0.743	0.750	0.000	0.000	0.750	0.000	0.778	0.000	0.778	0.801
Entering Leg	102	5	0	107	6	0	0	6	0	28	0	28	141
Exiting Leg				34				5				102	141
Total				141				11				130	282

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Articulated Trucks

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:00 AM	5	0	0	5	0	1	0	1	0	3	0	3	9
8:15 AM	6	1	0	7	0	0	0	0	0	6	0	6	13
8:30 AM	6	0	0	6	0	0	0	0	0	14	0	14	20
8:45 AM	3	0	0	3	0	0	0	0	0	3	0	3	6
Total	20	1	0	21	0	1	0	1	0	26	0	26	48
9:00 AM	5	0	0	5	0	0	0	0	0	7	0	7	12
9:15 AM	2	0	0	2	0	0	0	0	0	9	0	9	11
9:30 AM	6	0	0	6	0	0	0	0	0	6	0	6	12
9:45 AM	6	0	0	6	0	0	0	0	0	9	0	9	15
Total	19	0	0	19	0	0	0	0	0	31	0	31	50
Grand Total	39	1	0	40	0	1	0	1	0	57	0	57	98
Approach %	97.5	2.5	0.0		0.0	100.0	0.0		0.0	100.0	0.0		
Total %	39.8	1.0	0.0	40.8	0.0	1.0	0.0	1.0	0.0	58.2	0.0	58.2	
Exiting Leg Total				57				1				40	98

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:15 AM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
8:15 AM	6	1	0	7	0	0	0	0	0	6	0	6	13
8:30 AM	6	0	0	6	0	0	0	0	0	14	0	14	20
8:45 AM	3	0	0	3	0	0	0	0	0	3	0	3	6
9:00 AM	5	0	0	5	0	0	0	0	0	7	0	7	12
Total Volume	20	1	0	21	0	0	0	0	0	30	0	30	51
% Approach Total	95.2	4.8	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.833	0.250	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.536	0.000	0.536	0.638
Entering Leg	20	1	0	21	0	0	0	0	0	30	0	30	51
Exiting Leg				30				1				20	51
Total				51				1				50	102

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	149	57	0	206	38	4	0	42	27	41	0	68	316
2:45 PM	129	46	0	175	52	1	0	53	30	72	0	102	330
Total	278	103	0	381	90	5	0	95	57	113	0	170	646
3:00 PM	149	80	0	229	50	7	0	57	25	42	0	67	353
3:15 PM	170	77	0	247	46	5	0	51	26	56	0	82	380
3:30 PM	170	107	0	277	63	16	0	79	27	45	0	72	428
3:45 PM	150	126	0	276	37	11	0	48	32	48	0	80	404
Total	639	390	0	1029	196	39	0	235	110	191	0	301	1565
4:00 PM	226	96	0	322	61	7	0	68	27	41	0	68	458
4:15 PM	213	130	0	343	66	6	0	72	33	40	0	73	488
Total	439	226	0	665	127	13	0	140	60	81	0	141	946
Grand Total	1356	719	0	2075	413	57	0	470	227	385	0	612	3157
Approach %	65.3	34.7	0.0		87.9	12.1	0.0		37.1	62.9	0.0		
Total %	43.0	22.8	0.0	65.7	13.1	1.8	0.0	14.9	7.2	12.2	0.0	19.4	
Exiting Leg Total				798				946				1413	3157
Cars	1297	709	0	2006	405	53	0	458	225	326	0	551	3015
% Cars	95.6	98.6	0.0	96.7	98.1	93.0	0.0	97.4	99.1	84.7	0.0	90.0	95.5
Exiting Leg Total				731				934				1350	3015
Heavy Vehicles	59	10	0	69	8	4	0	12	2	59	0	61	142
% Heavy Vehicles	4.4	1.4	0.0	3.3	1.9	7.0	0.0	2.6	0.9	15.3	0.0	10.0	4.5
Exiting Leg Total				67				12				63	142

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
3:30 PM	170	107	0	277	63	16	0	79	27	45	0	72	428
3:45 PM	150	126	0	276	37	11	0	48	32	48	0	80	404
4:00 PM	226	96	0	322	61	7	0	68	27	41	0	68	458
4:15 PM	213	130	0	343	66	6	0	72	33	40	0	73	488
Total Volume	759	459	0	1218	227	40	0	267	119	174	0	293	1778
% Approach Total	62.3	37.7	0.0		85.0	15.0	0.0		40.6	59.4	0.0		
PHF	0.840	0.883	0.000	0.888	0.860	0.625	0.000	0.845	0.902	0.906	0.000	0.916	0.911
Cars	732	452	0	1184	223	38	0	261	118	150	0	268	1713
Cars %	96.4	98.5	0.0	97.2	98.2	95.0	0.0	97.8	99.2	86.2	0.0	91.5	96.3
Heavy Vehicles	27	7	0	34	4	2	0	6	1	24	0	25	65
Heavy Vehicles %	3.6	1.5	0.0	2.8	1.8	5.0	0.0	2.2	0.8	13.8	0.0	8.5	3.7
Cars Enter Leg	732	452	0	1184	223	38	0	261	118	150	0	268	1713
Heavy Enter Leg	27	7	0	34	4	2	0	6	1	24	0	25	65
Total Entering Leg	759	459	0	1218	227	40	0	267	119	174	0	293	1778
Cars Exiting Leg				373				570				770	1713
Heavy Exiting Leg				28				8				29	65
Total Exiting Leg				401				578				799	1778

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	137	57	0	194	37	3	0	40	27	35	0	62	296
2:45 PM	120	46	0	166	52	1	0	53	30	61	0	91	310
Total	257	103	0	360	89	4	0	93	57	96	0	153	606
3:00 PM	142	77	0	219	48	6	0	54	25	35	0	60	333
3:15 PM	166	77	0	243	45	5	0	50	25	45	0	70	363
3:30 PM	163	104	0	267	62	15	0	77	27	40	0	67	411
3:45 PM	146	124	0	270	37	10	0	47	32	41	0	73	390
Total	617	382	0	999	192	36	0	228	109	161	0	270	1497
4:00 PM	217	95	0	312	60	7	0	67	26	35	0	61	440
4:15 PM	206	129	0	335	64	6	0	70	33	34	0	67	472
Total	423	224	0	647	124	13	0	137	59	69	0	128	912
Grand Total	1297	709	0	2006	405	53	0	458	225	326	0	551	3015
Approach %	64.7	35.3	0.0		88.4	11.6	0.0		40.8	59.2	0.0		
Total %	43.0	23.5	0.0	66.5	13.4	1.8	0.0	15.2	7.5	10.8	0.0	18.3	
Exiting Leg Total				731				934				1350	3015

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
3:30 PM	163	104	0	267	62	15	0	77	27	40	0	67	411
3:45 PM	146	124	0	270	37	10	0	47	32	41	0	73	390
4:00 PM	217	95	0	312	60	7	0	67	26	35	0	61	440
4:15 PM	206	129	0	335	64	6	0	70	33	34	0	67	472
Total Volume	732	452	0	1184	223	38	0	261	118	150	0	268	1713
% Approach Total	61.8	38.2	0.0		85.4	14.6	0.0		44.0	56.0	0.0		
PHF	0.843	0.876	0.000	0.884	0.871	0.633	0.000	0.847	0.894	0.915	0.000	0.918	0.907
Entering Leg	732	452	0	1184	223	38	0	261	118	150	0	268	1713
Exiting Leg				373				570				770	1713
Total				1557				831				1038	3426

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	12	0	0	12	1	1	0	2	0	6	0	6	20
2:45 PM	9	0	0	9	0	0	0	0	0	11	0	11	20
Total	21	0	0	21	1	1	0	2	0	17	0	17	40
3:00 PM	7	3	0	10	2	1	0	3	0	7	0	7	20
3:15 PM	4	0	0	4	1	0	0	1	1	11	0	12	17
3:30 PM	7	3	0	10	1	1	0	2	0	5	0	5	17
3:45 PM	4	2	0	6	0	1	0	1	0	7	0	7	14
Total	22	8	0	30	4	3	0	7	1	30	0	31	68
4:00 PM	9	1	0	10	1	0	0	1	1	6	0	7	18
4:15 PM	7	1	0	8	2	0	0	2	0	6	0	6	16
Total	16	2	0	18	3	0	0	3	1	12	0	13	34
Grand Total	59	10	0	69	8	4	0	12	2	59	0	61	142
Approach %	85.5	14.5	0.0		66.7	33.3	0.0		3.3	96.7	0.0		
Total %	41.5	7.0	0.0	48.6	5.6	2.8	0.0	8.5	1.4	41.5	0.0	43.0	
Exiting Leg Total				67				12				63	142
Buses	0	3	0	3	1	0	0	1	0	0	0	0	4
% Buses	0.0	30.0	0.0	4.3	12.5	0.0	0.0	8.3	0.0	0.0	0.0	0.0	2.8
Exiting Leg Total				1				3				0	4
Single-Unit Trucks	36	6	0	42	4	4	0	8	2	30	0	32	82
% Single-Unit	61.0	60.0	0.0	60.9	50.0	100.0	0.0	66.7	100.0	50.8	0.0	52.5	57.7
Exiting Leg Total				34				8				40	82
Articulated Trucks	23	1	0	24	3	0	0	3	0	29	0	29	56
% Articulated	39.0	10.0	0.0	34.8	37.5	0.0	0.0	25.0	0.0	49.2	0.0	47.5	39.4
Exiting Leg Total				32				1				23	56

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	12	0	0	12	1	1	0	2	0	6	0	6	20
2:45 PM	9	0	0	9	0	0	0	0	0	11	0	11	20
3:00 PM	7	3	0	10	2	1	0	3	0	7	0	7	20
3:15 PM	4	0	0	4	1	0	0	1	1	11	0	12	17
Total Volume	32	3	0	35	4	2	0	6	1	35	0	36	77
% Approach Total	91.4	8.6	0.0		66.7	33.3	0.0		2.8	97.2	0.0		
PHF	0.667	0.250	0.000	0.729	0.500	0.500	0.000	0.500	0.250	0.795	0.000	0.750	0.963
Buses	0	2	0	2	1	0	0	1	0	0	0	0	3
Buses %	0.0	66.7	0.0	5.7	25.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	3.9
Single-Unit Trucks	18	0	0	18	1	2	0	3	1	16	0	17	38
Single-Unit %	56.3	0.0	0.0	51.4	25.0	100.0	0.0	50.0	100.0	45.7	0.0	47.2	49.4
Articulated Trucks	14	1	0	15	2	0	0	2	0	19	0	19	36
Articulated %	43.8	33.3	0.0	42.9	50.0	0.0	0.0	33.3	0.0	54.3	0.0	52.8	46.8
Buses	0	2	0	2	1	0	0	1	0	0	0	0	3
Single-Unit Trucks	18	0	0	18	1	2	0	3	1	16	0	17	38
Articulated Trucks	14	1	0	15	2	0	0	2	0	19	0	19	36
Total Entering Leg	32	3	0	35	4	2	0	6	1	35	0	36	77
Buses				1				2				0	3
Single-Unit Trucks				17				1				20	38
Articulated Trucks				21				1				14	36
Total Exiting Leg				39				4				34	77

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Buses

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	1
3:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	3	0	3	1	0	0	1	0	0	0	0	4
Approach %	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
Total %	0.0	75.0	0.0	75.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				1				3				0	4

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	1	0	0	1	0	0	0	0	3
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	2	0	2	1	0	0	1	0	0	0	0	3
Exiting Leg				1				2				0	3
Total				3				3				0	6

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Single-Unit Trucks

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	5	0	0	5	0	1	0	1	0	2	0	2	8
2:45 PM	6	0	0	6	0	0	0	0	0	7	0	7	13
Total	11	0	0	11	0	1	0	1	0	9	0	9	21
3:00 PM	6	0	0	6	1	1	0	2	0	0	0	0	8
3:15 PM	1	0	0	1	0	0	0	0	1	7	0	8	9
3:30 PM	4	3	0	7	1	1	0	2	0	3	0	3	12
3:45 PM	3	1	0	4	0	1	0	1	0	4	0	4	9
Total	14	4	0	18	2	3	0	5	1	14	0	15	38
4:00 PM	7	1	0	8	1	0	0	1	1	3	0	4	13
4:15 PM	4	1	0	5	1	0	0	1	0	4	0	4	10
Total	11	2	0	13	2	0	0	2	1	7	0	8	23
Grand Total	36	6	0	42	4	4	0	8	2	30	0	32	82
Approach %	85.7	14.3	0.0		50.0	50.0	0.0		6.3	93.8	0.0		
Total %	43.9	7.3	0.0	51.2	4.9	4.9	0.0	9.8	2.4	36.6	0.0	39.0	
Exiting Leg Total				34				8				40	82

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
3:30 PM	4	3	0	7	1	1	0	2	0	3	0	3	12
3:45 PM	3	1	0	4	0	1	0	1	0	4	0	4	9
4:00 PM	7	1	0	8	1	0	0	1	1	3	0	4	13
4:15 PM	4	1	0	5	1	0	0	1	0	4	0	4	10
Total Volume	18	6	0	24	3	2	0	5	1	14	0	15	44
% Approach Total	75.0	25.0	0.0		60.0	40.0	0.0		6.7	93.3	0.0		
PHF	0.643	0.500	0.000	0.750	0.750	0.500	0.000	0.625	0.250	0.875	0.000	0.938	0.846
Entering Leg	18	6	0	24	3	2	0	5	1	14	0	15	44
Exiting Leg				17				7				20	44
Total				41				12				35	88

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class:

Articulated Trucks

	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	7	0	0	7	0	0	0	0	0	4	0	4	11
2:45 PM	3	0	0	3	0	0	0	0	0	4	0	4	7
Total	10	0	0	10	0	0	0	0	0	8	0	8	18
3:00 PM	1	1	0	2	1	0	0	1	0	7	0	7	10
3:15 PM	3	0	0	3	1	0	0	1	0	4	0	4	8
3:30 PM	3	0	0	3	0	0	0	0	0	2	0	2	5
3:45 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
Total	8	1	0	9	2	0	0	2	0	16	0	16	27
4:00 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
4:15 PM	3	0	0	3	1	0	0	1	0	2	0	2	6
Total	5	0	0	5	1	0	0	1	0	5	0	5	11
Grand Total	23	1	0	24	3	0	0	3	0	29	0	29	56
Approach %	95.8	4.2	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	41.1	1.8	0.0	42.9	5.4	0.0	0.0	5.4	0.0	51.8	0.0	51.8	
Exiting Leg Total				32				1				23	56

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Ballardvale Street from North				Ballardvale Street from South				I-93 SB Ramps from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Total
2:30 PM	7	0	0	7	0	0	0	0	0	4	0	4	11
2:45 PM	3	0	0	3	0	0	0	0	0	4	0	4	7
3:00 PM	1	1	0	2	1	0	0	1	0	7	0	7	10
3:15 PM	3	0	0	3	1	0	0	1	0	4	0	4	8
Total Volume	14	1	0	15	2	0	0	2	0	19	0	19	36
% Approach Total	93.3	6.7	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.250	0.000	0.536	0.500	0.000	0.000	0.500	0.000	0.679	0.000	0.679	0.818
Entering Leg	14	1	0	15	2	0	0	2	0	19	0	19	36
Exiting Leg				21				1				14	36
Total				36				3				33	72

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						1						0						0	1

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:45 PM	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Exiting Leg						1						0						0	1
Total						1						1						0	2

PDI File #: **240268 D**
Location: **N: Ballardvale Street S: Ballardvale Street**
Location: **W: I-93 SB Ramps**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Ballardvale Street from North						Ballardvale Street from South						I-93 SB Ramps from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	41	77	0	0	118	4	7	2	0	13	4	94	18	0	116	34	24	89	0	147	394
8:15 AM	39	85	6	0	130	7	17	3	0	27	3	89	26	0	118	45	16	85	0	146	421
8:30 AM	56	92	3	0	151	7	10	3	0	20	11	85	15	0	111	36	18	59	0	113	395
8:45 AM	32	80	1	0	113	11	22	9	0	42	15	88	37	0	140	28	29	57	0	114	409
Total	168	334	10	0	512	29	56	17	0	102	33	356	96	0	485	143	87	290	0	520	1619
9:00 AM	31	80	1	0	112	7	18	12	0	37	7	65	19	0	91	35	14	65	0	114	354
9:15 AM	30	65	3	0	98	6	8	3	0	17	7	76	20	0	103	27	7	59	0	93	311
9:30 AM	29	62	4	0	95	7	6	3	0	16	7	85	24	0	116	30	8	58	0	96	323
9:45 AM	37	74	1	0	112	7	4	7	0	18	8	80	15	0	103	23	8	56	0	87	320
Total	127	281	9	0	417	27	36	25	0	88	29	306	78	0	413	115	37	238	0	390	1308
Grand Total	295	615	19	0	929	56	92	42	0	190	62	662	174	0	898	258	124	528	0	910	2927
Approach %	31.8	66.2	2.0	0.0		29.5	48.4	22.1	0.0		6.9	73.7	19.4	0.0		28.4	13.6	58.0	0.0		
Total %	10.1	21.0	0.6	0.0	31.7	1.9	3.1	1.4	0.0	6.5	2.1	22.6	5.9	0.0	30.7	8.8	4.2	18.0	0.0	31.1	
Exiting Leg Total					1246					205					915					561	2927
Cars	287	566	18	0	871	55	86	41	0	182	61	608	165	0	834	250	116	520	0	886	2773
% Cars	97.3	92.0	94.7	0.0	93.8	98.2	93.5	97.6	0.0	95.8	98.4	91.8	94.8	0.0	92.9	96.9	93.5	98.5	0.0	97.4	94.7
Exiting Leg Total					1183					195					857					538	2773
Heavy Vehicles	8	49	1	0	58	1	6	1	0	8	1	54	9	0	64	8	8	8	0	24	154
% Heavy Vehicles	2.7	8.0	5.3	0.0	6.2	1.8	6.5	2.4	0.0	4.2	1.6	8.2	5.2	0.0	7.1	3.1	6.5	1.5	0.0	2.6	5.3
Exiting Leg Total					63					10					58					23	154

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	41	77	0	0	118	4	7	2	0	13	4	94	18	0	116	34	24	89	0	147	394
8:15 AM	39	85	6	0	130	7	17	3	0	27	3	89	26	0	118	45	16	85	0	146	421
8:30 AM	56	92	3	0	151	7	10	3	0	20	11	85	15	0	111	36	18	59	0	113	395
8:45 AM	32	80	1	0	113	11	22	9	0	42	15	88	37	0	140	28	29	57	0	114	409
Total Volume	168	334	10	0	512	29	56	17	0	102	33	356	96	0	485	143	87	290	0	520	1619
% Approach Total	32.8	65.2	2.0	0.0		28.4	54.9	16.7	0.0		6.8	73.4	19.8	0.0		27.5	16.7	55.8	0.0		
PHF	0.750	0.908	0.417	0.000	0.848	0.659	0.636	0.472	0.000	0.607	0.550	0.947	0.649	0.000	0.866	0.794	0.750	0.815	0.000	0.884	0.961
Cars	164	318	10	0	492	28	53	16	0	97	32	335	91	0	458	137	80	284	0	501	1548
Cars %	97.6	95.2	100.0	0.0	96.1	96.6	94.6	94.1	0.0	95.1	97.0	94.1	94.8	0.0	94.4	95.8	92.0	97.9	0.0	96.3	95.6
Heavy Vehicles	4	16	0	0	20	1	3	1	0	5	1	21	5	0	27	6	7	6	0	19	71
Heavy Vehicles %	2.4	4.8	0.0	0.0	3.9	3.4	5.4	5.9	0.0	4.9	3.0	5.9	5.2	0.0	5.6	4.2	8.0	2.1	0.0	3.7	4.4
Cars Enter Leg	164	318	10	0	492	28	53	16	0	97	32	335	91	0	458	137	80	284	0	501	1548
Heavy Enter Leg	4	16	0	0	20	1	3	1	0	5	1	21	5	0	27	6	7	6	0	19	71
Total Entering Leg	168	334	10	0	512	29	56	17	0	102	33	356	96	0	485	143	87	290	0	520	1619
Cars Exiting Leg					647					122					471					308	1548
Heavy Exiting Leg					28					8					23					12	71
Total Exiting Leg					675					130					494					320	1619

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars

	Route 62 from North					High Street from East					Middlesex Avenue (Route 62) from South					Middlesex Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	39	72	0	0	111	4	7	2	0	13	4	90	18	0	112	34	24	86	0	144	380
8:15 AM	39	80	6	0	125	7	17	3	0	27	2	80	25	0	107	40	16	83	0	139	398
8:30 AM	54	91	3	0	148	7	10	3	0	20	11	81	15	0	107	35	18	58	0	111	386
8:45 AM	32	75	1	0	108	10	19	8	0	37	15	84	33	0	132	28	22	57	0	107	384
Total	164	318	10	0	492	28	53	16	0	97	32	335	91	0	458	137	80	284	0	501	1548
9:00 AM	31	74	1	0	106	7	16	12	0	35	7	56	19	0	82	34	14	65	0	113	336
9:15 AM	28	60	3	0	91	6	7	3	0	16	7	70	19	0	96	27	6	58	0	91	294
9:30 AM	29	55	3	0	87	7	6	3	0	16	7	75	22	0	104	29	8	58	0	95	302
9:45 AM	35	59	1	0	95	7	4	7	0	18	8	72	14	0	94	23	8	55	0	86	293
Total	123	248	8	0	379	27	33	25	0	85	29	273	74	0	376	113	36	236	0	385	1225
Grand Total	287	566	18	0	871	55	86	41	0	182	61	608	165	0	834	250	116	520	0	886	2773
Approach %	33.0	65.0	2.1	0.0		30.2	47.3	22.5	0.0		7.3	72.9	19.8	0.0		28.2	13.1	58.7	0.0		
Total %	10.3	20.4	0.6	0.0	31.4	2.0	3.1	1.5	0.0	6.6	2.2	21.9	6.0	0.0	30.1	9.0	4.2	18.8	0.0	32.0	
Exiting Leg Total					1183					195					857					538	2773

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Route 62 from North					High Street from East					Middlesex Avenue (Route 62) from South					Middlesex Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	39	72	0	0	111	4	7	2	0	13	4	90	18	0	112	34	24	86	0	144	380
8:15 AM	39	80	6	0	125	7	17	3	0	27	2	80	25	0	107	40	16	83	0	139	398
8:30 AM	54	91	3	0	148	7	10	3	0	20	11	81	15	0	107	35	18	58	0	111	386
8:45 AM	32	75	1	0	108	10	19	8	0	37	15	84	33	0	132	28	22	57	0	107	384
Total Volume	164	318	10	0	492	28	53	16	0	97	32	335	91	0	458	137	80	284	0	501	1548
% Approach Total	33.3	64.6	2.0	0.0		28.9	54.6	16.5	0.0		7.0	73.1	19.9	0.0		27.3	16.0	56.7	0.0		
PHF	0.759	0.874	0.417	0.000	0.831	0.700	0.697	0.500	0.000	0.655	0.533	0.931	0.689	0.000	0.867	0.856	0.833	0.826	0.000	0.870	0.972
Entering Leg	164	318	10	0	492	28	53	16	0	97	32	335	91	0	458	137	80	284	0	501	1548
Exiting Leg					647					122					471					308	1548
Total					1139					219					929					809	3096

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	5	0	0	7	0	0	0	0	0	0	4	0	0	4	0	0	3	0	3	14
8:15 AM	0	5	0	0	5	0	0	0	0	0	1	9	1	0	11	5	0	2	0	7	23
8:30 AM	2	1	0	0	3	0	0	0	0	0	0	4	0	0	4	1	0	1	0	2	9
8:45 AM	0	5	0	0	5	1	3	1	0	5	0	4	4	0	8	0	7	0	0	7	25
Total	4	16	0	0	20	1	3	1	0	5	1	21	5	0	27	6	7	6	0	19	71
9:00 AM	0	6	0	0	6	0	2	0	0	2	0	9	0	0	9	1	0	0	0	1	18
9:15 AM	2	5	0	0	7	0	1	0	0	1	0	6	1	0	7	0	1	1	0	2	17
9:30 AM	0	7	1	0	8	0	0	0	0	0	0	10	2	0	12	1	0	0	0	1	21
9:45 AM	2	15	0	0	17	0	0	0	0	0	0	8	1	0	9	0	0	1	0	1	27
Total	4	33	1	0	38	0	3	0	0	3	0	33	4	0	37	2	1	2	0	5	83
Grand Total	8	49	1	0	58	1	6	1	0	8	1	54	9	0	64	8	8	8	0	24	154
Approach %	13.8	84.5	1.7	0.0		12.5	75.0	12.5	0.0		1.6	84.4	14.1	0.0		33.3	33.3	33.3	0.0		
Total %	5.2	31.8	0.6	0.0	37.7	0.6	3.9	0.6	0.0	5.2	0.6	35.1	5.8	0.0	41.6	5.2	5.2	5.2	0.0	15.6	
Exiting Leg Total					63					10					58					23	154
Buses	0	1	0	0	1	0	5	1	0	6	0	4	3	0	7	1	7	0	0	8	22
% Buses	0.0	2.0	0.0	0.0	1.7	0.0	83.3	100.0	0.0	75.0	0.0	7.4	33.3	0.0	10.9	12.5	87.5	0.0	0.0	33.3	14.3
Exiting Leg Total					4					7					3					8	22
Single-Unit Trucks	6	32	1	0	39	1	0	0	0	1	1	38	6	0	45	6	0	8	0	14	99
% Single-Unit	75.0	65.3	100.0	0.0	67.2	100.0	0.0	0.0	0.0	12.5	100.0	70.4	66.7	0.0	70.3	75.0	0.0	100.0	0.0	58.3	64.3
Exiting Leg Total					47					2					38					12	99
Articulated Trucks	2	16	0	0	18	0	1	0	0	1	0	12	0	0	12	1	1	0	0	2	33
% Articulated	25.0	32.7	0.0	0.0	31.0	0.0	16.7	0.0	0.0	12.5	0.0	22.2	0.0	0.0	18.8	12.5	12.5	0.0	0.0	8.3	21.4
Exiting Leg Total					12					1					17					3	33

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

9:00 AM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
9:00 AM	0	6	0	0	6	0	2	0	0	2	0	9	0	0	9	1	0	0	0	1	18
9:15 AM	2	5	0	0	7	0	1	0	0	1	0	6	1	0	7	0	1	1	0	2	17
9:30 AM	0	7	1	0	8	0	0	0	0	0	0	10	2	0	12	1	0	0	0	1	21
9:45 AM	2	15	0	0	17	0	0	0	0	0	0	8	1	0	9	0	0	1	0	1	27
Total Volume	4	33	1	0	38	0	3	0	0	3	0	33	4	0	37	2	1	2	0	5	83
% Approach Total	10.5	86.8	2.6	0.0		0.0	100.0	0.0	0.0		0.0	89.2	10.8	0.0		40.0	20.0	40.0	0.0		
PHF	0.500	0.550	0.250	0.000	0.559	0.000	0.375	0.000	0.000	0.375	0.000	0.825	0.500	0.000	0.771	0.500	0.250	0.500	0.000	0.625	0.769
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	20.0	3.6
Single-Unit Trucks	4	21	1	0	26	0	0	0	0	0	0	21	4	0	25	1	0	2	0	3	54
Single-Unit %	100.0	63.6	100.0	0.0	68.4	0.0	0.0	0.0	0.0	0.0	0.0	63.6	100.0	0.0	67.6	50.0	0.0	100.0	0.0	60.0	65.1
Articulated Trucks	0	12	0	0	12	0	1	0	0	1	0	12	0	0	12	0	1	0	0	1	26
Articulated %	0.0	36.4	0.0	0.0	31.6	0.0	33.3	0.0	0.0	33.3	0.0	36.4	0.0	0.0	32.4	0.0	100.0	0.0	0.0	20.0	31.3
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
Single-Unit Trucks	4	21	1	0	26	0	0	0	0	0	0	21	4	0	25	1	0	2	0	3	54
Articulated Trucks	0	12	0	0	12	0	1	0	0	1	0	12	0	0	12	0	1	0	0	1	26
Total Entering Leg	4	33	1	0	38	0	3	0	0	3	0	33	4	0	37	2	1	2	0	5	83
Buses					0					0					1					2	3
Single-Unit Trucks					23					1					22					8	54
Articulated Trucks					12					1					12					1	26
Total Exiting Leg					35					2					35					11	83

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Buses

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:45 AM	0	1	0	0	1	0	3	1	0	4	0	0	3	0	3	0	7	0	0	7	15
Total	0	1	0	0	1	0	3	1	0	4	0	4	3	0	7	0	7	0	0	7	19
9:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
Grand Total	0	1	0	0	1	0	5	1	0	6	0	4	3	0	7	1	7	0	0	8	22
Approach %	0.0	100.0	0.0	0.0		0.0	83.3	16.7	0.0		0.0	57.1	42.9	0.0		12.5	87.5	0.0	0.0		
Total %	0.0	4.5	0.0	0.0	4.5	0.0	22.7	4.5	0.0	27.3	0.0	18.2	13.6	0.0	31.8	4.5	31.8	0.0	0.0	36.4	
Exiting Leg Total					4					7					3					8	22

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:15 AM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:45 AM	0	1	0	0	1	0	3	1	0	4	0	0	3	0	3	0	7	0	0	7	15
9:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3
Total Volume	0	1	0	0	1	0	5	1	0	6	0	4	3	0	7	1	7	0	0	8	22
% Approach Total	0.0	100.0	0.0	0.0		0.0	83.3	16.7	0.0		0.0	57.1	42.9	0.0		12.5	87.5	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.417	0.250	0.000	0.375	0.000	0.333	0.250	0.000	0.583	0.250	0.250	0.000	0.000	0.286	0.367
Entering Leg	0	1	0	0	1	0	5	1	0	6	0	4	3	0	7	1	7	0	0	8	22
Exiting Leg					4					7					3					8	22
Total					5					13					10					16	44

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Single-Unit Trucks**

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	2	3	0	0	5	0	0	0	0	0	0	4	0	0	4	0	0	3	0	3	12
8:15 AM	0	3	0	0	3	0	0	0	0	0	1	6	1	0	8	4	0	2	0	6	17
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	6
8:45 AM	0	4	0	0	4	1	0	0	0	1	0	4	1	0	5	0	0	0	0	0	10
Total	2	11	0	0	13	1	0	0	0	1	1	17	2	0	20	5	0	6	0	11	45
9:00 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
9:15 AM	2	3	0	0	5	0	0	0	0	0	0	4	1	0	5	0	0	1	0	1	11
9:30 AM	0	5	1	0	6	0	0	0	0	0	0	4	2	0	6	1	0	0	0	1	13
9:45 AM	2	10	0	0	12	0	0	0	0	0	0	7	1	0	8	0	0	1	0	1	21
Total	4	21	1	0	26	0	0	0	0	0	0	21	4	0	25	1	0	2	0	3	54
Grand Total	6	32	1	0	39	1	0	0	0	1	1	38	6	0	45	6	0	8	0	14	99
Approach %	15.4	82.1	2.6	0.0		100.0	0.0	0.0	0.0		2.2	84.4	13.3	0.0		42.9	0.0	57.1	0.0		
Total %	6.1	32.3	1.0	0.0	39.4	1.0	0.0	0.0	0.0	1.0	1.0	38.4	6.1	0.0	45.5	6.1	0.0	8.1	0.0	14.1	
Exiting Leg Total					47					2					38					12	99

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

9:00 AM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
9:00 AM	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	9
9:15 AM	2	3	0	0	5	0	0	0	0	0	0	4	1	0	5	0	0	1	0	1	11
9:30 AM	0	5	1	0	6	0	0	0	0	0	0	4	2	0	6	1	0	0	0	1	13
9:45 AM	2	10	0	0	12	0	0	0	0	0	0	7	1	0	8	0	0	1	0	1	21
Total Volume	4	21	1	0	26	0	0	0	0	0	0	21	4	0	25	1	0	2	0	3	54
% Approach Total	15.4	80.8	3.8	0.0		0.0	0.0	0.0	0.0		0.0	84.0	16.0	0.0		33.3	0.0	66.7	0.0		
PHF	0.500	0.525	0.250	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.500	0.000	0.781	0.250	0.000	0.500	0.000	0.750	0.643
Entering Leg	4	21	1	0	26	0	0	0	0	0	0	21	4	0	25	1	0	2	0	3	54
Exiting Leg					23					1					22					8	54
Total					49					1					47					11	108

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Articulated Trucks

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
8:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	4	0	0	6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	7
9:00 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
9:15 AM	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	6
9:30 AM	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
9:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
Total	0	12	0	0	12	0	1	0	0	1	0	12	0	0	12	0	1	0	0	1	26
Grand Total	2	16	0	0	18	0	1	0	0	1	0	12	0	0	12	1	1	0	0	2	33
Approach %	11.1	88.9	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		50.0	50.0	0.0	0.0		
Total %	6.1	48.5	0.0	0.0	54.5	0.0	3.0	0.0	0.0	3.0	0.0	36.4	0.0	0.0	36.4	3.0	3.0	0.0	0.0	6.1	
Exiting Leg Total					12					1					17					3	33

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

9:00 AM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
9:00 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
9:15 AM	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	0	1	0	0	1	6
9:30 AM	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
9:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
Total Volume	0	12	0	0	12	0	1	0	0	1	0	12	0	0	12	0	1	0	0	1	26
% Approach Total	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.600	0.000	0.000	0.600	0.000	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.250	0.000	0.000	0.250	0.813
Entering Leg	0	12	0	0	12	0	1	0	0	1	0	12	0	0	12	0	1	0	0	1	26
Exiting Leg					12					1					12					1	26
Total					24					2					24					2	52

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **8:00 AM**
End Time: **10:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 08:00 AM to 10:00 AM begins at:

8:00 AM	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Route 62 from North					High Street from East					Middlesex Avenue (Route 62) from South					Middlesex Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	84	66	1	0	151	7	17	7	0	31	5	92	19	0	116	27	11	59	0	97	395
2:45 PM	79	75	4	0	158	10	31	6	0	47	9	86	36	0	131	31	16	47	0	94	430
Total	163	141	5	0	309	17	48	13	0	78	14	178	55	0	247	58	27	106	0	191	825
3:00 PM	61	77	5	0	143	13	29	4	0	46	14	126	41	0	181	38	14	54	0	106	476
3:15 PM	88	70	4	0	162	9	31	4	0	44	12	91	34	0	137	27	14	52	0	93	436
3:30 PM	67	82	4	0	153	9	33	20	0	62	4	117	32	0	153	38	25	47	0	110	478
3:45 PM	80	82	4	0	166	7	29	11	0	47	8	98	25	0	131	44	24	85	0	153	497
Total	296	311	17	0	624	38	122	39	0	199	38	432	132	0	602	147	77	238	0	462	1887
4:00 PM	76	81	4	0	161	10	19	7	0	36	9	118	34	0	161	50	8	47	0	105	463
4:15 PM	80	82	3	0	165	5	29	6	0	40	7	118	35	0	160	55	19	65	0	139	504
Total	156	163	7	0	326	15	48	13	0	76	16	236	69	0	321	105	27	112	0	244	967
Grand Total	615	615	29	0	1259	70	218	65	0	353	68	846	256	0	1170	310	131	456	0	897	3679
Approach %	48.8	48.8	2.3	0.0		19.8	61.8	18.4	0.0		5.8	72.3	21.9	0.0		34.6	14.6	50.8	0.0		
Total %	16.7	16.7	0.8	0.0	34.2	1.9	5.9	1.8	0.0	9.6	1.8	23.0	7.0	0.0	31.8	8.4	3.6	12.4	0.0	24.4	
Exiting Leg Total					1372					228					990					1089	3679
Cars	609	593	27	0	1229	69	210	63	0	342	66	823	251	0	1140	302	122	451	0	875	3586
% Cars	99.0	96.4	93.1	0.0	97.6	98.6	96.3	96.9	0.0	96.9	97.1	97.3	98.0	0.0	97.4	97.4	93.1	98.9	0.0	97.5	97.5
Exiting Leg Total					1343					215					958					1070	3586
Heavy Vehicles	6	22	2	0	30	1	8	2	0	11	2	23	5	0	30	8	9	5	0	22	93
% Heavy Vehicles	1.0	3.6	6.9	0.0	2.4	1.4	3.7	3.1	0.0	3.1	2.9	2.7	2.0	0.0	2.6	2.6	6.9	1.1	0.0	2.5	2.5
Exiting Leg Total					29					13					32					19	93

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Route 62 from North					High Street from East					Middlesex Avenue (Route 62) from South					Middlesex Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
3:30 PM	67	82	4	0	153	9	33	20	0	62	4	117	32	0	153	38	25	47	0	110	478
3:45 PM	80	82	4	0	166	7	29	11	0	47	8	98	25	0	131	44	24	85	0	153	497
4:00 PM	76	81	4	0	161	10	19	7	0	36	9	118	34	0	161	50	8	47	0	105	463
4:15 PM	80	82	3	0	165	5	29	6	0	40	7	118	35	0	160	55	19	65	0	139	504
Total Volume	303	327	15	0	645	31	110	44	0	185	28	451	126	0	605	187	76	244	0	507	1942
% Approach Total	47.0	50.7	2.3	0.0		16.8	59.5	23.8	0.0		4.6	74.5	20.8	0.0		36.9	15.0	48.1	0.0		
PHF	0.947	0.997	0.938	0.000	0.971	0.775	0.833	0.550	0.000	0.746	0.778	0.956	0.900	0.000	0.939	0.850	0.760	0.718	0.000	0.828	0.963
Cars	303	314	14	0	631	31	109	43	0	183	27	441	124	0	592	179	68	242	0	489	1895
Cars %	100.0	96.0	93.3	0.0	97.8	100.0	99.1	97.7	0.0	98.9	96.4	97.8	98.4	0.0	97.9	95.7	89.5	99.2	0.0	96.4	97.6
Heavy Vehicles	0	13	1	0	14	0	1	1	0	2	1	10	2	0	13	8	8	2	0	18	47
Heavy Vehicles %	0.0	4.0	6.7	0.0	2.2	0.0	0.9	2.3	0.0	1.1	3.6	2.2	1.6	0.0	2.1	4.3	10.5	0.8	0.0	3.6	2.4
Cars Enter Leg	303	314	14	0	631	31	109	43	0	183	27	441	124	0	592	179	68	242	0	489	1895
Heavy Enter Leg	0	13	1	0	14	0	1	1	0	2	1	10	2	0	13	8	8	2	0	18	47
Total Entering Leg	303	327	15	0	645	31	110	44	0	185	28	451	126	0	605	187	76	244	0	507	1942
Cars Exiting Leg					714					109					536					536	1895
Heavy Exiting Leg					12					10					22					3	47
Total Exiting Leg					726					119					558					539	1942

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Cars

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	83	63	1	0	147	7	15	7	0	29	5	88	19	0	112	27	11	58	0	96	384
2:45 PM	77	70	4	0	151	9	31	5	0	45	9	81	36	0	126	31	16	46	0	93	415
Total	160	133	5	0	298	16	46	12	0	74	14	169	55	0	238	58	27	104	0	189	799
3:00 PM	61	77	4	0	142	13	27	4	0	44	14	124	40	0	178	38	13	54	0	105	469
3:15 PM	85	69	4	0	158	9	28	4	0	41	11	89	32	0	132	27	14	51	0	92	423
3:30 PM	67	80	3	0	150	9	32	19	0	60	4	115	31	0	150	32	18	45	0	95	455
3:45 PM	80	79	4	0	163	7	29	11	0	47	8	95	25	0	128	44	23	85	0	152	490
Total	293	305	15	0	613	38	116	38	0	192	37	423	128	0	588	141	68	235	0	444	1837
4:00 PM	76	77	4	0	157	10	19	7	0	36	9	116	34	0	159	49	8	47	0	104	456
4:15 PM	80	78	3	0	161	5	29	6	0	40	6	115	34	0	155	54	19	65	0	138	494
Total	156	155	7	0	318	15	48	13	0	76	15	231	68	0	314	103	27	112	0	242	950
Grand Total	609	593	27	0	1229	69	210	63	0	342	66	823	251	0	1140	302	122	451	0	875	3586
Approach %	49.6	48.3	2.2	0.0		20.2	61.4	18.4	0.0		5.8	72.2	22.0	0.0		34.5	13.9	51.5	0.0		
Total %	17.0	16.5	0.8	0.0	34.3	1.9	5.9	1.8	0.0	9.5	1.8	23.0	7.0	0.0	31.8	8.4	3.4	12.6	0.0	24.4	
Exiting Leg Total					1343					215					958					1070	3586

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:30 PM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
3:30 PM	67	80	3	0	150	9	32	19	0	60	4	115	31	0	150	32	18	45	0	95	455
3:45 PM	80	79	4	0	163	7	29	11	0	47	8	95	25	0	128	44	23	85	0	152	490
4:00 PM	76	77	4	0	157	10	19	7	0	36	9	116	34	0	159	49	8	47	0	104	456
4:15 PM	80	78	3	0	161	5	29	6	0	40	6	115	34	0	155	54	19	65	0	138	494
Total Volume	303	314	14	0	631	31	109	43	0	183	27	441	124	0	592	179	68	242	0	489	1895
% Approach Total	48.0	49.8	2.2	0.0		16.9	59.6	23.5	0.0		4.6	74.5	20.9	0.0		36.6	13.9	49.5	0.0		
PHF	0.947	0.981	0.875	0.000	0.968	0.775	0.852	0.566	0.000	0.763	0.750	0.950	0.912	0.000	0.931	0.829	0.739	0.712	0.000	0.804	0.959
Entering Leg	303	314	14	0	631	31	109	43	0	183	27	441	124	0	592	179	68	242	0	489	1895
Exiting Leg					714					109					536					536	1895
Total					1345					292					1128					1025	3790

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Route 62 from North					High Street from East					Middlesex Avenue (Route 62) from South					Middlesex Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	1	3	0	0	4	0	2	0	0	2	0	4	0	0	4	0	0	1	0	1	11
2:45 PM	2	5	0	0	7	1	0	1	0	2	0	5	0	0	5	0	0	1	0	1	15
Total	3	8	0	0	11	1	2	1	0	4	0	9	0	0	9	0	0	2	0	2	26
3:00 PM	0	0	1	0	1	0	2	0	0	2	0	2	1	0	3	0	1	0	0	1	7
3:15 PM	3	1	0	0	4	0	3	0	0	3	1	2	2	0	5	0	0	1	0	1	13
3:30 PM	0	2	1	0	3	0	1	1	0	2	0	2	1	0	3	6	7	2	0	15	23
3:45 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	7
Total	3	6	2	0	11	0	6	1	0	7	1	9	4	0	14	6	9	3	0	18	50
4:00 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	7
4:15 PM	0	4	0	0	4	0	0	0	0	0	1	3	1	0	5	1	0	0	0	1	10
Total	0	8	0	0	8	0	0	0	0	0	1	5	1	0	7	2	0	0	0	2	17
Grand Total	6	22	2	0	30	1	8	2	0	11	2	23	5	0	30	8	9	5	0	22	93
Approach %	20.0	73.3	6.7	0.0		9.1	72.7	18.2	0.0		6.7	76.7	16.7	0.0		36.4	40.9	22.7	0.0		
Total %	6.5	23.7	2.2	0.0	32.3	1.1	8.6	2.2	0.0	11.8	2.2	24.7	5.4	0.0	32.3	8.6	9.7	5.4	0.0	23.7	
Exiting Leg Total					29					13					32					19	93
Buses	2	4	1	0	7	0	5	1	0	6	0	3	3	0	6	2	8	1	0	11	30
% Buses	33.3	18.2	50.0	0.0	23.3	0.0	62.5	50.0	0.0	54.5	0.0	13.0	60.0	0.0	20.0	25.0	88.9	20.0	0.0	50.0	32.3
Exiting Leg Total					4					9					7					10	30
Single-Unit Trucks	4	10	0	0	14	1	3	1	0	5	2	15	2	0	19	6	0	4	0	10	48
% Single-Unit	66.7	45.5	0.0	0.0	46.7	100.0	37.5	50.0	0.0	45.5	100.0	65.2	40.0	0.0	63.3	75.0	0.0	80.0	0.0	45.5	51.6
Exiting Leg Total					20					2					17					9	48
Articulated Trucks	0	8	1	0	9	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	15
% Articulated	0.0	36.4	50.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	0.0	0.0	16.7	0.0	11.1	0.0	0.0	4.5	16.1
Exiting Leg Total					5					2					8					0	15

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:45 PM	Route 62 from North					High Street from East					Middlesex Avenue (Route 62) from South					Middlesex Avenue from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:45 PM	2	5	0	0	7	1	0	1	0	2	0	5	0	0	5	0	0	1	0	1	15
3:00 PM	0	0	1	0	1	0	2	0	0	2	0	2	1	0	3	0	1	0	0	1	7
3:15 PM	3	1	0	0	4	0	3	0	0	3	1	2	2	0	5	0	0	1	0	1	13
3:30 PM	0	2	1	0	3	0	1	1	0	2	0	2	1	0	3	6	7	2	0	15	23
Total Volume	5	8	2	0	15	1	6	2	0	9	1	11	4	0	16	6	8	4	0	18	58
% Approach Total	33.3	53.3	13.3	0.0		11.1	66.7	22.2	0.0		6.3	68.8	25.0	0.0		33.3	44.4	22.2	0.0		
PHF	0.417	0.400	0.500	0.000	0.536	0.250	0.500	0.500	0.000	0.750	0.250	0.550	0.500	0.000	0.800	0.250	0.286	0.500	0.000	0.300	0.630
Buses	2	0	1	0	3	0	4	1	0	5	0	2	3	0	5	1	8	1	0	10	23
Buses %	40.0	0.0	50.0	0.0	20.0	0.0	66.7	50.0	0.0	55.6	0.0	18.2	75.0	0.0	31.3	16.7	100.0	25.0	0.0	55.6	39.7
Single-Unit Trucks	3	5	0	0	8	1	2	1	0	4	1	5	1	0	7	5	0	3	0	8	27
Single-Unit %	60.0	62.5	0.0	0.0	53.3	100.0	33.3	50.0	0.0	44.4	100.0	45.5	25.0	0.0	43.8	83.3	0.0	75.0	0.0	44.4	46.6
Articulated Trucks	0	3	1	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
Articulated %	0.0	37.5	50.0	0.0	26.7	0.0	0.0	0.0	0.0	0.0	0.0	36.4	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	13.8
Buses	2	0	1	0	3	0	4	1	0	5	0	2	3	0	5	1	8	1	0	10	23
Single-Unit Trucks	3	5	0	0	8	1	2	1	0	4	1	5	1	0	7	5	0	3	0	8	27
Articulated Trucks	0	3	1	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
Total Entering Leg	5	8	2	0	15	1	6	2	0	9	1	11	4	0	16	6	8	4	0	18	58
Buses					3					9					2					9	23
Single-Unit Trucks					9					1					11					6	27
Articulated Trucks					4					1					3					0	8
Total Exiting Leg					16					11					16					15	58

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Buses

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
3:00 PM	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	4
3:15 PM	1	0	0	0	1	0	3	0	0	3	0	0	1	0	1	0	0	0	0	0	5
3:30 PM	0	0	0	0	0	0	0	1	0	1	0	1	1	0	2	1	7	1	0	9	12
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	1	0	3	0	4	1	0	5	0	1	3	0	4	1	8	1	0	10	22
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	4
Grand Total	2	4	1	0	7	0	5	1	0	6	0	3	3	0	6	2	8	1	0	11	30
Approach %	28.6	57.1	14.3	0.0		0.0	83.3	16.7	0.0		0.0	50.0	50.0	0.0		18.2	72.7	9.1	0.0		
Total %	6.7	13.3	3.3	0.0	23.3	0.0	16.7	3.3	0.0	20.0	0.0	10.0	10.0	0.0	20.0	6.7	26.7	3.3	0.0	36.7	
Exiting Leg Total					4					9					7					10	30

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:45 PM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:45 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
3:00 PM	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	4
3:15 PM	1	0	0	0	1	0	3	0	0	3	0	0	1	0	1	0	0	0	0	0	5
3:30 PM	0	0	0	0	0	0	0	1	0	1	0	1	1	0	2	1	7	1	0	9	12
Total Volume	2	0	1	0	3	0	4	1	0	5	0	2	3	0	5	1	8	1	0	10	23
% Approach Total	66.7	0.0	33.3	0.0		0.0	80.0	20.0	0.0		0.0	40.0	60.0	0.0		10.0	80.0	10.0	0.0		
PHF	0.500	0.000	0.250	0.000	0.750	0.000	0.333	0.250	0.000	0.417	0.000	0.500	0.750	0.000	0.625	0.250	0.286	0.250	0.000	0.278	0.479
Entering Leg	2	0	1	0	3	0	4	1	0	5	0	2	3	0	5	1	8	1	0	10	23
Exiting Leg					3					9					2					9	23
Total					6					14					7					19	46

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Class:

Single-Unit Trucks

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	1	0	0	0	1	0	1	0	0	1	0	4	0	0	4	0	0	1	0	1	7
2:45 PM	1	3	0	0	4	1	0	1	0	2	0	1	0	0	1	0	0	1	0	1	8
Total	2	3	0	0	5	1	1	1	0	3	0	5	0	0	5	0	0	2	0	2	15
3:00 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2
3:15 PM	2	1	0	0	3	0	0	0	0	0	1	2	1	0	4	0	0	1	0	1	8
3:30 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	5	0	1	0	6	9
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
Total	2	3	0	0	5	0	2	0	0	2	1	6	1	0	8	5	0	2	0	7	22
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
4:15 PM	0	3	0	0	3	0	0	0	0	0	1	2	1	0	4	1	0	0	0	1	8
Total	0	4	0	0	4	0	0	0	0	0	1	4	1	0	6	1	0	0	0	1	11
Grand Total	4	10	0	0	14	1	3	1	0	5	2	15	2	0	19	6	0	4	0	10	48
Approach %	28.6	71.4	0.0	0.0		20.0	60.0	20.0	0.0		10.5	78.9	10.5	0.0		60.0	0.0	40.0	0.0		
Total %	8.3	20.8	0.0	0.0	29.2	2.1	6.3	2.1	0.0	10.4	4.2	31.3	4.2	0.0	39.6	12.5	0.0	8.3	0.0	20.8	
Exiting Leg Total					20					2					17					9	48

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:45 PM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:45 PM	1	3	0	0	4	1	0	1	0	2	0	1	0	0	1	0	0	1	0	1	8
3:00 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2
3:15 PM	2	1	0	0	3	0	0	0	0	0	1	2	1	0	4	0	0	1	0	1	8
3:30 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	5	0	1	0	6	9
Total Volume	3	5	0	0	8	1	2	1	0	4	1	5	1	0	7	5	0	3	0	8	27
% Approach Total	37.5	62.5	0.0	0.0		25.0	50.0	25.0	0.0		14.3	71.4	14.3	0.0		62.5	0.0	37.5	0.0		
PHF	0.375	0.417	0.000	0.000	0.500	0.250	0.500	0.250	0.000	0.500	0.250	0.625	0.250	0.000	0.438	0.250	0.000	0.750	0.000	0.333	0.750
Entering Leg	3	5	0	0	8	1	2	1	0	4	1	5	1	0	7	5	0	3	0	8	27
Exiting Leg					9					1					11					6	27
Total					17					5					18					14	54

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Articulated Trucks

	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
Total	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	6
4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	8	1	0	9	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	15
Approach %	0.0	88.9	11.1	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	53.3	6.7	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	6.7	0.0	0.0	6.7	
Exiting Leg Total					5					2					8					0	15

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:30 PM	Route 62					High Street					Middlesex Avenue (Route 62)					Middlesex Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
2:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:45 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.400
Entering Leg	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	8
Exiting Leg					4					0					4					0	8
Total					8					0					8					0	16

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	5
Approach %	50.0	50.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	66.7	33.3		
Total %	20.0	20.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	20.0	60.0	
Exiting Leg Total							0							0							1							4	5

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

3:15 PM	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4
% Approach Total	50.0	50.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	50.0	50.0		
PHF	0.250	0.250	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.500
Entering Leg	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4
Exiting Leg							0							0							1							3	4
Total							2							0							1							5	8

PDI File #: **240268 E**
Location: **N: Route 62 S: Middlesex Avenue (Route 62)**
Location: **E: High Street W: Middlesex Avenue**
City, State: **Wilimngton, MA**
Client: **Nitsch/ B. Zimolka**
Site Code: **15428**
Count Date: **Thursday, October 24, 2024**
Start Time: **2:30 PM**
End Time: **4:30 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Pedestrians

	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	100		0	0	0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66.7	66.7	0	0	0	0	33.3	0	33.3	
Exiting Leg Total							0							0							2							1	3

Peak Hour Analysis from 02:30 PM to 04:30 PM begins at:

2:45 PM	Route 62 from North							High Street from East							Middlesex Avenue (Route 62) from South							Middlesex Avenue from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.375
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	1	0	1	3
Exiting Leg							0							0							2							1	3
Total							0							0							4							2	6

Ballardville Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION D A T A INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File #: 240268 ATR-A (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

NB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	4	30.2	27.8
1:00 AM	0	0	2	2	0	0	0	0	0	0	0	0	0	4	27.1	25.3
2:00 AM	0	0	1	2	1	0	0	0	0	0	0	0	0	4	31.3	28.0
3:00 AM	0	0	0	8	2	1	0	0	0	0	0	0	0	11	30.0	28.6
4:00 AM	0	0	8	14	2	0	0	0	0	0	0	0	0	24	27.0	25.4
5:00 AM	3	1	13	39	5	1	0	0	0	0	0	0	0	62	29.0	25.6
6:00 AM	1	3	29	71	9	0	0	0	0	0	0	0	0	113	29.0	25.7
7:00 AM	2	3	36	153	29	0	0	0	0	0	0	0	0	223	29.0	26.5
8:00 AM	3	5	39	97	26	2	0	0	0	0	0	0	0	172	30.0	26.1
9:00 AM	0	6	24	76	12	1	0	0	0	0	0	0	0	119	29.0	26.0
10:00 AM	1	1	25	64	13	1	0	0	0	0	0	0	0	105	29.0	26.2
11:00 AM	2	1	21	74	17	1	0	0	0	0	0	0	0	116	29.8	26.6
12:00 PM	3	5	32	85	22	1	0	0	0	0	0	0	0	148	30.0	26.5
1:00 PM	2	2	25	68	20	3	0	0	0	0	0	0	0	120	30.0	26.3
2:00 PM	2	4	26	78	19	2	0	0	0	0	0	0	0	131	30.0	26.4
3:00 PM	5	9	52	71	18	2	0	0	0	0	0	0	0	157	29.0	25.0
4:00 PM	3	2	32	101	33	2	0	0	0	0	1	0	0	174	30.0	27.0
5:00 PM	5	2	40	98	34	1	1	0	0	0	0	0	0	181	30.0	26.6
6:00 PM	1	0	18	98	13	1	0	0	0	0	0	0	0	131	29.0	26.7
7:00 PM	1	1	7	51	17	4	0	0	0	0	0	0	0	81	31.0	27.5
8:00 PM	0	1	10	46	10	1	0	0	0	0	0	0	0	68	30.0	27.0
9:00 PM	0	0	7	16	10	0	0	0	0	0	0	0	0	33	31.0	27.6
10:00 PM	1	0	4	14	3	1	0	0	0	0	0	0	0	23	29.7	26.8
11:00 PM	0	0	4	5	3	0	0	0	0	0	0	0	0	12	31.4	27.8
Total	35	46	456	1333	319	25	1	0	0	0	1	0	0	2216	30.0	26.4
Percent	1.58%	2.08%	20.58%	60.15%	14.40%	1.13%	0.05%	0.00%	0.00%	0.00%	0.05%	0.00%	0.00%			
AM Peak	5:00 AM	9:00 AM	8:00 AM	7:00 AM	7:00 AM	8:00 AM								7:00 AM		
Volume	3	6	39	153	29	2	0	0	0	0	0	0	0	223		
PM Peak	3:00 PM	3:00 PM	3:00 PM	4:00 PM	5:00 PM	7:00 PM	5:00 PM				4:00 PM			5:00 PM		
Volume	5	9	52	101	34	4	1	0	0	0	1	0	0	181		

15th Percentile:	23.0 MPH	Average Speed:	26.4 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	27.0 MPH	10 MPH Pace:	22 to 31 MPH	Number of Vehicles > 25 MPH:	1444
85th Percentile:	30.0 MPH	Number in Pace:	1949	Percent of Vehicles > 25 MPH:	65.2%
95th Percentile:	32.0 MPH	Percent in Pace:	88.0%		

Ballardville Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-A (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	3	7	1	1	0	0	0	0	0	0	12	33.8	32.1
1:00 AM	0	0	1	2	3	1	0	0	0	0	0	0	0	7	34.1	29.4
2:00 AM	0	0	0	5	4	1	0	0	0	0	0	0	0	10	33.3	30.3
3:00 AM	0	0	2	8	1	3	0	0	0	0	0	0	0	14	35.0	28.8
4:00 AM	0	0	0	9	5	0	0	0	0	0	0	0	0	14	31.0	28.9
5:00 AM	0	2	4	18	9	0	1	0	0	0	0	0	0	34	31.1	28.1
6:00 AM	1	0	25	93	46	6	0	0	0	0	0	0	0	171	31.5	27.9
7:00 AM	2	8	41	157	83	17	0	2	0	0	0	0	0	310	32.0	28.0
8:00 AM	14	6	19	107	86	12	1	0	0	0	0	0	0	245	32.0	27.8
9:00 AM	17	21	22	77	41	5	1	1	0	0	0	0	0	185	32.0	25.3
10:00 AM	0	3	22	73	44	10	0	0	0	0	0	0	0	152	31.0	28.2
11:00 AM	1	6	33	85	80	3	1	1	0	0	0	0	0	210	32.0	28.1
12:00 PM	1	3	32	121	71	9	1	1	0	0	0	0	0	239	32.0	28.1
1:00 PM	1	6	39	129	61	5	0	1	0	0	0	0	0	242	31.0	27.5
2:00 PM	2	9	51	143	81	9	0	0	0	0	0	0	0	295	31.0	27.5
3:00 PM	7	36	57	176	73	5	3	0	0	0	0	0	0	357	31.0	26.1
4:00 PM	2	21	56	219	138	11	3	0	0	0	0	0	0	450	32.0	27.7
5:00 PM	1	14	62	184	109	16	2	0	0	0	0	0	0	388	32.0	27.8
6:00 PM	2	3	22	144	75	6	1	0	0	0	0	0	0	253	32.0	28.2
7:00 PM	0	0	26	81	51	8	0	1	0	0	0	0	0	167	32.0	28.4
8:00 PM	0	0	12	62	41	7	0	0	0	0	0	0	0	122	32.0	28.8
9:00 PM	1	1	8	38	26	5	2	0	0	0	0	0	0	81	33.0	28.8
10:00 PM	0	0	3	14	17	4	0	0	0	0	0	0	0	38	33.0	30.1
11:00 PM	0	0	5	9	14	3	0	0	0	0	0	0	0	31	32.0	29.0
Total	52	139	542	1957	1166	147	17	7	0	0	0	0	0	4027	32.0	27.7
Percent	1.29%	3.45%	13.46%	48.60%	28.95%	3.65%	0.42%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%			
AM Peak	9:00 AM	9:00 AM	7:00 AM	7:00 AM	8:00 AM	7:00 AM	12:00 AM	7:00 AM						7:00 AM		
Volume	17	21	41	157	86	17	1	2	0	0	0	0	0	310		
PM Peak	3:00 PM	3:00 PM	5:00 PM	4:00 PM	4:00 PM	5:00 PM	3:00 PM	12:00 PM						4:00 PM		
Volume	7	36	62	219	138	16	3	1	0	0	0	0	0	450		

15th Percentile:	24.0 MPH	Average Speed:	27.7 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 25 MPH:	3028
85th Percentile:	32.0 MPH	Number in Pace:	3256	Percent of Vehicles > 25 MPH:	75.2%
95th Percentile:	34.0 MPH	Percent in Pace:	80.9%		

Ballardville Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-A (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	5	8	1	1	0	0	0	0	0	0	16	32.0	31.0
1:00 AM	0	0	3	4	3	1	0	0	0	0	0	0	0	11	33.0	27.9
2:00 AM	0	0	1	7	5	1	0	0	0	0	0	0	0	14	34.0	29.6
3:00 AM	0	0	2	16	3	4	0	0	0	0	0	0	0	25	33.2	28.7
4:00 AM	0	0	8	23	7	0	0	0	0	0	0	0	0	38	30.0	26.7
5:00 AM	3	3	17	57	14	1	1	0	0	0	0	0	0	96	30.0	26.5
6:00 AM	2	3	54	164	55	6	0	0	0	0	0	0	0	284	30.6	27.0
7:00 AM	4	11	77	310	112	17	0	2	0	0	0	0	0	533	31.0	27.4
8:00 AM	17	11	58	204	112	14	1	0	0	0	0	0	0	417	32.0	27.1
9:00 AM	17	27	46	153	53	6	1	1	0	0	0	0	0	304	30.6	25.6
10:00 AM	1	4	47	137	57	11	0	0	0	0	0	0	0	257	31.0	27.4
11:00 AM	3	7	54	159	97	4	1	1	0	0	0	0	0	326	31.0	27.6
12:00 PM	4	8	64	206	93	10	1	1	0	0	0	0	0	387	31.0	27.5
1:00 PM	3	8	64	197	81	8	0	1	0	0	0	0	0	362	31.0	27.1
2:00 PM	4	13	77	221	100	11	0	0	0	0	0	0	0	426	31.0	27.1
3:00 PM	12	45	109	247	91	7	3	0	0	0	0	0	0	514	30.0	25.8
4:00 PM	5	23	88	320	171	13	3	0	0	0	1	0	0	624	31.0	27.5
5:00 PM	6	16	102	282	143	17	3	0	0	0	0	0	0	569	32.0	27.4
6:00 PM	3	3	40	242	88	7	1	0	0	0	0	0	0	384	31.0	27.7
7:00 PM	1	1	33	132	68	12	0	1	0	0	0	0	0	248	32.0	28.1
8:00 PM	0	1	22	108	51	8	0	0	0	0	0	0	0	190	31.0	28.1
9:00 PM	1	1	15	54	36	5	2	0	0	0	0	0	0	114	32.0	28.4
10:00 PM	1	0	7	28	20	5	0	0	0	0	0	0	0	61	33.0	28.8
11:00 PM	0	0	9	14	17	3	0	0	0	0	0	0	0	43	32.0	28.6
Total	87	185	998	3290	1485	172	18	7	0	0	1	0	0	6243	31.0	27.2
Percent	1.39%	2.96%	15.99%	52.70%	23.79%	2.76%	0.29%	0.11%	0.00%	0.00%	0.02%	0.00%	0.00%			
AM Peak	8:00 AM	9:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	12:00 AM	7:00 AM						7:00 AM		
Volume	17	27	77	310	112	17	1	2	0	0	0	0	0	533		
PM Peak	3:00 PM	3:00 PM	3:00 PM	4:00 PM	4:00 PM	5:00 PM	3:00 PM	12:00 PM			4:00 PM			4:00 PM		
Volume	12	45	109	320	171	17	3	1	0	0	1	0	0	624		

15th Percentile:	24.0 MPH	Average Speed:	27.2 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	23 to 32 MPH	Number of Vehicles > 25 MPH:	4472
85th Percentile:	31.0 MPH	Number in Pace:	5155	Percent of Vehicles > 25 MPH:	71.6%
95th Percentile:	33.0 MPH	Percent in Pace:	82.6%		

Ballardville Street
north of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-A (Speed)

Count Date
Thursday, October 24, 2024

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	4	3	0	0	0	0	0	0	0	0	8	32.0	28.9
1:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	2	26.7	26.0
2:00 AM	0	1	2	2	0	0	0	0	0	0	0	0	0	5	25.0	22.8
3:00 AM	0	0	1	3	2	0	0	0	0	0	0	0	0	6	30.0	27.3
4:00 AM	0	0	3	11	1	0	1	0	0	0	0	0	0	16	28.8	26.9
5:00 AM	1	1	11	39	7	1	0	0	0	0	0	0	0	60	29.0	26.4
6:00 AM	4	2	37	64	11	1	0	0	0	0	0	0	0	119	28.0	25.2
7:00 AM	3	4	45	139	31	1	0	0	0	0	0	0	0	223	29.0	26.3
8:00 AM	6	3	72	96	28	2	1	0	0	0	0	0	0	208	29.0	25.5
9:00 AM	3	3	40	78	21	0	0	0	0	0	0	0	0	145	29.0	25.9
10:00 AM	1	2	26	69	10	1	0	0	0	0	0	0	0	109	28.8	26.2
11:00 AM	2	1	25	74	15	0	0	0	0	0	0	0	0	117	29.0	26.1
12:00 PM	2	2	23	76	24	1	0	0	0	0	0	0	0	128	30.0	26.8
1:00 PM	2	1	32	76	37	2	0	0	0	0	0	0	0	150	30.0	27.1
2:00 PM	3	4	24	92	18	2	0	0	0	0	0	0	0	143	29.0	26.4
3:00 PM	6	4	64	96	11	0	0	0	0	0	0	0	0	181	28.0	24.6
4:00 PM	3	4	25	121	31	1	0	0	0	0	0	0	0	185	30.0	26.9
5:00 PM	2	1	21	129	43	2	0	0	0	0	0	0	0	198	31.0	27.5
6:00 PM	0	1	23	75	13	0	0	0	0	0	0	0	0	112	29.0	26.6
7:00 PM	0	1	13	67	12	0	0	0	0	0	0	0	0	93	29.0	26.9
8:00 PM	1	0	10	51	13	2	0	0	0	0	0	0	0	77	30.0	27.2
9:00 PM	0	2	5	14	5	1	0	0	0	0	0	0	0	27	30.1	26.5
10:00 PM	0	0	1	16	3	0	0	0	0	0	0	0	0	20	29.3	27.8
11:00 PM	0	0	1	8	1	0	0	0	0	0	0	0	0	10	29.0	27.3
Total	39	37	505	1402	340	17	2	0	0	0	0	0	0	2342	30.0	26.3
Percent	1.67%	1.58%	21.56%	59.86%	14.52%	0.73%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
AM Peak	8:00 AM	7:00 AM	8:00 AM	7:00 AM	7:00 AM	8:00 AM	4:00 AM							7:00 AM		
Volume	6	4	72	139	31	2	1	0	0	0	0	0	0	223		
PM Peak	3:00 PM	2:00 PM	3:00 PM	5:00 PM	5:00 PM	1:00 PM								5:00 PM		
Volume	6	4	64	129	43	2	0	0	0	0	0	0	0	198		

15th Percentile:	23.0 MPH	Average Speed:	26.3 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	27.0 MPH	10 MPH Pace:	22 to 31 MPH	Number of Vehicles > 25 MPH:	1511
85th Percentile:	30.0 MPH	Number in Pace:	2111	Percent of Vehicles > 25 MPH:	64.5%
95th Percentile:	31.0 MPH	Percent in Pace:	90.1%		

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Count Date
Thursday, October 24, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	6	5	1	0	0	0	0	0	0	0	12	34.0	30.3
1:00 AM	0	1	1	2	1	0	0	0	0	0	0	0	0	5	29.6	25.8
2:00 AM	0	0	2	3	2	0	0	0	0	0	0	0	0	7	31.3	27.9
3:00 AM	0	0	0	5	3	1	0	0	0	0	0	0	0	9	31.0	30.1
4:00 AM	0	0	2	4	5	1	0	0	0	0	0	0	0	12	32.0	29.0
5:00 AM	2	1	6	18	12	1	0	0	0	0	0	0	0	40	31.0	26.8
6:00 AM	0	1	37	76	36	4	1	0	0	0	0	0	0	155	31.0	27.5
7:00 AM	3	2	30	121	66	3	0	0	0	0	0	0	0	225	31.0	27.6
8:00 AM	0	8	26	103	82	8	1	1	0	0	0	0	0	229	32.0	28.4
9:00 AM	1	3	21	82	41	6	1	0	0	0	0	0	0	155	31.0	27.9
10:00 AM	0	0	36	80	40	4	4	0	0	0	0	0	0	164	31.0	27.9
11:00 AM	1	3	25	100	84	7	1	0	0	0	0	0	0	221	32.0	28.6
12:00 PM	0	5	38	119	102	11	3	0	0	0	0	0	0	278	33.0	28.6
1:00 PM	1	6	29	139	68	3	0	0	0	0	0	0	0	246	31.0	27.9
2:00 PM	3	6	37	139	74	4	0	0	0	0	0	0	0	263	31.0	27.5
3:00 PM	2	19	75	196	69	12	1	0	1	0	0	0	0	375	31.0	26.8
4:00 PM	3	15	69	211	132	14	1	0	0	0	0	0	0	445	32.0	27.6
5:00 PM	2	4	22	205	120	13	2	0	0	0	0	0	0	368	32.0	28.7
6:00 PM	0	4	27	139	69	13	1	0	0	0	0	0	0	253	32.0	28.2
7:00 PM	1	0	17	73	66	12	0	0	0	0	0	0	0	169	32.0	29.1
8:00 PM	0	0	7	77	49	2	3	0	0	0	0	0	0	138	32.0	29.1
9:00 PM	0	1	5	36	32	7	0	0	0	0	0	0	0	81	33.0	29.2
10:00 PM	0	1	6	23	17	3	2	0	0	0	0	0	0	52	33.0	29.3
11:00 PM	0	0	5	17	9	2	0	0	0	0	0	0	0	33	32.0	28.4
Total	19	80	523	1974	1184	132	21	1	1	0	0	0	0	3935	32.0	28.1
Percent	0.48%	2.03%	13.29%	50.17%	30.09%	3.35%	0.53%	0.03%	0.03%	0.00%	0.00%	0.00%	0.00%			
AM Peak	7:00 AM	8:00 AM	6:00 AM	7:00 AM	11:00 AM	8:00 AM	10:00 AM	8:00 AM						8:00 AM		
Volume	3	8	37	121	84	8	4	1	0	0	0	0	0	229		
PM Peak	2:00 PM	3:00 PM	3:00 PM	4:00 PM	4:00 PM	4:00 PM	12:00 PM		3:00 PM					4:00 PM		
Volume	3	19	75	211	132	14	3	0	1	0	0	0	0	445		

15th Percentile:	24.0 MPH	Average Speed:	28.1 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 25 MPH:	3069
85th Percentile:	32.0 MPH	Number in Pace:	3263	Percent of Vehicles > 25 MPH:	78.0%
95th Percentile:	34.0 MPH	Percent in Pace:	82.9%		

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Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	10	8	1	0	0	0	0	0	0	0	20	33.2	29.8
1:00 AM	0	1	1	4	1	0	0	0	0	0	0	0	0	7	28.4	25.9
2:00 AM	0	1	4	5	2	0	0	0	0	0	0	0	0	12	29.7	25.8
3:00 AM	0	0	1	8	5	1	0	0	0	0	0	0	0	15	30.9	29.0
4:00 AM	0	0	5	15	6	1	1	0	0	0	0	0	0	28	32.0	27.8
5:00 AM	3	2	17	57	19	2	0	0	0	0	0	0	0	100	30.0	26.6
6:00 AM	4	3	74	140	47	5	1	0	0	0	0	0	0	274	30.0	26.5
7:00 AM	6	6	75	260	97	4	0	0	0	0	0	0	0	448	30.0	27.0
8:00 AM	6	11	98	199	110	10	2	1	0	0	0	0	0	437	31.0	27.0
9:00 AM	4	6	61	160	62	6	1	0	0	0	0	0	0	300	31.0	26.9
10:00 AM	1	2	62	149	50	5	4	0	0	0	0	0	0	273	30.0	27.2
11:00 AM	3	4	50	174	99	7	1	0	0	0	0	0	0	338	31.0	27.7
12:00 PM	2	7	61	195	126	12	3	0	0	0	0	0	0	406	32.0	28.0
1:00 PM	3	7	61	215	105	5	0	0	0	0	0	0	0	396	31.0	27.6
2:00 PM	6	10	61	231	92	6	0	0	0	0	0	0	0	406	31.0	27.1
3:00 PM	8	23	139	292	80	12	1	0	1	0	0	0	0	556	30.0	26.1
4:00 PM	6	19	94	332	163	15	1	0	0	0	0	0	0	630	31.0	27.4
5:00 PM	4	5	43	334	163	15	2	0	0	0	0	0	0	566	31.0	28.3
6:00 PM	0	5	50	214	82	13	1	0	0	0	0	0	0	365	31.0	27.7
7:00 PM	1	1	30	140	78	12	0	0	0	0	0	0	0	262	31.9	28.3
8:00 PM	1	0	17	128	62	4	3	0	0	0	0	0	0	215	32.0	28.4
9:00 PM	0	3	10	50	37	8	0	0	0	0	0	0	0	108	32.0	28.5
10:00 PM	0	1	7	39	20	3	2	0	0	0	0	0	0	72	32.0	28.9
11:00 PM	0	0	6	25	10	2	0	0	0	0	0	0	0	43	30.7	28.1
Total	58	117	1028	3376	1524	149	23	1	1	0	0	0	0	6277	31.0	27.4
Percent	0.92%	1.86%	16.38%	53.78%	24.28%	2.37%	0.37%	0.02%	0.02%	0.00%	0.00%	0.00%	0.00%			
AM Peak	7:00 AM	8:00 AM	8:00 AM	7:00 AM	8:00 AM	8:00 AM	10:00 AM	8:00 AM						7:00 AM		
Volume	6	11	98	260	110	10	4	1	0	0	0	0	0	448		
PM Peak	3:00 PM	3:00 PM	3:00 PM	5:00 PM	4:00 PM	4:00 PM	12:00 PM		3:00 PM					4:00 PM		
Volume	8	23	139	334	163	15	3	0	1	0	0	0	0	630		

15th Percentile:	24.0 MPH	Average Speed:	27.4 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	23 to 32 MPH	Number of Vehicles > 25 MPH:	4580
85th Percentile:	31.0 MPH	Number in Pace:	5291	Percent of Vehicles > 25 MPH:	73.0%
95th Percentile:	33.0 MPH	Percent in Pace:	84.3%		

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
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Site Code: 15428

PRECISION D A T A INDUSTRIES, LLC

PDI File #: 240268 ATR-B (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	1	11	13	2	0	0	0	0	0	0	27	39.0	35.3
1:00 AM	0	0	0	1	3	1	0	0	0	0	0	0	0	5	34.2	31.2
2:00 AM	0	0	0	1	4	6	1	0	0	0	0	0	0	12	38.4	35.5
3:00 AM	0	0	0	0	4	4	2	0	0	0	0	0	0	10	42.3	36.6
4:00 AM	0	0	0	3	3	3	2	0	0	0	0	0	0	11	40.5	34.6
5:00 AM	0	0	3	2	18	15	2	0	0	0	0	0	0	40	37.2	33.4
6:00 AM	0	0	0	18	63	35	5	0	0	0	0	0	0	121	36.0	33.1
7:00 AM	0	1	1	47	123	64	8	0	1	0	0	0	0	245	36.0	32.6
8:00 AM	1	1	8	75	175	73	7	1	0	0	0	0	0	341	36.0	31.9
9:00 AM	2	0	11	66	129	56	8	0	0	0	0	0	0	272	36.0	31.4
10:00 AM	1	0	1	52	129	62	8	0	0	0	0	0	0	253	36.0	32.4
11:00 AM	0	6	11	43	131	77	12	1	0	0	0	0	0	281	36.0	32.4
12:00 PM	0	0	3	46	193	106	17	2	0	0	0	0	0	367	37.0	33.2
1:00 PM	0	0	2	49	156	91	16	1	0	0	0	0	0	315	37.0	33.3
2:00 PM	0	1	11	123	217	98	17	0	0	0	0	0	0	467	36.0	31.8
3:00 PM	8	19	44	164	203	76	12	2	0	0	0	0	0	528	35.0	29.7
4:00 PM	9	30	49	170	181	69	6	1	0	0	0	0	0	515	34.0	29.0
5:00 PM	5	22	31	141	208	66	10	1	0	0	0	0	0	484	35.0	29.8
6:00 PM	1	2	9	112	178	68	7	0	0	0	0	0	0	377	35.0	31.3
7:00 PM	2	1	13	81	132	46	5	1	0	0	0	0	0	281	35.0	31.0
8:00 PM	1	0	3	41	106	72	11	0	0	0	0	0	0	234	37.0	32.9
9:00 PM	0	0	0	21	62	39	10	0	0	0	0	0	0	132	37.0	33.4
10:00 PM	1	0	0	8	37	27	6	1	0	0	0	0	0	80	38.0	33.6
11:00 PM	0	0	1	5	35	20	6	1	0	0	0	0	0	68	38.0	33.7
Total	31	83	201	1270	2501	1187	180	12	1	0	0	0	0	5466	36.0	31.6
Percent	0.57%	1.52%	3.68%	23.23%	45.76%	21.72%	3.29%	0.22%	0.02%	0.00%	0.00%	0.00%	0.00%			
AM Peak	9:00 AM	11:00 AM	9:00 AM	8:00 AM	8:00 AM	11:00 AM	11:00 AM	8:00 AM	7:00 AM					8:00 AM		
Volume	2	6	11	75	175	77	12	1	1	0	0	0	0	341		
PM Peak	4:00 PM	4:00 PM	4:00 PM	4:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM						3:00 PM		
Volume	9	30	49	170	217	106	17	2	0	0	0	0	0	528		

15th Percentile:	27.0 MPH	Average Speed:	31.6 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 30 MPH:	3453
85th Percentile:	36.0 MPH	Number in Pace:	4214	Percent of Vehicles > 30 MPH:	63.2%
95th Percentile:	39.0 MPH	Percent in Pace:	77.1%		

Middlesex Avenue
south of Salem Street
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PRECISION
D A T A
INDUSTRIES, LLC

PDI File #: 240268 ATR-B (Speed)

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Wednesday, October 23, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	1	9	6	0	0	0	0	0	0	0	16	36.8	33.3
1:00 AM	0	0	0	2	6	5	1	0	0	0	0	0	0	14	38.0	34.0
2:00 AM	0	0	0	0	4	5	1	0	0	0	0	0	0	10	39.0	35.0
3:00 AM	0	0	0	2	14	9	3	0	0	0	0	0	0	28	37.0	33.9
4:00 AM	0	0	0	8	45	24	8	0	0	0	0	0	0	85	38.0	34.0
5:00 AM	0	0	0	29	175	103	8	0	0	1	0	0	0	316	37.0	33.7
6:00 AM	5	3	11	125	315	93	4	0	0	0	0	0	0	556	35.0	31.3
7:00 AM	110	24	27	84	167	52	13	1	0	0	0	0	0	478	34.0	25.8
8:00 AM	58	30	15	72	186	77	4	1	0	0	0	1	0	444	35.0	28.0
9:00 AM	36	17	5	55	157	78	7	0	0	0	0	0	0	355	36.0	29.5
10:00 AM	0	0	3	61	216	87	11	0	0	0	0	0	0	378	36.0	32.6
11:00 AM	0	0	5	49	209	107	11	0	0	0	0	0	0	381	36.0	32.8
12:00 PM	1	0	0	53	201	114	12	2	1	0	0	0	0	384	36.0	33.2
1:00 PM	0	0	4	80	214	100	12	2	0	0	0	0	0	412	36.0	32.5
2:00 PM	0	1	7	69	203	101	12	1	1	0	0	0	0	395	36.0	32.6
3:00 PM	0	0	12	123	232	71	10	0	0	0	0	0	0	448	35.0	31.5
4:00 PM	0	0	4	107	302	94	11	2	0	0	0	0	0	520	35.0	32.0
5:00 PM	0	3	14	112	238	89	13	2	0	0	0	0	0	471	36.0	31.8
6:00 PM	0	0	3	86	227	69	11	1	0	0	0	0	0	397	36.0	32.1
7:00 PM	0	1	0	33	149	47	6	0	0	0	0	0	0	236	36.0	32.6
8:00 PM	0	1	0	23	93	49	8	2	2	0	0	0	0	178	37.0	33.5
9:00 PM	0	0	1	14	71	34	3	0	0	0	0	0	0	123	36.0	33.0
10:00 PM	0	0	0	8	36	16	1	0	0	0	0	0	0	61	36.0	32.9
11:00 PM	0	0	0	4	7	11	1	0	0	0	0	0	0	23	36.7	33.7
Total	210	80	111	1200	3476	1441	171	14	4	1	0	1	0	6709	36.0	31.5
Percent	3.13%	1.19%	1.65%	17.89%	51.81%	21.48%	2.55%	0.21%	0.06%	0.01%	0.00%	0.01%	0.00%			
AM Peak	7:00 AM	8:00 AM	7:00 AM	6:00 AM	6:00 AM	11:00 AM	7:00 AM	7:00 AM		5:00 AM		8:00 AM		6:00 AM		
Volume	110	30	27	125	315	107	13	1	0	1	0	1	0	556		
PM Peak	12:00 PM	5:00 PM	5:00 PM	3:00 PM	4:00 PM	12:00 PM	5:00 PM	12:00 PM	8:00 PM					4:00 PM		
Volume	1	3	14	123	302	114	13	2	2	0	0	0	0	520		

15th Percentile:	28.0 MPH	Average Speed:	31.5 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 30 MPH:	4574
85th Percentile:	36.0 MPH	Number in Pace:	5462	Percent of Vehicles > 30 MPH:	68.2%
95th Percentile:	38.0 MPH	Percent in Pace:	81.4%		

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-B (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	2	20	19	2	0	0	0	0	0	0	43	38.0	34.6
1:00 AM	0	0	0	3	9	6	1	0	0	0	0	0	0	19	37.3	33.3
2:00 AM	0	0	0	1	8	11	2	0	0	0	0	0	0	22	39.0	35.3
3:00 AM	0	0	0	2	18	13	5	0	0	0	0	0	0	38	38.5	34.6
4:00 AM	0	0	0	11	48	27	10	0	0	0	0	0	0	96	38.0	34.1
5:00 AM	0	0	3	31	193	118	10	0	0	1	0	0	0	356	37.0	33.7
6:00 AM	5	3	11	143	378	128	9	0	0	0	0	0	0	677	35.0	31.6
7:00 AM	110	25	28	131	290	116	21	1	1	0	0	0	0	723	35.0	28.1
8:00 AM	59	31	23	147	361	150	11	2	0	0	0	1	0	785	35.0	29.7
9:00 AM	38	17	16	121	286	134	15	0	0	0	0	0	0	627	36.0	30.3
10:00 AM	1	0	4	113	345	149	19	0	0	0	0	0	0	631	36.0	32.5
11:00 AM	0	6	16	92	340	184	23	1	0	0	0	0	0	662	36.0	32.6
12:00 PM	1	0	3	99	394	220	29	4	1	0	0	0	0	751	36.0	33.2
1:00 PM	0	0	6	129	370	191	28	3	0	0	0	0	0	727	36.0	32.8
2:00 PM	0	2	18	192	420	199	29	1	1	0	0	0	0	862	36.0	32.2
3:00 PM	8	19	56	287	435	147	22	2	0	0	0	0	0	976	35.0	30.5
4:00 PM	9	30	53	277	483	163	17	3	0	0	0	0	0	1035	35.0	30.5
5:00 PM	5	25	45	253	446	155	23	3	0	0	0	0	0	955	35.0	30.8
6:00 PM	1	2	12	198	405	137	18	1	0	0	0	0	0	774	36.0	31.7
7:00 PM	2	2	13	114	281	93	11	1	0	0	0	0	0	517	35.0	31.7
8:00 PM	1	1	3	64	199	121	19	2	2	0	0	0	0	412	37.0	33.2
9:00 PM	0	0	1	35	133	73	13	0	0	0	0	0	0	255	36.0	33.2
10:00 PM	1	0	0	16	73	43	7	1	0	0	0	0	0	141	37.0	33.3
11:00 PM	0	0	1	9	42	31	7	1	0	0	0	0	0	91	38.0	33.7
Total	241	163	312	2470	5977	2628	351	26	5	1	0	1	0	12175	36.0	31.5
Percent	1.98%	1.34%	2.56%	20.29%	49.09%	21.59%	2.88%	0.21%	0.04%	0.01%	0.00%	0.01%	0.00%			
AM Peak	7:00 AM	8:00 AM	7:00 AM	8:00 AM	6:00 AM	11:00 AM	11:00 AM	8:00 AM	7:00 AM	5:00 AM		8:00 AM		8:00 AM		
Volume	110	31	28	147	378	184	23	2	1	1	0	1	0	785		
PM Peak	4:00 PM	4:00 PM	3:00 PM	3:00 PM	4:00 PM	12:00 PM	12:00 PM	12:00 PM	8:00 PM					4:00 PM		
Volume	9	30	56	287	483	220	29	4	2	0	0	0	0	1035		

15th Percentile:	28.0 MPH	Average Speed:	31.5 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 30 MPH:	8027
85th Percentile:	36.0 MPH	Number in Pace:	9619	Percent of Vehicles > 30 MPH:	65.9%
95th Percentile:	38.0 MPH	Percent in Pace:	79.0%		

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION
D A T A
INDUSTRIES, LLC

PDI File #: 240268 ATR-B (Speed)

Count Date
Thursday, October 24, 2024

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	4	13	7	3	0	0	0	0	0	0	29	38.0	32.8
1:00 AM	0	0	0	0	6	3	0	0	0	0	0	0	0	9	35.8	33.3
2:00 AM	0	0	0	2	2	2	1	0	1	0	0	0	0	8	41.8	36.1
3:00 AM	0	0	0	0	3	7	0	0	0	0	0	0	0	10	37.3	35.5
4:00 AM	0	0	0	0	5	6	1	0	0	0	0	0	0	12	36.4	34.4
5:00 AM	0	0	3	10	25	15	2	0	0	0	0	0	0	55	36.0	32.1
6:00 AM	1	0	5	27	45	30	4	0	0	0	0	0	0	112	36.0	31.7
7:00 AM	0	0	4	40	125	58	5	0	1	0	0	0	0	233	36.0	32.7
8:00 AM	0	0	3	54	167	88	16	0	0	0	0	0	0	328	36.0	32.8
9:00 AM	1	0	2	37	127	64	6	1	0	0	0	0	0	238	36.0	32.7
10:00 AM	0	0	3	38	105	70	8	0	0	0	0	0	0	224	37.0	32.8
11:00 AM	1	2	11	48	131	74	11	4	0	0	0	0	0	282	37.0	32.5
12:00 PM	1	0	2	41	144	114	16	1	1	0	0	0	0	320	37.0	33.6
1:00 PM	1	0	13	59	177	87	12	0	0	0	0	0	0	349	37.0	32.3
2:00 PM	0	3	19	100	242	107	15	0	0	0	0	0	0	486	35.0	31.8
3:00 PM	8	10	36	132	211	89	10	1	0	0	0	0	0	497	35.0	30.5
4:00 PM	6	9	29	136	224	91	9	0	0	0	0	0	0	504	35.0	30.6
5:00 PM	8	17	35	179	229	73	2	1	0	0	0	0	0	544	34.0	29.7
6:00 PM	0	1	16	111	201	66	8	1	1	0	0	0	0	405	35.0	31.1
7:00 PM	0	0	6	67	173	52	5	1	0	0	0	0	0	304	35.0	31.7
8:00 PM	0	0	4	36	109	69	4	0	0	0	0	0	0	222	37.0	32.7
9:00 PM	0	0	1	29	71	36	9	0	0	0	0	0	0	146	37.0	32.9
10:00 PM	0	0	1	13	53	38	2	1	0	0	0	0	0	108	38.0	33.7
11:00 PM	0	0	0	8	32	19	6	1	0	0	0	0	0	66	38.0	34.1
Total	27	42	195	1171	2620	1265	155	12	4	0	0	0	0	5491	36.0	31.8
Percent	0.49%	0.76%	3.55%	21.33%	47.71%	23.04%	2.82%	0.22%	0.07%	0.00%	0.00%	0.00%	0.00%			
AM Peak	6:00 AM	11:00 AM	11:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	11:00 AM	2:00 AM					8:00 AM		
Volume	1	2	11	54	167	88	16	4	1	0	0	0	0	328		
PM Peak	3:00 PM	5:00 PM	3:00 PM	5:00 PM	2:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM					5:00 PM		
Volume	8	17	36	179	242	114	16	1	1	0	0	0	0	544		

15th Percentile:	28.0 MPH	Average Speed:	31.8 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 30 MPH:	3592
85th Percentile:	36.0 MPH	Number in Pace:	4280	Percent of Vehicles > 30 MPH:	65.4%
95th Percentile:	39.0 MPH	Percent in Pace:	77.9%		

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-B (Speed)

Count Date
Thursday, October 24, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	5	7	0	0	0	0	0	0	0	12	37.4	35.1
1:00 AM	0	1	0	2	2	1	0	0	0	0	0	0	0	6	34.0	29.2
2:00 AM	0	0	0	2	5	3	0	0	0	0	0	0	0	10	35.7	32.5
3:00 AM	0	0	0	2	12	6	3	0	0	0	0	0	0	23	38.1	34.4
4:00 AM	0	0	0	3	57	36	3	2	0	0	0	0	0	101	37.0	34.1
5:00 AM	0	0	0	33	162	101	9	0	0	0	0	0	0	305	37.0	33.4
6:00 AM	6	14	50	105	313	77	9	2	0	0	0	0	0	576	35.0	30.6
7:00 AM	44	48	57	159	167	59	8	3	0	0	0	0	0	545	34.0	27.3
8:00 AM	0	1	18	121	281	118	11	3	0	0	0	0	0	553	36.0	32.0
9:00 AM	0	2	7	66	203	104	12	0	0	0	0	0	0	394	36.0	32.6
10:00 AM	0	0	1	54	186	62	9	1	0	0	0	0	0	313	36.0	32.6
11:00 AM	0	1	0	52	222	106	12	1	0	0	0	0	0	394	36.0	32.9
12:00 PM	0	0	1	70	208	114	12	2	0	0	0	0	0	407	36.0	33.0
1:00 PM	0	0	2	68	195	98	11	3	1	0	0	0	0	378	36.5	33.0
2:00 PM	0	0	1	52	211	96	17	1	1	0	0	0	0	379	37.0	33.1
3:00 PM	6	8	32	126	203	78	7	1	0	0	0	0	0	461	35.0	30.5
4:00 PM	5	4	19	109	302	94	7	3	1	0	0	0	0	544	35.0	31.5
5:00 PM	41	15	31	108	146	44	6	0	0	0	0	0	0	391	34.0	27.8
6:00 PM	0	0	1	71	224	97	10	1	1	0	0	0	0	405	36.0	32.6
7:00 PM	0	0	3	51	148	52	6	1	0	0	0	0	0	261	36.0	32.2
8:00 PM	0	0	2	32	92	59	6	0	0	0	0	0	0	191	36.0	32.9
9:00 PM	0	0	6	17	99	29	5	0	0	0	0	0	0	156	36.0	32.5
10:00 PM	0	0	0	12	37	19	2	0	0	0	0	0	0	70	36.7	32.8
11:00 PM	0	0	0	6	23	11	5	0	0	0	0	0	0	45	37.4	33.6
Total	102	94	231	1321	3503	1471	170	24	4	0	0	0	0	6920	36.0	31.6
Percent	1.47%	1.36%	3.34%	19.09%	50.62%	21.26%	2.46%	0.35%	0.06%	0.00%	0.00%	0.00%	0.00%			
AM Peak	7:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	8:00 AM	9:00 AM	7:00 AM						6:00 AM		
Volume	44	48	57	159	313	118	12	3	0	0	0	0	0	576		
PM Peak	5:00 PM	5:00 PM	3:00 PM	3:00 PM	4:00 PM	12:00 PM	2:00 PM	1:00 PM	1:00 PM					4:00 PM		
Volume	41	15	32	126	302	114	17	3	1	0	0	0	0	544		

15th Percentile:	28.0 MPH	Average Speed:	31.6 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 30 MPH:	4652
85th Percentile:	36.0 MPH	Number in Pace:	5553	Percent of Vehicles > 30 MPH:	67.2%
95th Percentile:	38.0 MPH	Percent in Pace:	80.2%		

Middlesex Avenue
south of Salem Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-B (Speed)

Count Date
Thursday, October 24, 2024

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	4	18	14	3	0	0	0	0	0	0	41	38.0	33.4
1:00 AM	0	1	0	2	8	4	0	0	0	0	0	0	0	15	35.9	31.7
2:00 AM	0	0	0	4	7	5	1	0	1	0	0	0	0	18	37.0	34.1
3:00 AM	0	0	0	2	15	13	3	0	0	0	0	0	0	33	38.2	34.7
4:00 AM	0	0	0	3	62	42	4	2	0	0	0	0	0	113	37.0	34.1
5:00 AM	0	0	3	43	187	116	11	0	0	0	0	0	0	360	37.0	33.2
6:00 AM	7	14	55	132	358	107	13	2	0	0	0	0	0	688	35.0	30.8
7:00 AM	44	48	61	199	292	117	13	3	1	0	0	0	0	778	35.0	28.9
8:00 AM	0	1	21	175	448	206	27	3	0	0	0	0	0	881	36.0	32.3
9:00 AM	1	2	9	103	330	168	18	1	0	0	0	0	0	632	36.0	32.6
10:00 AM	0	0	4	92	291	132	17	1	0	0	0	0	0	537	36.0	32.7
11:00 AM	1	3	11	100	353	180	23	5	0	0	0	0	0	676	36.0	32.7
12:00 PM	1	0	3	111	352	228	28	3	1	0	0	0	0	727	37.0	33.2
1:00 PM	1	0	15	127	372	185	23	3	1	0	0	0	0	727	37.0	32.6
2:00 PM	0	3	20	152	453	203	32	1	1	0	0	0	0	865	36.0	32.4
3:00 PM	14	18	68	258	414	167	17	2	0	0	0	0	0	958	35.0	30.5
4:00 PM	11	13	48	245	526	185	16	3	1	0	0	0	0	1048	35.0	31.1
5:00 PM	49	32	66	287	375	117	8	1	0	0	0	0	0	935	34.0	28.9
6:00 PM	0	1	17	182	425	163	18	2	2	0	0	0	0	810	35.0	31.9
7:00 PM	0	0	9	118	321	104	11	2	0	0	0	0	0	565	35.4	32.0
8:00 PM	0	0	6	68	201	128	10	0	0	0	0	0	0	413	36.2	32.8
9:00 PM	0	0	7	46	170	65	14	0	0	0	0	0	0	302	36.0	32.7
10:00 PM	0	0	1	25	90	57	4	1	0	0	0	0	0	178	37.0	33.3
11:00 PM	0	0	0	14	55	30	11	1	0	0	0	0	0	111	38.0	33.9
Total	129	136	426	2492	6123	2736	325	36	8	0	0	0	0	12411	36.0	31.7
Percent	1.04%	1.10%	3.43%	20.08%	49.34%	22.04%	2.62%	0.29%	0.06%	0.00%	0.00%	0.00%	0.00%			
AM Peak	7:00 AM	7:00 AM	7:00 AM	7:00 AM	8:00 AM	8:00 AM	8:00 AM	11:00 AM	2:00 AM					8:00 AM		
Volume	44	48	61	199	448	206	27	5	1	0	0	0	0	881		
PM Peak	5:00 PM	5:00 PM	3:00 PM	5:00 PM	4:00 PM	12:00 PM	2:00 PM	12:00 PM	6:00 PM					4:00 PM		
Volume	49	32	68	287	526	228	32	3	2	0	0	0	0	1048		

15th Percentile:	28.0 MPH	Average Speed:	31.7 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 30 MPH:	8244
85th Percentile:	36.0 MPH	Number in Pace:	9819	Percent of Vehicles > 30 MPH:	66.4%
95th Percentile:	38.0 MPH	Percent in Pace:	79.1%		

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION
D A T A
INDUSTRIES, LLC

PDI File #: 240268 ATR-C (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	2	7	14	5	1	0	0	0	0	29	45.0	41.3
1:00 AM	0	0	0	2	1	2	4	3	1	0	0	0	0	13	46.0	40.2
2:00 AM	0	0	0	0	2	3	9	2	0	0	0	0	0	16	44.0	41.1
3:00 AM	0	0	0	0	2	9	11	2	1	0	0	0	0	25	44.0	40.3
4:00 AM	0	0	0	1	4	12	5	5	0	1	0	0	0	28	46.0	39.1
5:00 AM	0	0	0	0	14	35	41	14	0	0	1	0	0	105	44.0	40.0
6:00 AM	0	2	3	14	64	114	76	21	3	0	0	0	0	297	42.0	37.4
7:00 AM	1	4	6	26	117	198	148	25	1	0	0	0	0	526	42.0	36.9
8:00 AM	9	11	52	87	174	188	94	18	3	0	0	0	0	636	40.0	33.4
9:00 AM	3	2	26	52	102	151	97	16	3	1	0	0	0	453	41.0	35.2
10:00 AM	0	0	0	8	58	200	150	28	0	0	0	0	0	444	42.6	38.5
11:00 AM	0	0	0	10	48	193	131	23	9	0	0	0	0	414	43.0	38.6
12:00 PM	1	0	2	11	80	192	212	46	6	1	0	0	0	551	43.0	38.9
1:00 PM	0	0	1	6	64	192	157	45	5	0	0	0	0	470	43.7	39.0
2:00 PM	0	0	6	25	98	244	192	27	6	1	0	0	0	599	42.3	37.8
3:00 PM	1	1	6	25	103	301	175	32	0	0	0	0	0	644	42.0	37.5
4:00 PM	0	1	3	18	77	292	248	45	6	1	0	0	0	691	43.0	38.7
5:00 PM	1	1	2	7	83	251	214	48	2	0	0	0	0	609	43.0	38.6
6:00 PM	0	0	1	16	108	220	116	19	2	0	0	0	0	482	42.0	37.2
7:00 PM	0	0	1	9	54	152	98	26	3	0	0	0	0	343	43.0	38.2
8:00 PM	0	0	0	4	28	117	112	36	4	0	0	0	0	301	44.0	39.7
9:00 PM	0	0	1	1	13	53	72	19	2	0	0	0	0	161	44.0	40.1
10:00 PM	0	0	0	0	16	36	49	23	3	0	0	0	0	127	45.0	40.6
11:00 PM	0	0	0	1	14	36	35	15	3	0	0	0	0	104	45.0	39.9
Total	16	22	110	323	1326	3198	2460	543	64	5	1	0	0	8068	43.0	37.8
Percent	0.20%	0.27%	1.36%	4.00%	16.44%	39.64%	30.49%	6.73%	0.79%	0.06%	0.01%	0.00%	0.00%			
AM Peak	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	10:00 AM	10:00 AM	10:00 AM	11:00 AM	4:00 AM	5:00 AM			8:00 AM		
Volume	9	11	52	87	174	200	150	28	9	1	1	0	0	636		
PM Peak	12:00 PM	3:00 PM	2:00 PM	2:00 PM	6:00 PM	3:00 PM	4:00 PM	5:00 PM	12:00 PM	12:00 PM				4:00 PM		
Volume	1	1	6	25	108	301	248	48	6	1	0	0	0	691		

15th Percentile:	33.0 MPH	Average Speed:	37.8 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	38.0 MPH	10 MPH Pace:	34 to 43 MPH	Number of Vehicles > 35 MPH:	5761
85th Percentile:	43.0 MPH	Number in Pace:	5765	Percent of Vehicles > 35 MPH:	71.4%
95th Percentile:	46.0 MPH	Percent in Pace:	71.5%		

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-C (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	8	8	6	2	0	0	0	0	0	24	42.1	37.1
1:00 AM	0	0	0	1	2	4	12	0	0	0	0	0	0	19	43.0	39.3
2:00 AM	0	0	0	1	2	7	7	2	1	0	0	0	0	20	43.3	39.4
3:00 AM	0	0	0	0	6	15	5	3	1	0	0	0	0	30	43.3	38.7
4:00 AM	0	0	0	0	15	54	32	5	0	0	0	0	0	106	42.0	38.3
5:00 AM	1	0	0	2	75	202	77	5	1	0	0	0	0	363	41.0	37.1
6:00 AM	3	1	2	24	131	320	83	8	1	0	0	0	0	573	40.0	36.1
7:00 AM	1	3	2	8	159	336	126	5	2	0	0	0	0	642	40.0	36.5
8:00 AM	5	4	3	16	151	250	95	8	0	0	0	0	0	532	40.0	35.9
9:00 AM	5	1	2	20	170	234	87	9	2	0	0	0	0	530	40.0	35.6
10:00 AM	3	0	0	10	162	283	105	7	2	0	0	0	0	572	40.0	36.3
11:00 AM	2	1	3	31	158	262	83	5	1	0	0	0	0	546	40.0	35.8
12:00 PM	5	1	1	11	124	274	101	10	2	0	0	0	0	529	40.0	36.4
1:00 PM	3	2	4	12	175	285	92	11	0	0	0	1	0	585	40.0	36.1
2:00 PM	3	5	5	14	114	254	118	17	2	1	0	0	0	533	41.0	36.7
3:00 PM	1	4	9	17	169	289	99	11	1	0	0	0	0	600	40.0	35.9
4:00 PM	1	1	1	17	160	402	151	14	0	0	0	0	0	747	40.0	36.9
5:00 PM	4	2	3	16	196	372	116	17	2	0	0	0	0	728	40.0	36.2
6:00 PM	4	1	2	18	200	250	52	3	0	1	0	0	0	531	39.0	35.1
7:00 PM	3	2	2	12	100	196	35	5	0	0	0	0	0	355	39.0	35.3
8:00 PM	0	0	0	4	65	140	44	5	0	0	0	0	0	258	40.0	36.6
9:00 PM	0	0	0	8	45	90	29	0	1	0	0	0	0	173	40.0	36.1
10:00 PM	0	0	0	3	18	36	18	0	0	1	0	0	0	76	40.0	36.6
11:00 PM	0	0	0	0	14	15	17	3	2	0	0	0	0	51	43.5	38.5
Total	44	28	39	245	2419	4578	1590	155	21	3	0	1	0	9123	40.0	36.2
Percent	0.48%	0.31%	0.43%	2.69%	26.52%	50.18%	17.43%	1.70%	0.23%	0.03%	0.00%	0.01%	0.00%			
AM Peak	8:00 AM	8:00 AM	8:00 AM	11:00 AM	9:00 AM	7:00 AM	7:00 AM	9:00 AM	7:00 AM					7:00 AM		
Volume	5	4	3	31	170	336	126	9	2	0	0	0	0	642		
PM Peak	12:00 PM	2:00 PM	3:00 PM	6:00 PM	6:00 PM	4:00 PM	4:00 PM	2:00 PM	12:00 PM	2:00 PM		1:00 PM		4:00 PM		
Volume	5	5	9	18	200	402	151	17	2	1	0	1	0	747		

15th Percentile:	33.0 MPH	Average Speed:	36.2 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	36.0 MPH	10 MPH Pace:	32 to 41 MPH	Number of Vehicles > 35 MPH:	5447
85th Percentile:	40.0 MPH	Number in Pace:	7547	Percent of Vehicles > 35 MPH:	59.7%
95th Percentile:	43.0 MPH	Percent in Pace:	82.7%		

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-C (Speed)

Count Date
Wednesday, October 23, 2024

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	10	15	20	7	1	0	0	0	0	53	44.2	39.4
1:00 AM	0	0	0	3	3	6	16	3	1	0	0	0	0	32	44.0	39.7
2:00 AM	0	0	0	1	4	10	16	4	1	0	0	0	0	36	44.0	40.1
3:00 AM	0	0	0	0	8	24	16	5	2	0	0	0	0	55	44.0	39.4
4:00 AM	0	0	0	1	19	66	37	10	0	1	0	0	0	134	42.0	38.4
5:00 AM	1	0	0	2	89	237	118	19	1	0	1	0	0	468	42.0	37.8
6:00 AM	3	3	5	38	195	434	159	29	4	0	0	0	0	870	41.0	36.5
7:00 AM	2	7	8	34	276	534	274	30	3	0	0	0	0	1168	41.0	36.7
8:00 AM	14	15	55	103	325	438	189	26	3	0	0	0	0	1168	40.0	34.5
9:00 AM	8	3	28	72	272	385	184	25	5	1	0	0	0	983	41.0	35.4
10:00 AM	3	0	0	18	220	483	255	35	2	0	0	0	0	1016	41.0	37.2
11:00 AM	2	1	3	41	206	455	214	28	10	0	0	0	0	960	41.0	37.0
12:00 PM	6	1	3	22	204	466	313	56	8	1	0	0	0	1080	42.0	37.6
1:00 PM	3	2	5	18	239	477	249	56	5	0	0	1	0	1055	42.0	37.4
2:00 PM	3	5	11	39	212	498	310	44	8	2	0	0	0	1132	42.0	37.3
3:00 PM	2	5	15	42	272	590	274	43	1	0	0	0	0	1244	41.0	36.8
4:00 PM	1	2	4	35	237	694	399	59	6	1	0	0	0	1438	42.0	37.7
5:00 PM	5	3	5	23	279	623	330	65	4	0	0	0	0	1337	41.6	37.3
6:00 PM	4	1	3	34	308	470	168	22	2	1	0	0	0	1013	40.0	36.1
7:00 PM	3	2	3	21	154	348	133	31	3	0	0	0	0	698	41.0	36.7
8:00 PM	0	0	0	8	93	257	156	41	4	0	0	0	0	559	42.3	38.3
9:00 PM	0	0	1	9	58	143	101	19	3	0	0	0	0	334	42.0	38.0
10:00 PM	0	0	0	3	34	72	67	23	3	1	0	0	0	203	44.0	39.1
11:00 PM	0	0	0	1	28	51	52	18	5	0	0	0	0	155	44.0	39.4
Total	60	50	149	568	3745	7776	4050	698	85	8	1	1	0	17191	41.0	37.0
Percent	0.35%	0.29%	0.87%	3.30%	21.78%	45.23%	23.56%	4.06%	0.49%	0.05%	0.01%	0.01%	0.00%			
AM Peak	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	10:00 AM	11:00 AM	4:00 AM	5:00 AM			7:00 AM		
Volume	14	15	55	103	325	534	274	35	10	1	1	0	0	1168		
PM Peak	12:00 PM	2:00 PM	3:00 PM	3:00 PM	6:00 PM	4:00 PM	4:00 PM	5:00 PM	12:00 PM	2:00 PM		1:00 PM		4:00 PM		
Volume	6	5	15	42	308	694	399	65	8	2	0	1	0	1438		

15th Percentile:	33.0 MPH	Average Speed:	37.0 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	37.0 MPH	10 MPH Pace:	32 to 41 MPH	Number of Vehicles > 35 MPH:	11208
85th Percentile:	41.0 MPH	Number in Pace:	13043	Percent of Vehicles > 35 MPH:	65.2%
95th Percentile:	44.0 MPH	Percent in Pace:	75.9%		

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-C (Speed)

Count Date
Thursday, October 24, 2024

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	4	7	15	3	2	1	0	0	0	32	45.0	41.6
1:00 AM	0	0	0	0	1	4	6	5	1	0	0	0	0	17	46.2	42.0
2:00 AM	0	0	0	1	1	2	2	5	0	0	0	0	0	11	48.0	41.0
3:00 AM	0	0	0	1	0	5	9	8	1	1	0	0	0	25	46.0	42.8
4:00 AM	0	0	0	0	2	10	12	5	0	1	0	0	0	30	46.0	41.1
5:00 AM	0	0	0	1	10	48	44	15	2	0	0	0	0	120	44.0	39.8
6:00 AM	1	0	7	17	57	106	85	9	3	0	0	0	0	285	42.0	36.9
7:00 AM	1	1	8	20	101	217	103	26	4	3	0	0	0	484	42.0	36.9
8:00 AM	0	1	4	20	78	197	158	51	11	1	0	0	0	521	44.0	38.5
9:00 AM	5	1	6	28	84	146	113	34	5	0	1	0	0	423	43.0	37.2
10:00 AM	0	0	0	2	47	148	165	35	4	0	0	0	0	401	44.0	39.4
11:00 AM	0	0	0	5	53	183	151	43	8	1	0	0	0	444	44.0	39.2
12:00 PM	1	0	9	16	72	173	177	45	8	0	0	0	0	501	44.0	38.6
1:00 PM	2	0	0	9	76	206	203	63	5	2	0	0	0	566	44.0	39.1
2:00 PM	0	0	2	11	74	271	243	55	7	2	0	0	0	665	44.0	39.1
3:00 PM	1	2	8	21	91	246	243	55	8	1	0	0	0	676	43.0	38.6
4:00 PM	0	1	7	17	63	235	236	66	5	1	0	0	0	631	44.0	39.1
5:00 PM	0	1	10	19	86	303	226	39	4	0	0	0	0	688	43.0	38.2
6:00 PM	0	0	1	21	86	227	134	14	2	0	0	0	0	485	42.0	37.4
7:00 PM	0	0	0	13	64	177	103	23	5	0	0	0	0	385	43.0	38.1
8:00 PM	0	0	0	1	27	90	102	33	3	0	0	0	0	256	44.0	39.9
9:00 PM	0	0	0	0	12	54	84	26	4	0	0	0	0	180	45.0	40.8
10:00 PM	0	0	0	1	10	52	77	20	7	0	0	0	0	167	45.0	40.6
11:00 PM	0	0	0	2	7	32	32	12	5	0	0	0	0	90	46.0	40.4
Total	11	7	62	226	1106	3139	2723	690	104	14	1	0	0	8083	43.0	38.6
Percent	0.14%	0.09%	0.77%	2.80%	13.68%	38.83%	33.69%	8.54%	1.29%	0.17%	0.01%	0.00%	0.00%			
AM Peak	9:00 AM	7:00 AM	7:00 AM	9:00 AM	7:00 AM	7:00 AM	10:00 AM	8:00 AM	8:00 AM	7:00 AM	9:00 AM			8:00 AM		
Volume	5	1	8	28	101	217	165	51	11	3	1	0	0	521		
PM Peak	1:00 PM	3:00 PM	5:00 PM	3:00 PM	3:00 PM	5:00 PM	2:00 PM	4:00 PM	12:00 PM	1:00 PM				5:00 PM		
Volume	2	2	10	21	91	303	243	66	8	2	0	0	0	688		

15th Percentile:	34.0 MPH	Average Speed:	38.6 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	39.0 MPH	10 MPH Pace:	35 to 44 MPH	Number of Vehicles > 35 MPH:	6179
85th Percentile:	43.0 MPH	Number in Pace:	5862	Percent of Vehicles > 35 MPH:	76.4%
95th Percentile:	46.0 MPH	Percent in Pace:	72.5%		

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-C (Speed)

Count Date
Thursday, October 24, 2024

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	1	11	4	2	1	0	0	0	0	19	44.2	39.7
1:00 AM	0	0	0	1	2	5	3	0	0	0	0	0	0	11	40.0	36.5
2:00 AM	0	0	0	1	2	8	2	3	0	0	0	0	0	16	44.0	38.6
3:00 AM	0	0	0	1	5	15	8	3	0	0	0	0	0	32	43.0	38.1
4:00 AM	0	0	0	1	23	59	24	4	0	0	0	0	0	111	41.0	37.3
5:00 AM	0	0	1	2	67	206	68	4	0	0	0	0	0	348	40.0	37.0
6:00 AM	0	1	5	11	181	340	75	8	3	0	0	0	0	624	39.0	35.9
7:00 AM	2	2	3	16	210	324	114	9	0	0	0	0	0	680	40.0	36.0
8:00 AM	5	4	3	19	167	319	120	21	1	0	0	0	0	659	40.0	36.3
9:00 AM	1	2	0	12	155	288	96	9	0	1	0	0	0	564	40.0	36.4
10:00 AM	3	2	2	20	123	245	74	10	1	0	0	0	0	480	40.0	36.1
11:00 AM	1	1	6	23	157	298	83	13	1	0	0	0	0	583	40.0	36.0
12:00 PM	1	5	0	20	184	272	99	5	0	0	0	0	0	586	40.0	35.7
1:00 PM	6	1	5	27	144	282	103	8	1	0	0	0	0	577	40.0	35.9
2:00 PM	2	7	4	17	158	311	111	15	3	1	0	0	0	629	40.0	36.3
3:00 PM	2	3	0	7	140	355	139	12	0	0	0	0	0	658	40.0	36.8
4:00 PM	1	7	3	18	187	370	152	8	1	0	0	0	0	747	40.0	36.3
5:00 PM	4	3	4	11	177	372	111	11	0	0	0	0	0	693	40.0	36.2
6:00 PM	0	2	4	13	165	266	89	6	0	1	0	0	0	546	40.0	36.1
7:00 PM	3	4	1	13	112	183	43	6	2	0	0	0	0	367	39.0	35.5
8:00 PM	1	0	0	11	87	125	45	2	0	0	0	0	0	271	40.0	35.8
9:00 PM	0	0	2	7	46	90	33	2	0	0	0	0	0	180	40.0	36.1
10:00 PM	0	0	0	4	20	68	23	3	2	0	0	0	0	120	40.2	37.2
11:00 PM	0	1	0	0	19	33	18	3	0	1	0	0	0	75	41.9	37.3
Total	32	45	43	255	2532	4845	1637	167	16	4	0	0	0	9576	40.0	36.2
Percent	0.33%	0.47%	0.45%	2.66%	26.44%	50.60%	17.09%	1.74%	0.17%	0.04%	0.00%	0.00%	0.00%			
AM Peak	8:00 AM	8:00 AM	11:00 AM	11:00 AM	7:00 AM	6:00 AM	8:00 AM	8:00 AM	6:00 AM	9:00 AM				7:00 AM		
Volume	5	4	6	23	210	340	120	21	3	1	0	0	0	680		
PM Peak	1:00 PM	2:00 PM	1:00 PM	1:00 PM	4:00 PM	5:00 PM	4:00 PM	2:00 PM	2:00 PM	2:00 PM				4:00 PM		
Volume	6	7	5	27	187	372	152	15	3	1	0	0	0	747		

15th Percentile:	33.0 MPH	Average Speed:	36.2 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	36.0 MPH	10 MPH Pace:	32 to 41 MPH	Number of Vehicles > 35 MPH:	5707
85th Percentile:	40.0 MPH	Number in Pace:	8001	Percent of Vehicles > 35 MPH:	59.6%
95th Percentile:	42.0 MPH	Percent in Pace:	83.6%		

Route 62
north of High Street
City, State: Wilmington, MA
Client: Nitsch/ B. Zimolka
Site Code: 15428

PRECISION DATA INDUSTRIES, LLC

PDI File #: 240268 ATR-C (Speed)

Count Date
Thursday, October 24, 2024

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	5	18	19	5	3	1	0	0	0	51	45.0	40.9
1:00 AM	0	0	0	1	3	9	9	5	1	0	0	0	0	28	45.0	39.9
2:00 AM	0	0	0	2	3	10	4	8	0	0	0	0	0	27	46.1	39.6
3:00 AM	0	0	0	2	5	20	17	11	1	1	0	0	0	57	45.0	40.1
4:00 AM	0	0	0	1	25	69	36	9	0	1	0	0	0	141	43.0	38.1
5:00 AM	0	0	1	3	77	254	112	19	2	0	0	0	0	468	41.0	37.7
6:00 AM	1	1	12	28	238	446	160	17	6	0	0	0	0	909	40.0	36.2
7:00 AM	3	3	11	36	311	541	217	35	4	3	0	0	0	1164	41.0	36.4
8:00 AM	5	5	7	39	245	516	278	72	12	1	0	0	0	1180	42.0	37.3
9:00 AM	6	3	6	40	239	434	209	43	5	1	1	0	0	987	41.0	36.7
10:00 AM	3	2	2	22	170	393	239	45	5	0	0	0	0	881	42.0	37.6
11:00 AM	1	1	6	28	210	481	234	56	9	1	0	0	0	1027	42.0	37.4
12:00 PM	2	5	9	36	256	445	276	50	8	0	0	0	0	1087	42.0	37.1
1:00 PM	8	1	5	36	220	488	306	71	6	2	0	0	0	1143	42.0	37.5
2:00 PM	2	7	6	28	232	582	354	70	10	3	0	0	0	1294	42.0	37.7
3:00 PM	3	5	8	28	231	601	382	67	8	1	0	0	0	1334	42.0	37.7
4:00 PM	1	8	10	35	250	605	388	74	6	1	0	0	0	1378	42.0	37.6
5:00 PM	4	4	14	30	263	675	337	50	4	0	0	0	0	1381	41.0	37.2
6:00 PM	0	2	5	34	251	493	223	20	2	1	0	0	0	1031	41.0	36.7
7:00 PM	3	4	1	26	176	360	146	29	7	0	0	0	0	752	41.0	36.8
8:00 PM	1	0	0	12	114	215	147	35	3	0	0	0	0	527	43.0	37.8
9:00 PM	0	0	2	7	58	144	117	28	4	0	0	0	0	360	43.0	38.5
10:00 PM	0	0	0	5	30	120	100	23	9	0	0	0	0	287	43.0	39.2
11:00 PM	0	1	0	2	26	65	50	15	5	1	0	0	0	165	44.0	39.0
Total	43	52	105	481	3638	7984	4360	857	120	18	1	0	0	17659	42.0	37.3
Percent	0.24%	0.29%	0.59%	2.72%	20.60%	45.21%	24.69%	4.85%	0.68%	0.10%	0.01%	0.00%	0.00%			
AM Peak	9:00 AM	8:00 AM	6:00 AM	9:00 AM	7:00 AM	7:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	9:00 AM			8:00 AM		
Volume	6	5	12	40	311	541	278	72	12	3	1	0	0	1180		
PM Peak	1:00 PM	4:00 PM	5:00 PM	12:00 PM	5:00 PM	5:00 PM	4:00 PM	4:00 PM	2:00 PM	2:00 PM				5:00 PM		
Volume	8	8	14	36	263	675	388	74	10	3	0	0	0	1381		

15th Percentile:	33.0 MPH	Average Speed:	37.3 MPH	Posted Speed Limit:	35 MPH
50th Percentile:	37.0 MPH	10 MPH Pace:	33 to 42 MPH	Number of Vehicles > 35 MPH:	11886
85th Percentile:	42.0 MPH	Number in Pace:	13384	Percent of Vehicles > 35 MPH:	67.3%
95th Percentile:	45.0 MPH	Percent in Pace:	75.8%		

Appendix B: MassDOT's 2023 Weekday Seasonal Adjustment Factors

Massachusetts Highway Department
Statewide Traffic Data Collection
2023 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.23	1.14	1.11	1.06	1.01	0.96	0.93	0.91	1.00	0.97	1.04	1.08	0.77
R3	1.11	1.07	1.02	0.95	0.90	0.89	0.87	0.87	0.92	0.89	0.95	0.99	0.98
R4-R7	1.19	1.16	1.10	1.00	0.92	0.91	0.87	0.88	0.93	0.93	1.01	1.06	0.98
U1-Boston	1.07	1.05	1.00	0.95	0.93	0.92	0.92	0.92	0.94	0.93	0.96	0.99	0.94
U1-Essex	1.14	1.11	1.06	1.00	0.95	0.91	0.87	0.87	0.94	0.95	1.00	1.03	0.96
U1-Southeast	1.12	1.09	1.04	0.96	0.91	0.87	0.84	0.86	0.92	0.94	0.98	1.03	0.96
U1-West	1.05	1.02	0.98	0.96	0.94	0.93	0.94	0.94	0.95	0.92	0.96	0.98	0.81
U1-Worcester	1.06	1.04	0.97	0.93	0.92	0.90	0.92	0.92	0.93	0.92	0.94	0.97	0.88
U3	1.05	1.02	0.96	0.92	0.89	0.89	0.91	0.92	0.91	0.90	0.94	0.96	0.98
U4-U7	1.02	1.00	0.94	0.89	0.86	0.88	0.91	0.92	0.89	0.88	0.91	0.91	0.99
UR2	1.05	1.01	0.97	0.92	0.90	0.90	0.91	0.91	0.91	0.90	0.94	0.97	0.98
Rec - East	1.17	1.16	1.09	1.04	0.92	0.84	0.76	0.80	0.93	1.00	1.03	1.06	0.98
Rec - West	1.46	1.38	1.32	1.06	0.94	0.79	0.59	0.69	0.97	0.99	1.18	1.28	0.98

Round off:
0-999 = 10
>1000 = 100

U = Urban
R = Rural

1 - Interstate
2 - Freeway and Expressway
3 - Other Principal Arterial
4 - Minor Arterial
5 - Major Collector
6 - Minor Collector
7 - Local Road and Street

UR2 Group - Combination of Urban Freeways and Expressways and Rural Freeways and Expressways.

Recreational - East Group - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

Recreational - West Group - Continuous Stations 2 and 189 including stations 1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113, 1114,1116,2196,2197 and 2198.

Appendix C: Crash Rate Worksheets

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wilmington, MA COUNT DATE : Oct-24

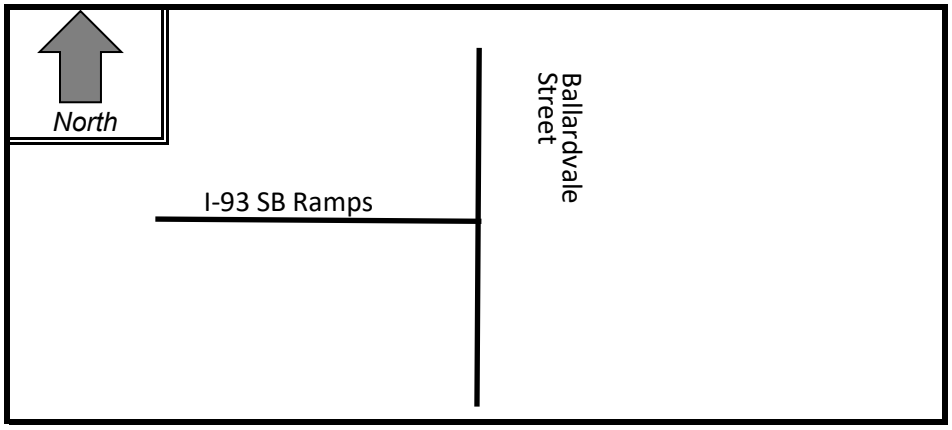
DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X]

~ INTERSECTION DATA ~

MAJOR STREET : Ballardvale Street

MINOR STREET(S) : I-93 Southbound Ramps

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB			
PEAK HOURLY VOLUMES (AM/(PM)) :	267	1,218	293			**1,778**

" K " FACTOR : **0.118** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **15,132**

TOTAL # OF CRASHES : 9 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **1.80**

CRASH RATE CALCULATION : **0.33** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : District 4 [Statewide] Average: 0.73 [0.78] Crashes per Million Entering Vehicles (MEV).

Project Title & Date: North Intermediate School - Nitsch Project #15428

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wilmington, MA COUNT DATE : Oct-24

DISTRICT : 4 UNSIGNALIZED : X SIGNALIZED :

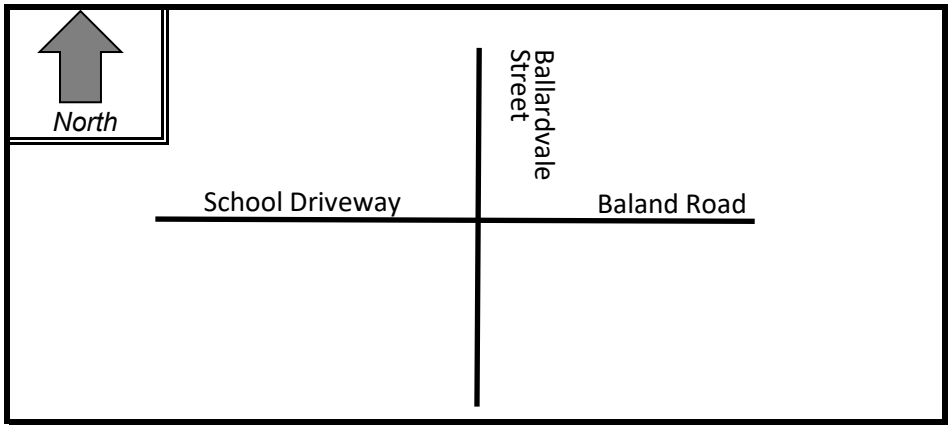
~ INTERSECTION DATA ~

MAJOR STREET : Ballardvale Street

MINOR STREET(S) : Baland Road

School Driveway

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	285	578	60	5		**928**

" K " FACTOR : **0.118** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **7,898**

TOTAL # OF CRASHES : 2 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.40**

CRASH RATE CALCULATION : **0.14** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : District 4 [Statewide] Average: 0.57 [0.57] Crashes per Million Entering Vehicles (MEV).

Project Title & Date: North Intermediate School - Nitsch Project #15428

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wilmington, MA COUNT DATE : Oct-24

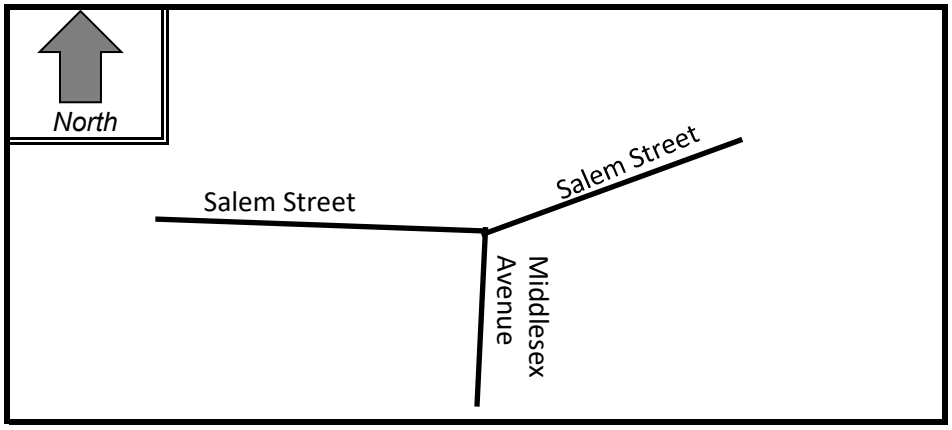
DISTRICT : 4 UNSIGNALIZED : X SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Salem Street

MINOR STREET(S) : Middlesex Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	565	509	594			**1,668**

" K " FACTOR : **0.094** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **17,840**

TOTAL # OF CRASHES : 8 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **1.60**

CRASH RATE CALCULATION : **0.25** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : District 4 [Statewide] Average: 0.57 [0.57] Crashes per Million Entering Vehicles (MEV).

Project Title & Date: North Intermediate School - Nitsch Project #15428

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wilmington, MA COUNT DATE : Oct-24

DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X]

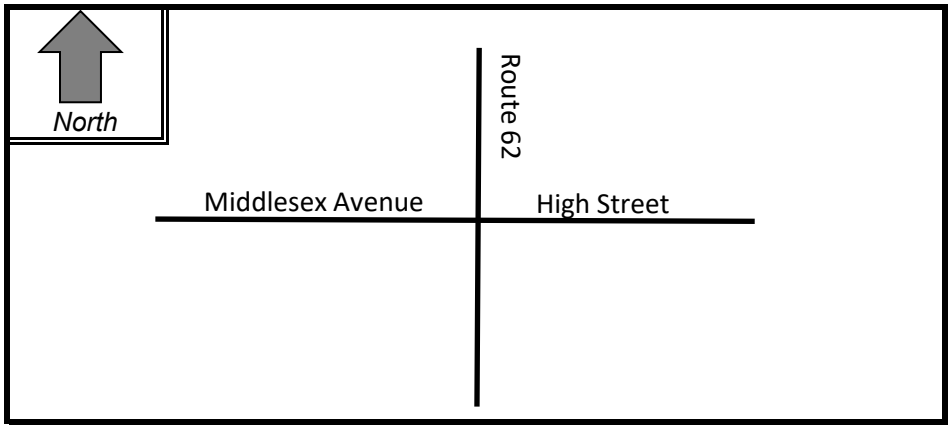
~ INTERSECTION DATA ~

MAJOR STREET : Ballardvale Street

MINOR STREET(S) : Middlesex Avenue

High Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/(PM)) :	605	645	507	185		**1,942**

" K " FACTOR :	**0.084**	INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME :	**23,119**

TOTAL # OF CRASHES :	26	# OF YEARS :	5	AVERAGE # OF CRASHES PER YEAR (**A**) :	**5.20**

CRASH RATE CALCULATION : **0.62** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : District 4 [Statewide] Average: 0.73 [0.78] Crashes per Million Entering Vehicles (MEV).

Project Title & Date: North Intermediate School - Nitsch Project #15428

Appendix D: Additional Developments' Traffic Studies

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

PRINCIPALS
Robert J. Michaud, P.E.
Daniel J. Mills, P.E., PTOE

M E M O R A N D U M

DATE: November 8, 2023

TO: Christopher Neelon
Ciminelli Real Estate Corp.
Managing Director – Massachusetts Investments
800 Hingham Street, Ste. 31
Rockland, MA 02370

FROM: Robert J. Michaud, P.E. – Managing Principal
Daniel A. Dumais, P.E. – Senior Project Manager

RE: **Proposed Life Science/Biomanufacturing Facility**
181-187 Ballardvale Street, Wilmington, Massachusetts

MDM Transportation Consultants, Inc. (MDM) has conducted this traffic impact assessment (TIA) for a proposed facility to be located at 181-187 Ballardvale Street in Wilmington, Massachusetts. The location of the site relative to the adjacent roadway network is shown in **Figure 1.** This TIA provides a primary summary of the baseline traffic conditions at the Site and adjacent roadways/ intersections, evaluates existing and projected trip generation, quantifies incremental traffic impacts of the Site development on area roadways, and evaluates safety-related conditions at key study locations that provide access to the Site.

Key findings of the assessment are as follows:

- *Baseline Traffic Volumes.* Ballardvale Street carries approximately 19,956 vehicles per day (vpd) on weekdays. Peak hour traffic flow on Ballardvale Street ranges from approximately 935 to 1,060 vehicles per hour (vph) which represents 6 to 7 percent of daily traffic flow. The traffic flow on Ballardvale Street is skewed heavily in the northbound direction during the weekday morning peak hour and southbound during the weekday evening peak hour. The travel patterns are consistent with employee patterns for the commercial uses along that section of Ballardvale Street.

- *Safety Review.* Based on extensive review of MassDOT crash data, the study intersections all experienced crash rates well below the District 4 average and none of the intersection are listed as HSIP locations. No immediate safety countermeasures are warranted based on the crash history at the remaining study intersections.

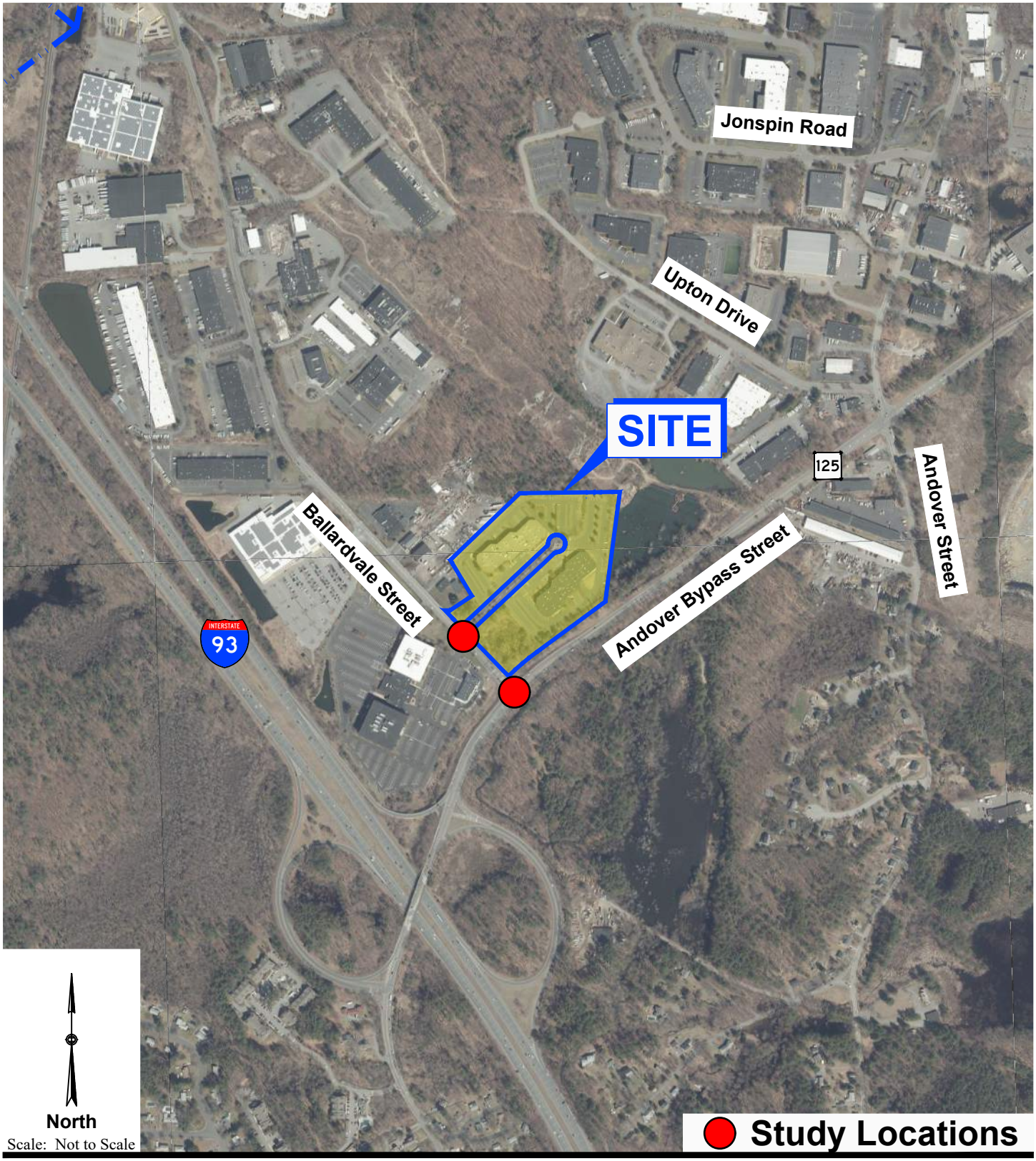


Figure 1

Site Location

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

Date: October 2023
Dwg No. 1325 TIS.dwg
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- *Traffic Generation*. Projected trip generation for the Site based on industry-standard trip rates the proposed development is estimated to generate approximately 72 vehicle trips (60 entering and 12 exiting) during the weekday morning peak hour and 73 vehicle trips (17 entering and 56 exiting) during the weekday evening peak hour. On a daily basis, the proposed development is estimated to generate approximately 512 vehicle trips.

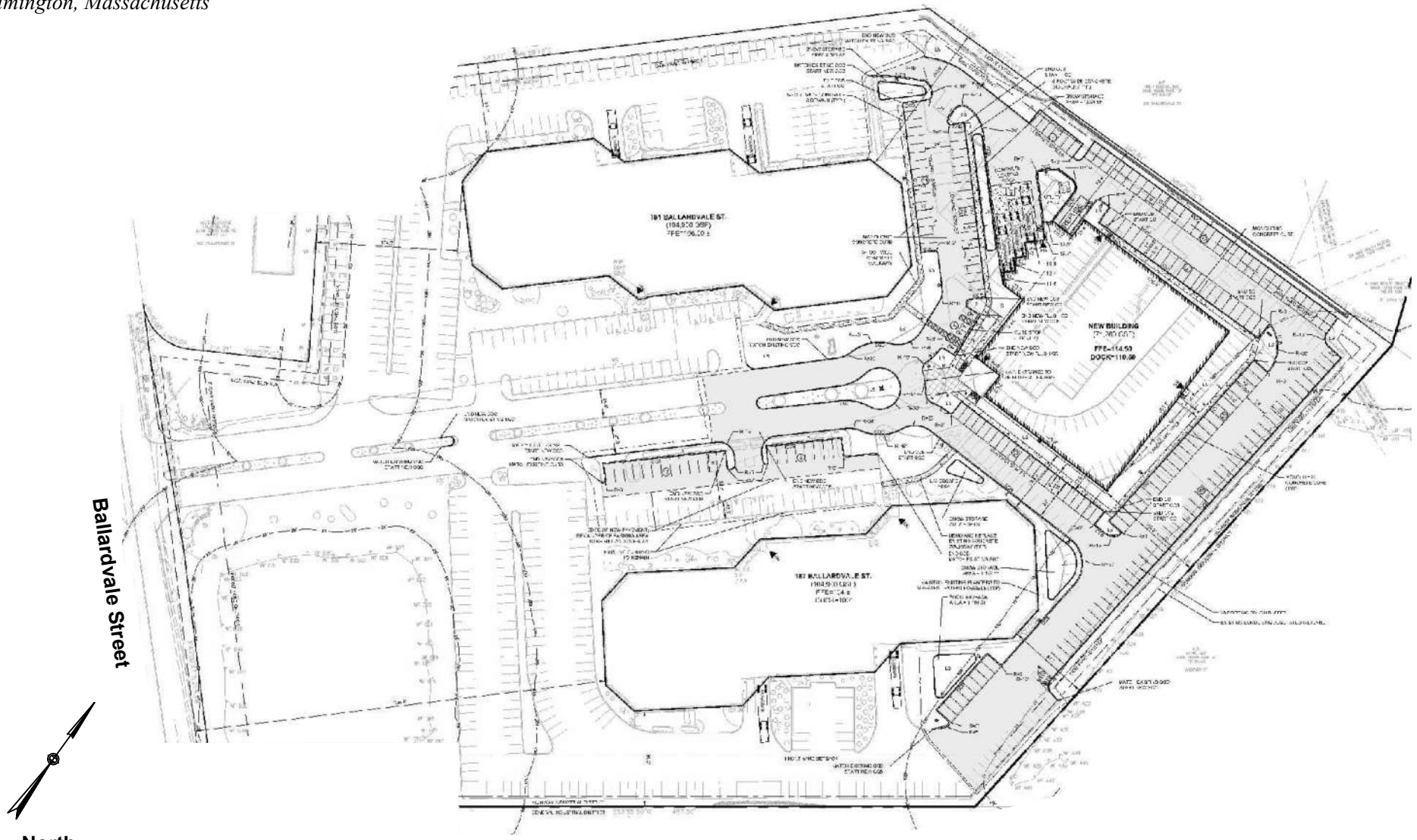
- *Nominal Impact.* The project at full buildout will result in less than 5% increase in traffic along Ballardvale Street and the gateway intersection at Route 125. The increase in trips due to the project are not expected to alter operating conditions compared to No-Build conditions with less than 2 new total vehicle trip or less every minute.

In summary, MDM finds that incremental traffic associated with the proposed development is not expected to materially impact operating conditions at the study intersections. Implementation of access/egress improvements, proposed pedestrian improvements, and a TDM program as outlined under *Recommendations and Conclusions* will establish a framework of minimizing Site traffic impacts.

PROJECT DESCRIPTION

The site consists of approximately 5.38± acres of land located at the northeastern corner of the Route 125 at Ballardvale intersection. The existing Site includes the Ballardvale Technology Center with includes two 104,900 sf office/manufacturing buildings. Access/egress is via a full access driveway along Ballardvale Street.

Under the proposed Site programming, the proposed facility will provide a total building area of approximately 71,300 square feet (sf) of life science/biomanufacturing space use within an expansion of the existing office park. Access/egress to the site will remain via a single driveway connection to Ballardvale Street. The preliminary site layout prepared by HighPoint Engineering, Inc. is presented in **Figure 2**.



Scale: Not to Scale

Source: High Point Engineering, Inc.

Figure 2

Preliminary Site Layout

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

Date: October 2023
Dwg No. 1325 TIS.dwg
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BASELINE TRAFFIC & SAFETY CHARATERISTICS

An overview of roadway classification and geometric characteristics is provided below for the adjacent study roadway.

Ballardvale Street

Ballardvale Street is generally a north-south roadway under local jurisdiction and is classified by the Massachusetts Department of Transportation (MassDOT) as an Urban Minor Arterial roadway. The roadway becomes River Street to the north before connecting to Andover Street in Andover. To the south of the site, Ballardvale Street connects to Route 125 before becoming Middlesex Avenue and providing a connection to Route 62. Adjacent to the site, Ballardvale Street provides a single travel lane in the northbound direction and two travel lanes in the southbound direction, separated by a double yellow centerline. Additional turn lanes are provided at its major intersections. No pedestrian or bicycle facilities are provided withing the study area. Land use along Ballardvale Street in the immediate study area are primarily commercial uses including industrial and office uses in addition to a Target and retail plaza.

Baseline Traffic Data

Daily Traffic Counts

Daily traffic volumes along Ballardvale Street in the site vicinity are summarized in **Table 1** and included in the **Attachments**.

TABLE 1
ROADWAY TRAFFIC-VOLUME SUMMARY – BALLARDVALE STREET

Time Period	Daily Volume (vpd)[1]	Percent Daily Traffic[2]	Peak Hour Volume (vph)[3]	Peak Flow Direction[4]	Peak Hour Directional Volume (vph)
Weekday Morning Peak Hour	19,956	6%	1,251	75% NB	935
Weekday Evening Peak Hour	19,956	7%	1,434	74% SB	1,060

[1]Two-way daily traffic expressed in vehicles per day.
[2]The percent of daily traffic that occurs during the peak hour.
[3]Two-way peak-hour volume expressed in vehicles per hour.
[4]NB = Northbound, SB = Southbound

As summarized in **Table 1**, Ballardvale Street carries approximately 19,956 vehicles per day (vpd) on weekdays. Peak hour traffic flow on Ballardvale Street ranges from approximately 935 to 1,060 vehicles per hour (vph) which represents 6 to 7 percent of daily traffic flow. The traffic flow on Ballardvale Street is skewed heavily in the northbound direction during the weekday morning peak hour and southbound during the weekday evening peak hour. The travel patterns are consistent with employee patterns for the commercial uses along that section of Ballardvale Street.

Existing Trip Generation Characteristics

Observed trip generation for the Ballardvale Technology Center (181-187 Ballardvale Street) has been determined based on turning movement counts conducted at the site driveway along Ballardvale Street in November 2023. **Table 2** presents the existing trip generation characteristics of the Center during the study periods.

TABLE 2
EXISTING TRIP GENERATION – BALLARDVALE TECHNOLOGY CENTER

Period/Direction	OBSERVED TRIPS[1]
Weekday Morning Peak Hour:	
Entering	77
Exiting	4
Total	81
Weekday Evening Peak Hour:	
Entering	11
Exiting	63
Total	74
Weekday Daily (24 hours)	610

[1]Based on turning movement counts conducted at the Ballardvale Technology Center in November 2023.

As summarized in **Table 2**, the existing Ballardvale Technology Center at 181-187 Ballardvale Street is currently fully occupied and observed to generate approximately 81 vehicle trips (77 entering and 4 exiting) during the weekday morning peak hour and 74 vehicle trips (11 entering and 63 exiting) during the weekday evening peak hour. On a daily basis, the existing center was observed to generate 610 vehicle trips on a weekday

Peak Hour Traffic

Traffic volume data were collected at the study intersections in November 2023 during the weekday morning (7:00 AM - 9:00 AM) and weekday evening (4:00 PM – 6:00 PM) periods to coincide with peak traffic activity of the proposed use and the adjacent streets. Review of MassDOT permanent count station data indicates that November an average traffic month. Therefore, then traffic volumes represent an average season analysis and no seasonal adjustment factor is needed. The weekday morning and weekday evening peak hour traffic volumes for the study intersections are shown in **Figure 3**. Traffic count data, MassDOT permanent count station data, and pandemic adjustment calculations are provided in the **Attachments.**

SIGHT LINE EVALUATION

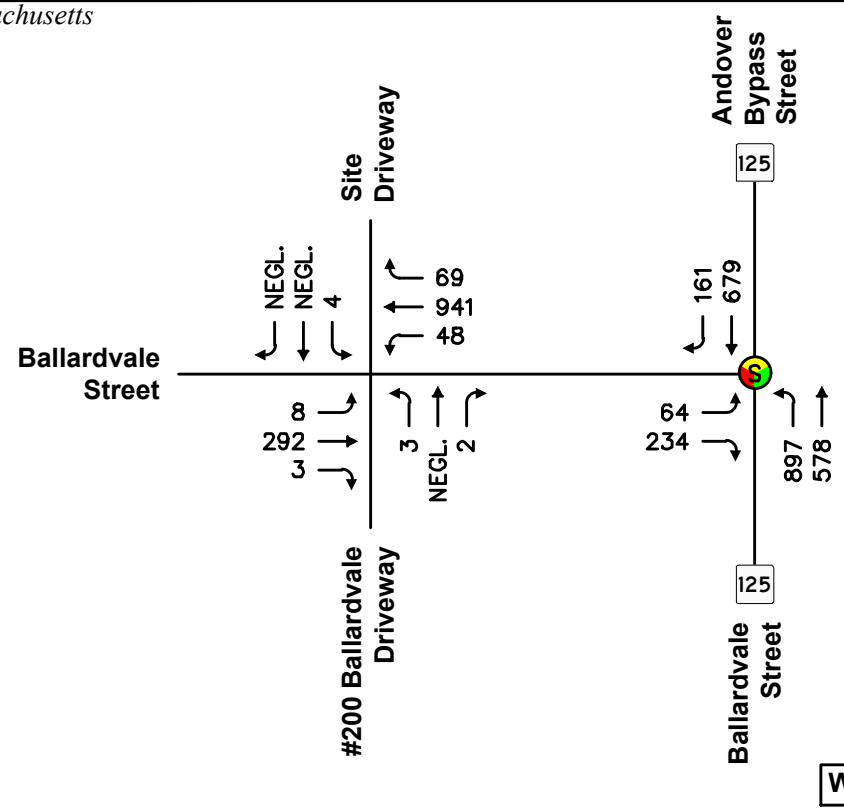
An evaluation of sight lines was conducted at the existing site driveway to ensure that minimum recommended sight lines are available to safely exit onto Ballardvale Street. The evaluation documents existing sight lines for vehicles as they relate to Ballardvale Street with comparison to recommended guidelines for the regulatory speed limit.

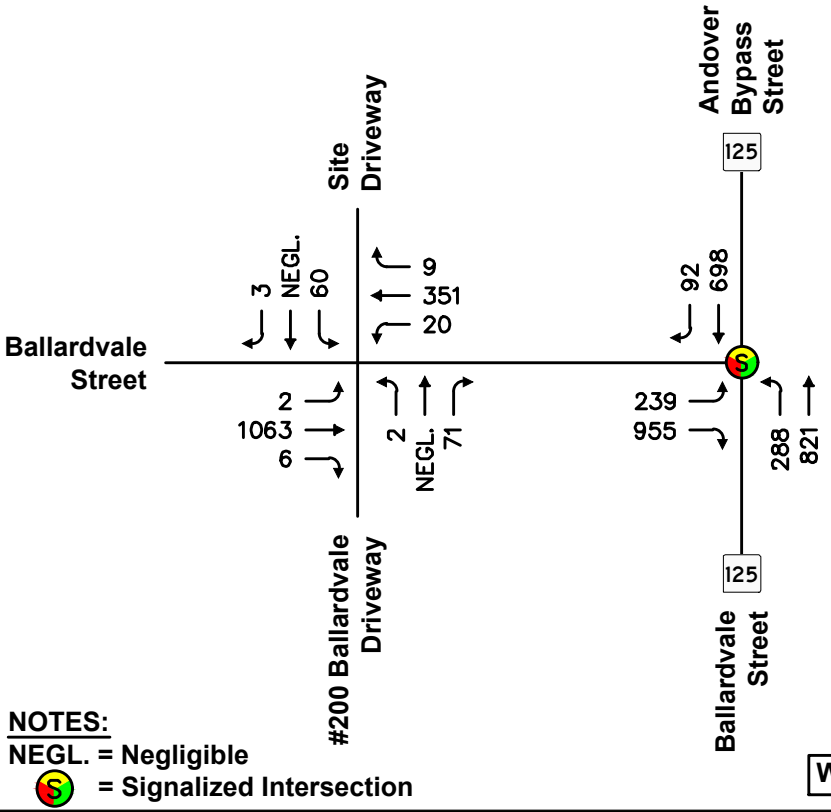
The American Association of State Highway and Transportation Officials' (AASHTO) standards[1] reference two types of sight distance which are relevant at the proposed site driveway intersection on Ballardvale Street: stopping sight distance (SSD) and intersection sight distance (ISD). Sight lines for critical vehicle movements at the site driveway intersection with Ballardvale Street were compared to minimum SSD and ISD for the regulatory speed limit in the Site vicinity.

Stopping Sight Distance

Sight distance is the length of roadway visible to the motorist to a fixed object. The minimum sight distance available on a roadway should be sufficiently long enough to enable a below-average operator, traveling at or near a regulatory speed limit, to stop safely before reaching a stationary object in its path, in this case, a vehicle exiting onto Ballardvale Street. The SSD criteria are defined by AASHTO based on design and operating speeds, anticipated driver behavior and vehicle performance, as well as physical roadway conditions. SSD includes the length of roadway traveled during the perception and reaction time of a driver to an object, and the distance traveled during brake application on wet level pavement. Adjustment factors are applied to account for roadway grades when applicable.

[1] *A policy on Geometric Design of Highways and Streets*, American Association of State Highway and Transportation Officials (AASHTO), 2018.







North
Scale: Not to Scale

NOTES:
NEGL. = Negligible
S = Signalized Intersection

Figure 3

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

2023 Baseline Conditions
Weekday Peak Hour Volumes

Date: October 2023
Dwg No. 1325 TIS.dwg
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SSD was estimated in the field using AASHTO standards for driver's eye (3.5 feet) and object height equivalent to the taillight height of a passenger car (2.0 feet) for the northbound and southbound Ballardvale Street approaches to the Site driveway. **Table 3** presents a summary of the available SSD as they relate to Ballardvale Street and AASHTO's recommended SSD.

TABLE 3
STOPPING SIGHT DISTANCE SUMMARY
BALLARDVALE STREET APPROACHES TO SITE DRIVEWAY

Approach/ Travel Direction	Available SSD	AASHTO Recommended[1] Regulatory Speed Limit[2]
Northbound	450± Feet	305 Feet
Southbound	>500 Feet	305 Feet

[1]Recommended sight distance based on AASHTO, A Policy on Geometric Design of Highways and Streets. Based on driver height of eye of 3.5 feet to object height of 2.0 feet.
[2] Regulatory speed limit: Ballardvale Street = 40 mph

As summarized in **Table 3,** analysis results indicate that the available sight lines exceed AASHTO's recommended SSD criteria for the northbound and southbound travel directions along Ballardvale Street based on the regulatory (posted) speed limit.

Intersection Sight Distance

Clear sight lines provide sufficient sight distance for a stopped driver on a minor-road approach to depart from the intersection and enter or cross the major road. As stated under AASHTO's Intersection Sight Distance (ISD) considerations, "…*If the available sight distance for an entering …vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to avoid collisions…To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road*." AASHTO's ISD criteria are defined into several "cases". For the unsignalized Site driveway location, which is under STOP sign control, the ISD in question relates to the ability to turn left or turn right from the proposed driveway.

Available ISD was estimated in the field using AASHTO standards for driver's eye (3.5 feet), object height (3.5 feet) and decision point (8 feet from the edge of the travel way) for the northbound and southbound directions along Ballardvale Street. **Table 4** presents a summary of the available ISD for the departure from the Site driveway and AASHTO's minimum recommended ISD.

TABLE 4
INTERSECTION SIGHT DISTANCE SUMMARY
SITE DRIVEWAY DEPARTURES TO BALLARDVALE STREET

Approach/ Travel Direction	Available ISD	AASHTO Minimum[1] Regulatory Speed Limit[2]	AASHTO Ideal[1] Regulatory Speed Limit[2]
Looking North	>500 Feet	305 Feet	445 Feet
Looking South	450± Feet	305 Feet	385 Feet

[1] Recommended sight distance based on AASHTO, A Policy on Geometric Design of Highways and Streets. Based on driver height of eye of 3.5 feet to object height of 2.0 feet. Minimum value as noted represents SSD per AASHTO guidance.
[2] Regulatory speed limit: Ballardvale Street = 40 mph

The results of the ISD analysis presented in **Table 4** indicate that the available sight lines looking from the Site driveways onto Ballardvale Street will exceed the recommended sight line requirements from AASHTO. MDM recommends that any new plantings (shrubs, bushes) or physical landscape features to be located within the driveway sight lines should also be maintained at a height of 2 feet or less above the adjacent existing roadway grade to ensure unobstructed lines of sight.

Intersection Crash History

In order to identify crash trends and safety characteristics for study area intersections, crash data were obtained from MassDOT for the Town of Wilmington for the five-year period covering 2018-2022 (the most recent full year of data currently available from MassDOT). A summary of the crash data with crash rates for the study intersections with reported crashes is provided in **Table 5** with detailed data provided in the **Attachments.**

Crash rates were calculated for the study intersections as reported in **Table 5**. These rates quantify the number of crashes per million entering vehicles. MassDOT has determined the official District 4 (which includes the Town of Wilmington) crash rate to be 0.73 for signalized intersections and 0.57 for unsignalized intersections. This rate represents MassDOT's "average" crash experience for District 4 communities and serves as a basis for comparing reported crash rates for the study intersections. Where calculated crash rates notably exceed the district average, some form of safety countermeasures may be warranted. A review of Highway Safety Improvement Project (HSIP) locations was also conducted.

TABLE 5
INTERSECTION CRASH SUMMARY
2018 THROUGH 2022[1]

Data Category	Route 125 at Ballardvale Street	Ballardvale Street at 181-187 and 200 Driveway
Traffic Control	Signalized	Unsignalized
Crash Rate[2]	**0.40**	**0.28**
MHD District 4 Avg[3]	0.73	0.57
Year:		
2018	9	1
2019	4	1
2020	2	0
2021	4	3
2022	6	4
Total	**25**	**9**
Type:		
Angle	7	4
Rear-End	11	5
Head-On	0	0
Sideswipe	7	0
Single-Vehicle	0	0
Unknown	0	0
Severity:		
P. Damage Only	21	7
Personal Injury	4	2
Fatality	0	0
Not Reported	0	0
Conditions:		
Dry	23	8
Wet	1	1
Snow	0	0
Unknown	1	0
Time:		
7:00 to 9:00 AM	3	1
4:00 to 6:00 PM	3	3
Rest of Day	19	5

[1] Source: MassDOT Crash Database
[2] Crashes per million entering vehicles
[3] District 4 Average Crash Rate

As summarized in **Table 5**:

- *Route 125 at Ballardvale Street*: A total of twenty-five (25) crashes were reported for the Route 125 signalized intersection with Ballardvale Street. The resulting crash rate of 0.40 is lower than the District 4 average. The reported crashes included fourteen (14) angle/sideswipe type collisions and eleven (11) rear-end type collisions. Eighty-four percent (84%) of the crashes resulted in property-damage only, generally indicative of low-speed crashes. Ninety-two percent (92%) of the crashes occurred under dry roadway conditions, and seventy-six percent (76%) occurred outside of peak travel times. No fatalities or pedestrian-related incidents were reported during the study period.

- *Ballardvale Street at 181-187 and 200 Ballardvale Street Driveways*: A total of nine (9) crashes were reported for the unsignalized Site Driveway intersection with Ballardvale Street. The resulting crash rate of 0.28 is lower than the District 4 average. The reported crashes included four (4) angle/sideswipe type collisions and five (5) rear-end type collisions. Seventy-eight percent (78%) of the crashes resulted in property-damage only, eighty-nine percent (89%) occurred under dry roadway conditions, and fifty-six percent (56%) occurred outside of peak travel times. No fatalities or pedestrian-related incidents were reported during the study period.

In summary, based on extensive review of MassDOT crash data, the study intersections, experienced crash rates below the District 4 averages and none of the intersection are listed as HSIP locations; therefore, no immediate safety countermeasures are warranted based on the crash history at the study intersections.

PROJECTED FUTURE TRAFFIC CONDITIONS

Evaluation of the proposed development impacts requires the establishment of a future baseline analysis condition. This section estimates future roadway and traffic conditions with and without the proposed development. For planning purposes, a seven-year planning horizon (year 2030) was selected consistent with standard industry practice.

To determine the impact of site-generated traffic volumes on the roadway network under future conditions, baseline traffic volumes in the study area were projected to a future year condition. Traffic volumes on the roadway network at that time, in the absence of the development (that is, the No-Build condition), includes existing traffic, new traffic due to general background traffic growth, and traffic related to specific developments by others that are currently under review at the local and/or state level. Consideration of these factors resulted in the development of No-Build traffic volumes. Anticipated site-generated traffic volumes were then superimposed upon these No-Build traffic-flow networks to develop future Build conditions.

The following sections provide an overview of future No-Build traffic volumes and Build traffic volumes.

Historical Area Growth

Nearby permanent count station data published by MassDOT indicates a 0.5 percent per year growth rate. For purposes of this evaluation, a 1.0 percent compounded annual growth rate was used (7.2 percent increase over a 7-year horizon). This growth rate is higher than historic rates and is also expected to account for any small fluctuation in hourly traffic as may occur from time to time in the study area and traffic associated with other potential small developments or vacancies in the area. MassDOT permanent count station data and background growth calculations are provided in the **Attachments**.

Background Development-Related Growth

Development of future No-Build traffic volumes also considers traffic generated through the study area from other specific area developments. Review of Massachusetts Environmental Policy Act (MEPA) files and correspondence with the Town of Wilmington Planning Staff indicates that there are several Site-specific development projects in the area that may increase baseline traffic at the study intersections:

- *36 & 38 Upton Drive*. The commercial development is currently proposed to include 19,800± sf of R&D space, 39,000± sf of light industrial space, 78,500± sf of manufacturing space and 125,300± sf of warehouse space to be located at 36 and 38 Upton Drive in Wilmington. The site-specific trip tracings were obtained from the TIA prepared by Greenman-Pedersen, Inc. in September 2022. Trip tracings for the proposed development are provided in the **Attachments**.

- *30 Upton Drive*. The commercial redevelopment is proposed to include 91,305± sf of warehouse space and 38,935± sf of office space to be located at 30 Upton Drive in Wilmington. The site-specific trip tracings were obtained from the TIA prepared by Greenman-Pedersen, Inc. in December 2021. Trip tracings for the proposed development are provided in the **Attachments**.

- *225 Andover Street*. The 27,395± sf self-storage facility is proposed to be located at 225 Andover Street in Wilmington. The site-specific trips associated with the development are proposed to minimal and accounted for in the conservative background growth.

- *100 Research Drive*. The proposed development includes the construction of approximately 20,000± sf of commercial space. A Traffic Impact Assessment prepared by Vanasse Hangen Brustlin Inc. (VHB) dated July 2019 compares the impact of three land use scenarios. Background trip tracings for the proposed development are based on the highest generating land use, LUC 180 Specialty Contractor, and are provided in the **Attachments**.

2030 No-Build Traffic Volume Networks

In summary, to account for future traffic growth in the study area future No-Build traffic volumes are developed by increasing the Baseline (2023) volumes by approximately 7.2 percent (1.0 percent compounded annually over 7 years). The resulting 2030 No-Build traffic volumes are displayed in **Figure 4**.

Trip Generation

The trip generation estimates for the proposed development are provided for the weekday morning and weekday evening, which correspond to the critical analysis periods for the proposed uses and adjacent street traffic flow. In this case, ITE's land use code (LUC) for General Office (LUC 710) and Manufacturing (140) were selected for analysis purposes; the use category generally aligns with the proposed characterization of the Site. New traffic generated by the project was estimated using trip rates published in ITE's *Trip Generation*[2] for the Land Use Code (LUC) 710 – General Office and LUC 140 – Manufacturing. **Table 6** presents the trip-generation comparison for the proposed development based on ITE methodology and trip rates based on the exiting site uses.

[2]*Trip Generation,* Eleventh Edition; Institute of Transportation Engineers; Washington, DC; 2021.

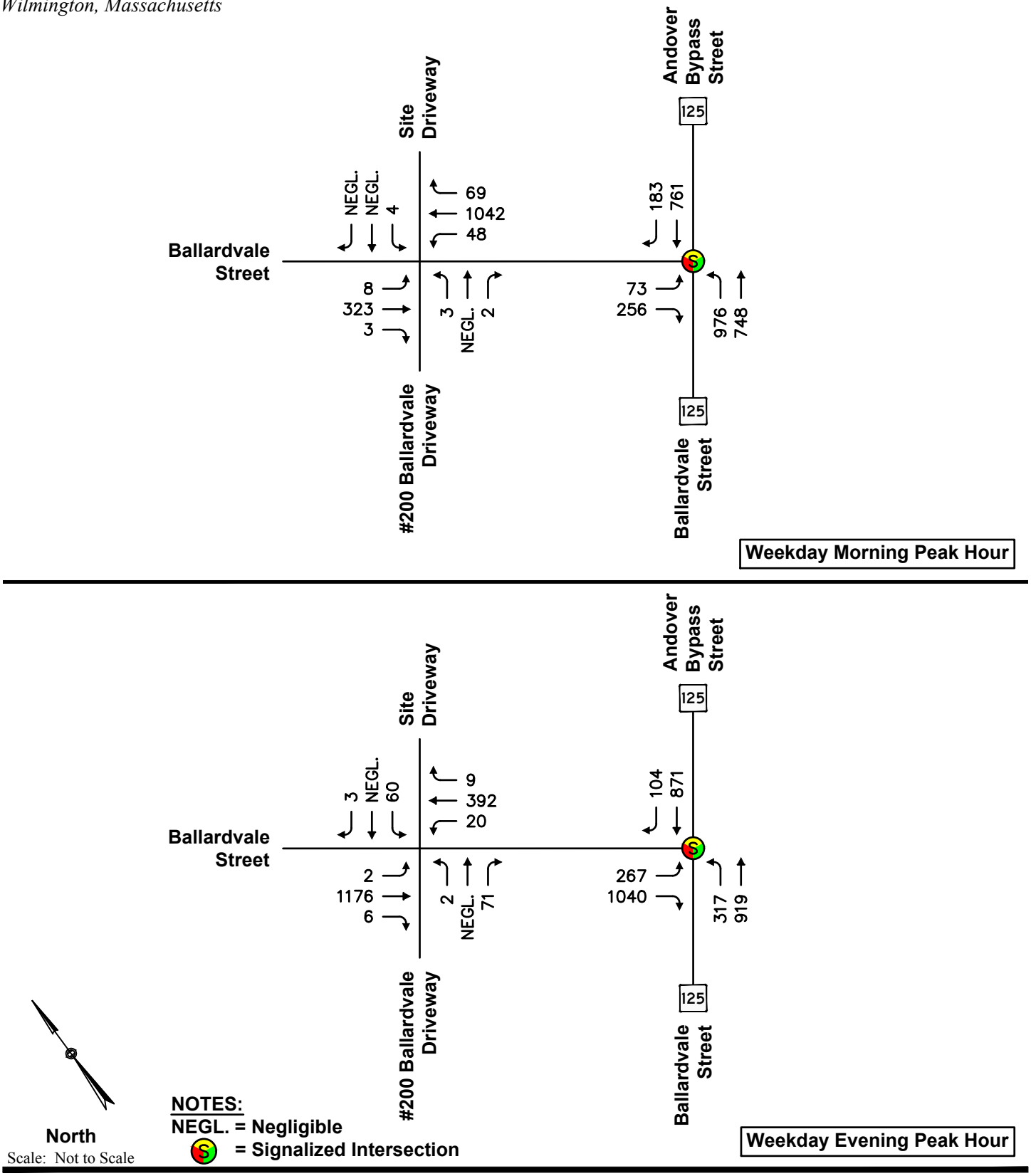


Figure 4

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2030 No-Build Conditions
Weekday Peak Hour Volumes

Date: October 2023
Dwg No. 1325 TIS.dwg
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TABLE 6
TRIP-GENERATION SUMMARY

Peak Hour/Direction	Empirical Basis[1]	ITE Basis: Office (28,500 sf)[2]	ITE Basis: Manufacturing (42,800 sf)[3]	ITE Basis: Total	Used for Report
Weekday Morning Peak Hour:					
Entering	27	38	22	60	**60**
Exiting	2	5	7	12	**12**
Total	29	43	29	72	**72**
Weekday Evening Peak Hour:					
Entering	4	7	10	17	**17**
Exiting	22	34	22	56	**56**
Total	26	41	32	73	**73**
Weekday Daily:	208	308	204	512	**512**

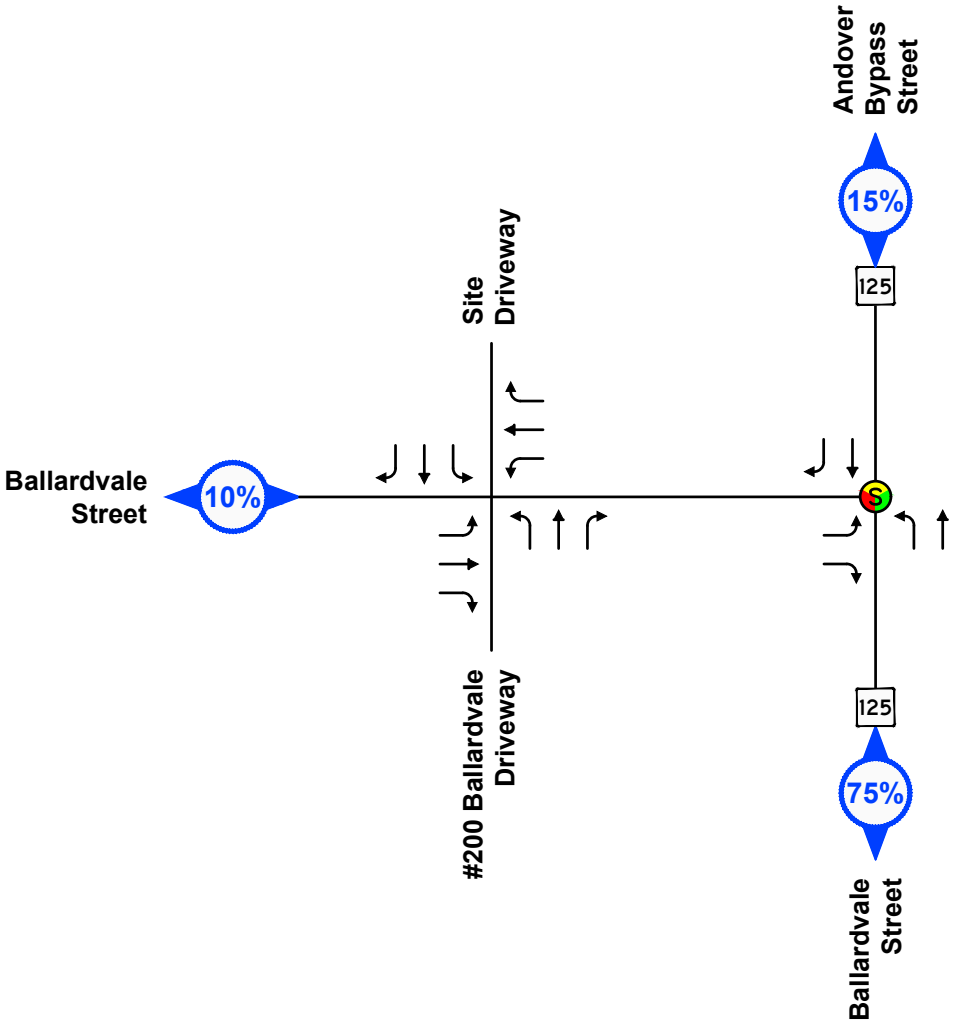
Source: ITE *Trip Generation*, 11th Edition; 2021.
[1]Based on Table 2 applied to 71.3ksf.
[2]ITE LUC 710 – General Office trip rates applied to 28,500 sf.
[3]ITE LUC 140 – Manufacturing Park trip rates applied to 42,800 sf.

As summarized in **Table 6**, based on industry-standard trip rates the proposed development is estimated to generate approximately 72 vehicle trips (60 entering and 12 exiting) during the weekday morning peak hour and 73 vehicle trips (17 entering and 56 exiting) during the weekday evening peak hour. On a daily basis, the proposed development is estimated to generate approximately 512 vehicle trips.

Trip Distribution

The directional distribution of development-generated trips on the roadway network is a function of a number of variables including local area populations and the efficiency of the roadways leading to the Site. Existing roadway travel patterns served as the primary basis for determining the trip distribution pattern for the proposed development. The distribution of the site generated trips is displayed in **Figure 5**. Trip distribution calculations are provided in the **Attachments**.

Development-related trips for the proposed development are assigned to the roadway network using the trip-generation estimates shown in **Table 6** and the distribution patterns presented in **Figure 5**. Development-related trips at each intersection approach for the weekday morning and weekday evening peak hours are quantified in **Figure 6**.





North
Scale: Not to Scale

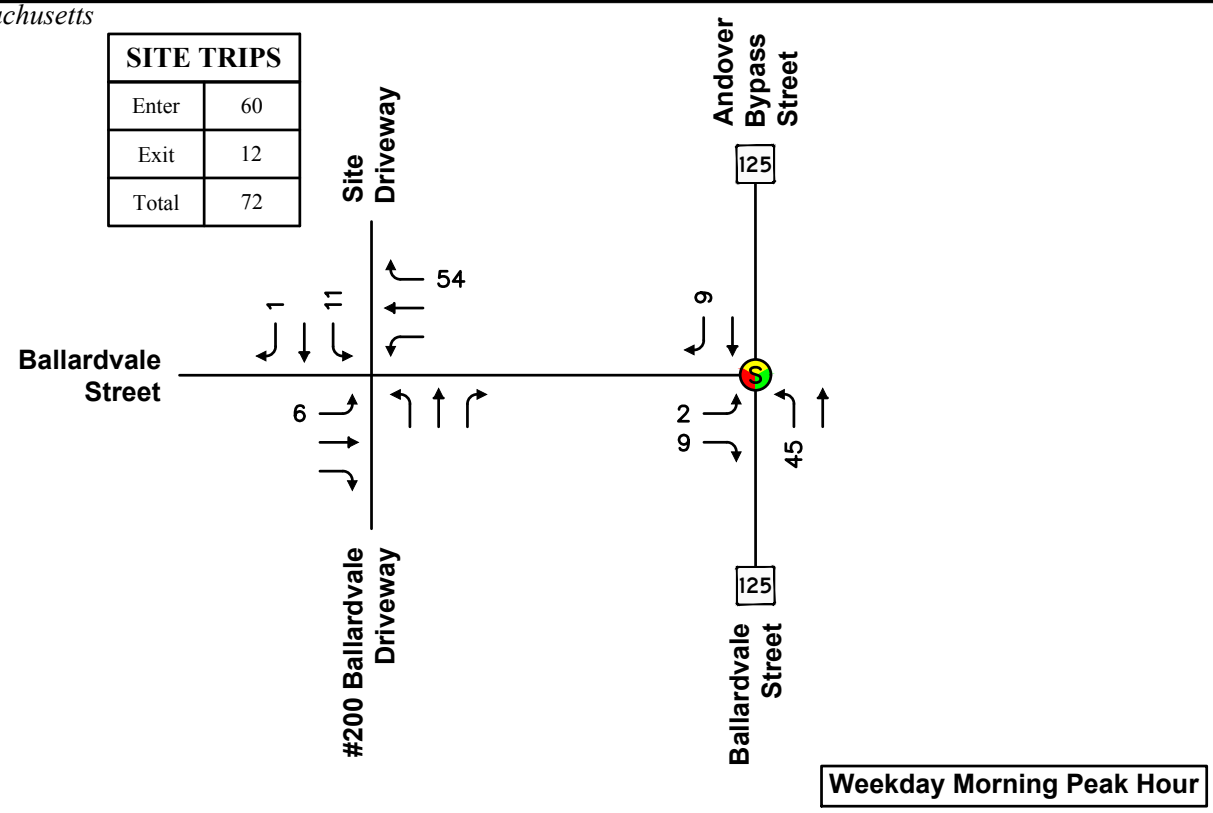
NOTES:
S = Signalized Intersection

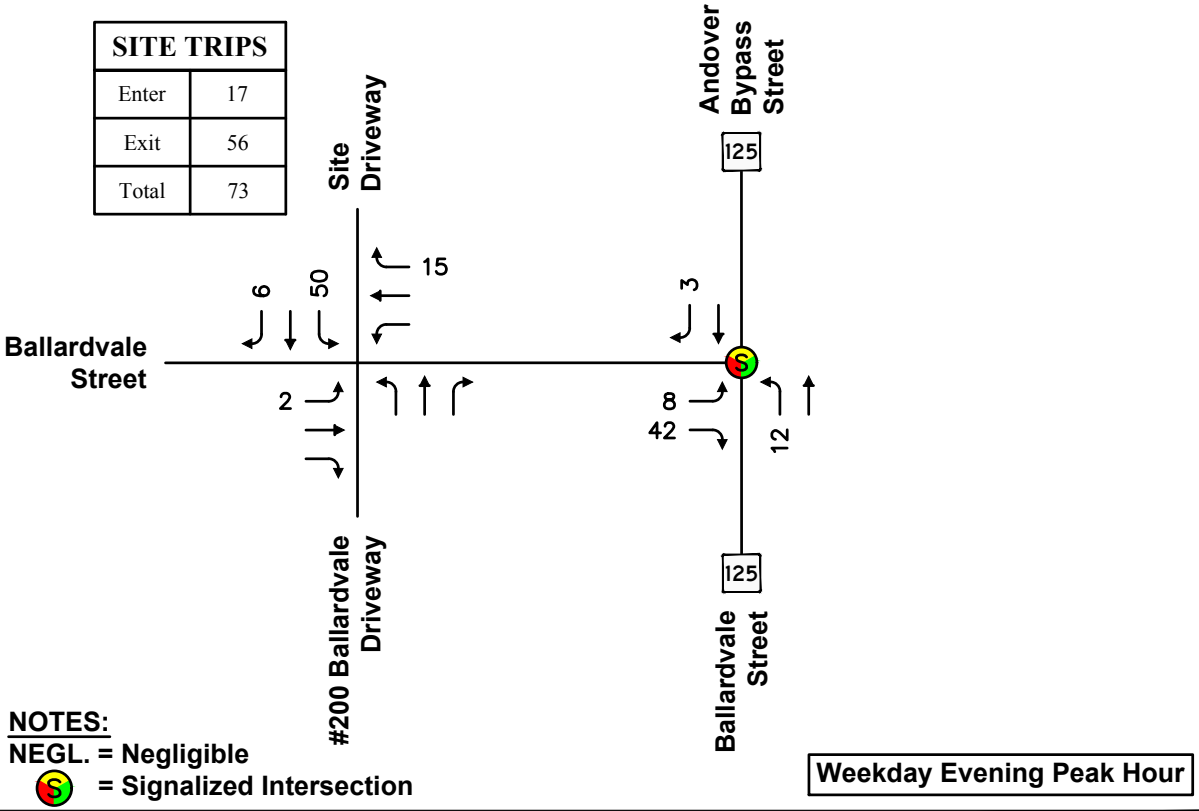
Figure 5

Trip Distribution

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North
Scale: Not to Scale

NOTES:
NEGL. = Negligible
S = Signalized Intersection

Figure 6

Site Generated Trips

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2030 Build Traffic Conditions

2030 Build condition traffic volumes are derived by adding incremental traffic increases for the proposed development of the Site to the 2030 No-Build conditions. **Figure 7** presents the 2030 Build condition traffic-volume networks for the weekday morning and weekday evening peak hours.

QUALTATIVE STATEMENT OF IMPACT

This section provides a quantitative statement of impact and described trip increases associated with the development relative to future 2030 No-Build conditions along Ballardvale Street. A comparison of the total intersection entering volume for the two gateway study intersections during the weekday morning peak hour and weekday evening peak hour, are summarized in **Table 7**.

TABLE 7
ROADWAY TOTAL ENTERING VOLUME

	Peak Hour	2030 No-Build Entering Volume[1]	Project Impact # of New Trips	Project Impact %Δ
Route 125 at Ballardvale Street	Weekday AM	2,997	65	2.2%
	Weekday PM	3,518	65	1.8%
Ballardvale Street at Site Driveway	Weekday AM	1,502	72	4.8%
	Weekday PM	1,741	73	4.2%

[1] Volumes based on traffic peak hour turning movement counts conducted in November 2023.

As shown in **Table 7**, the project at full buildout will result in less than 5% increase in traffic along Ballardvale Street and the gateway intersection at Route 125. The increase in trips due to the project are not expected to alter operating conditions compared to No-Build conditions with less than 2 new total vehicle trip or less every minute.

RECOMMENDATIONS AND CONCLUSIONS

Based on this preliminary report, MDM has identified several mitigation actions that are likely to be required through the local permitting process to support the project. These include (a) access-related improvements, (b) pedestrian and bicycle accommodations, and (c) a transportation demand management (TDM) program to enhance traffic operations and travel safety:

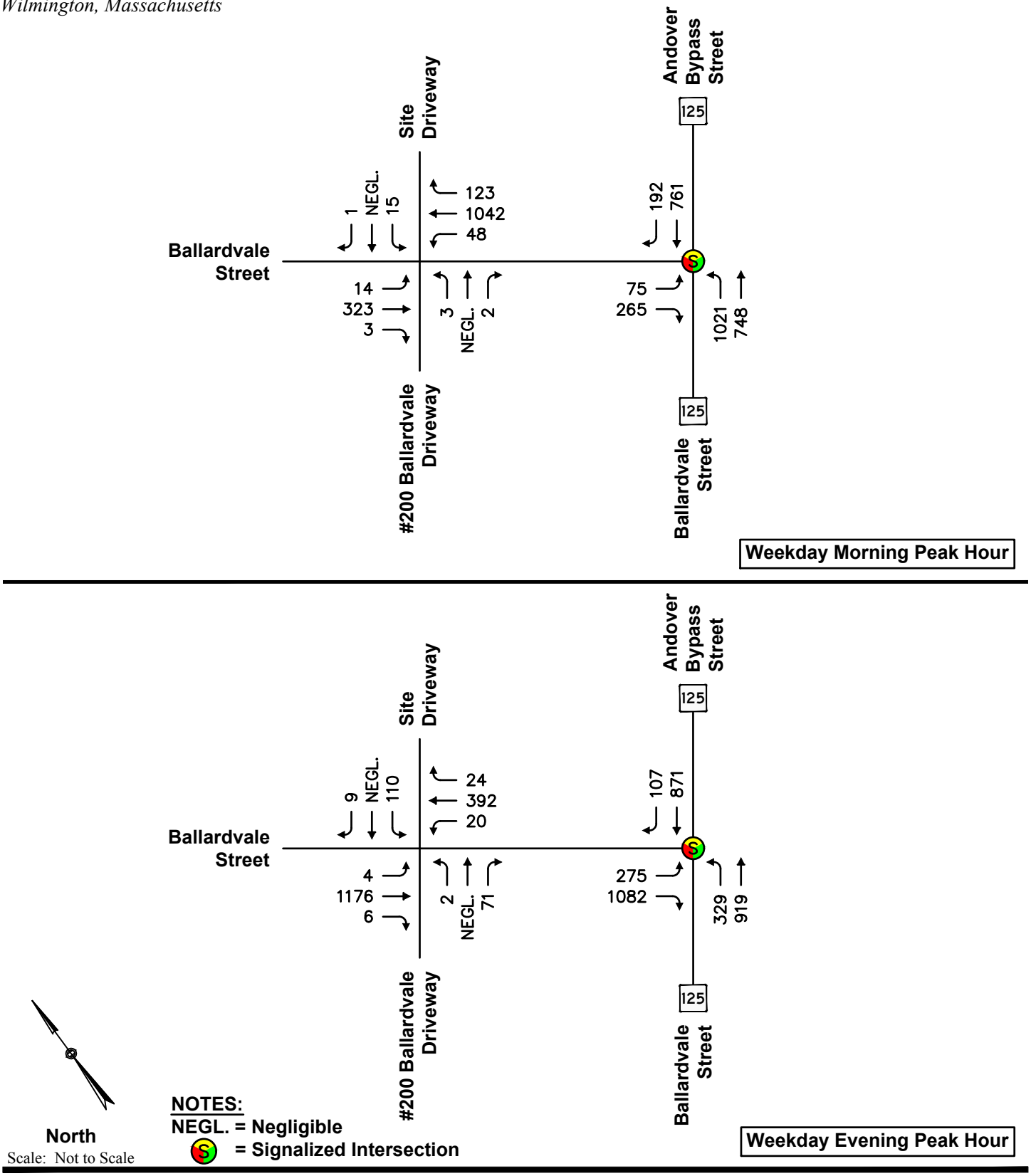


Figure 7

2030 Build Conditions
Weekday Peak Hour Volumes

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

Date: October 2023
Dwg No. 1325 TIS.dwg
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Access/Egress Improvements

- *Signs and Pavement Markings.* A STOP sign (R1-1) and STOP line pavement marking should be installed on the Site Driveway approach to Ballardvale Street. The sign and pavement markings shall conform to Manual on Uniform Traffic Control Devices (MUTCD) standards.

- *Sight Line Maintenance.* The sight lines for the Sight Driveway approach to Ballardvale Street should be maintained with the construction of the Site. Any new plantings (shrubs, bushes) or physical landscape features to be located within the sight lines should also be maintained at a height of 2 feet or less above the adjacent roadway grade to ensure unobstructed lines of sight.

Pedestrian and Bicycle Accommodations

- *Pedestrian Accommodation.* The design shall incorporate sidewalks that connect the proposed building entrances with the proposed parking areas.

- *Bicycle Amenities*. The Proponent shall incorporate secure and weather-protected bicycle racks to encourage and facilitate this mode of transportation to/from the Site by employees.

Transportation Demand Management (TDM)

A preliminary list of potential TDM program elements may include the following, subject to refinement of the development program and further evaluation by the Proponent:

- *On-Site Transportation Coordinator*
- *TMA Membership*
- *Public Transportation Information & Promotion*
- *Preferential Parking for Carpools, Vanpools*
- *Electric Vehicle Charging Station*
- *Preferential Parking for Low-Emission Vehicles*
- *Workforce Transportation Program*
- *Off-Peak Shift Changes*
- *Automatic Employee Payroll Reduction*
- *Commuter Assistance Programs*
- *Guaranteed Ride Home*
- *Pedestrian Infrastructure*
- *Bicycle Racks*
- *Secure Covered Bike Parking*
- *On-Site Support Services/Amenities*

CONCLUSIONS

In summary, MDM finds that incremental traffic associated with the proposed development is not expected to materially impact operating conditions at the study intersections. Implementation of access/egress improvements, proposed pedestrian improvements, and a TDM program as outlined under *Recommendations and Conclusions* will establish a framework of minimizing Site traffic impacts.

ATTACHMENTS

- Traffic Volume Data
- Seasonal/Yearly Growth Data
- Sight Distance Calculations
- Crash Data
- Background Projects
- Trip Generation
- Trip Distribution Calculations

- Traffic Volume Data

Ballardvale Street
Wilmigton, MA

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

28 Lord Road, Suite 280
Marlborough, MA 01752

Site Code:

Start Time	02-Nov-23 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		9	140			11	174				
12:15		10	138			11	163				
12:30		6	140			19	163				
12:45		8	150	33	568	9	166	50	666	83	1234
01:00		6	94			8	158				
01:15		4	140			9	133				
01:30		7	126			13	132				
01:45		11	130	28	490	7	139	37	562	65	1052
02:00		11	114			16	231				
02:15		17	114			10	163				
02:30		22	115			8	219				
02:45		38	98	88	441	6	160	40	773	128	1214
03:00		26	101			23	228				
03:15		19	114			10	215				
03:30		19	107			14	238				
03:45		33	119	97	441	12	208	59	889	156	1330
04:00		35	107			16	291				
04:15		42	103			25	235				
04:30		62	83			20	278				
04:45		113	81	252	374	19	256	80	1060	332	1434
05:00		98	85			33	290				
05:15		101	64			55	248				
05:30		119	79			63	185				
05:45		204	75	522	303	66	182	217	905	739	1208
06:00		145	62			66	131				
06:15		133	47			69	108				
06:30		124	65			58	98				
06:45		159	54	561	228	74	81	267	418	828	646
07:00		179	60			90	80				
07:15		158	38			79	73				
07:30		182	38			83	62				
07:45		235	26	754	162	84	61	336	276	1090	438
08:00		213	34			88	52				
08:15		244	30			68	48				
08:30		243	19			76	29				
08:45		235	32	935	115	68	53	300	182	1235	297
09:00		223	32			80	48				
09:15		200	18			126	41				
09:30		162	28			109	36				
09:45		122	23	707	101	100	29	415	154	1122	255
10:00		104	10			92	35				
10:15		116	12			85	13				
10:30		100	9			87	28				
10:45		127	16	447	47	107	26	371	102	818	149
11:00		103	16			110	36				
11:15		93	12			104	30				
11:30		117	10			125	27				
11:45		145	6	458	44	154	15	493	108	951	152
Total		4882	3314			2665	6095			7547	9409
Percent		59.6%	40.4%			30.4%	69.6%			44.5%	55.5%
Total		4882	3314			2665	6095			7547	9409
Percent		59.6%	40.4%			30.4%	69.6%			44.5%	55.5%
Combined Total		8196				8760				16956	

Site Driveway
Wilmington, MA

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

28 Lord Road, Suite 280
Marlborough, MA 01752

Site Code:

Start Time	02-Nov-23 Thu	Entering Morning	Entering Afternoon	Hour Totals Morning	Hour Totals Afternoon	Exiting Morning	Exiting Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	2			0	12				
12:15		0	9			0	8				
12:30		0	10			0	7				
12:45		0	5	0	26	0	2	0	29	0	55
01:00		0	2			0	4				
01:15		0	4			0	5				
01:30		0	8			0	2				
01:45		0	2	0	16	0	2	0	13	0	29
02:00		0	3			0	6				
02:15		1	5			1	1				
02:30		0	4			0	6				
02:45		0	1	1	13	0	4	1	17	2	30
03:00		0	3			0	11				
03:15		0	2			0	5				
03:30		0	3			0	10				
03:45		0	2	0	10	0	5	0	31	0	41
04:00		0	0			0	12				
04:15		0	4			0	10				
04:30		0	1			0	18				
04:45		0	1	0	6	0	11	0	51	0	57
05:00		0	4			0	25				
05:15		0	4			0	14				
05:30		2	0			0	17				
05:45		1	1	3	9	1	18	1	74	4	83
06:00		2	1			0	10				
06:15		2	0			1	7				
06:30		3	0			0	5				
06:45		6	0	13	1	0	3	1	25	14	26
07:00		7	0			1	1				
07:15		9	0			2	2				
07:30		9	0			2	6				
07:45		9	0	34	0	2	2	7	11	41	11
08:00		14	0			2	3				
08:15		17	0			1	0				
08:30		22	0			1	0				
08:45		25	0	78	0	0	1	4	4	82	4
09:00		22	0			3	0				
09:15		13	0			2	0				
09:30		15	0			1	0				
09:45		16	0	66	0	3	0	9	0	75	0
10:00		6	0			1	0				
10:15		6	0			1	0				
10:30		3	0			1	0				
10:45		3	0	18	0	2	0	5	0	23	0
11:00		2	0			1	0				
11:15		1	0			4	0				
11:30		3	0			6	0				
11:45		4	0	10	0	11	0	22	0	32	0
Total		223	81			50	255			273	336
Percent		73.4%	26.6%			16.4%	83.6%			44.8%	55.2%
Total		223	81			50	255			273	336
Percent		73.4%	26.6%			16.4%	83.6%			44.8%	55.2%
Combined Total		304				305				609	

MDM Transportation Consultants, Inc.

28 Lord Road, Suite 280
Marlborough, MA, 01752

N/S: Ballardvale Street
WB: 181-187 Ballardvale Dwy
Wilmington, MA

File Name : 1325_Ballardvale_at_Site_11-02-2023
Site Code : 1325
Start Date : 11/2/2023
Page No : 1

Groups Printed- Lights - Mediums - Articulated Trucks - Bicycles on Road

	Ballardvale Street From North					181 Ballardvale - Site From East					Ballardvale Street From South					Business Plaza Dwy From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	88	3	0	92	1	0	0	0	1	6	178	4	0	188	0	0	0	0	0	281
07:15 AM	0	78	2	0	80	1	0	1	0	2	8	156	9	0	173	1	0	0	0	1	256
07:30 AM	1	80	2	0	83	1	0	1	0	2	6	180	8	0	194	1	0	1	0	2	281
07:45 AM	1	81	0	0	82	1	0	1	0	2	9	232	5	0	246	3	0	1	0	4	334
Total	3	327	7	0	337	4	0	3	0	7	29	746	26	0	801	5	0	2	0	7	1152
08:00 AM	1	86	3	0	90	0	0	2	0	2	11	211	11	0	233	1	0	1	0	2	327
08:15 AM	1	65	2	0	68	0	0	1	0	1	15	246	11	0	272	0	0	1	0	1	342
08:30 AM	1	73	3	0	77	0	0	1	0	1	19	247	6	0	272	0	0	1	0	1	351
08:45 AM	0	68	0	0	68	0	0	0	0	0	24	237	20	0	281	1	0	0	0	1	350
Total	3	292	8	0	303	0	0	4	0	4	69	941	48	0	1058	2	0	3	0	5	1370
03:00 PM	4	220	0	0	224	1	0	9	0	10	3	101	4	0	108	8	0	1	0	9	351
03:15 PM	3	213	0	0	216	0	0	7	0	7	2	113	1	0	116	14	1	4	0	19	358
03:30 PM	3	232	1	0	236	1	0	8	0	9	2	108	6	0	116	11	0	0	0	11	372
03:45 PM	2	207	0	0	209	1	0	5	0	6	2	117	2	0	121	10	0	2	0	12	348
Total	12	872	1	0	885	3	0	29	0	32	9	439	13	0	461	43	1	7	0	51	1429
04:00 PM	7	282	0	0	289	0	0	12	0	12	0	103	6	0	109	18	0	5	0	23	433
04:15 PM	2	234	0	0	236	1	0	9	0	10	4	103	4	0	111	26	0	2	0	28	385
04:30 PM	0	281	1	0	282	1	0	16	0	17	0	82	7	0	89	8	0	0	0	8	396
04:45 PM	1	254	0	0	255	0	0	12	0	12	1	80	5	0	86	17	0	0	0	17	370
Total	10	1051	1	0	1062	2	0	49	0	51	5	368	22	0	395	69	0	7	0	76	1584
05:00 PM	3	294	1	0	298	1	0	23	0	24	4	86	4	0	94	20	0	0	0	20	436
05:15 PM	2	254	0	0	256	2	0	13	0	15	3	65	9	0	77	17	0	0	0	17	365
05:30 PM	4	180	0	0	184	2	0	16	0	18	0	77	5	0	82	11	0	1	0	12	296
05:45 PM	5	176	1	0	182	3	0	15	0	18	0	71	4	0	75	10	1	0	0	11	286
Total	14	904	2	0	920	8	0	67	0	75	7	299	22	0	328	58	1	1	0	60	1383
Grand Total		3446	19	0	3507	17	0	152	0	169	119	2793	131	0	3043	177	2	20	0	199	6918
Apprch %	1.2	98.3	0.5	0		10.1	0	89.9	0		3.9	91.8	4.3	0		88.9	1	10.1	0		
Total %	0.6	49.8	0.3	0	50.7	0.2	0	2.2	0	2.4	1.7	40.4	1.9	0	44	2.6	0	0.3	0	2.9	
Lights	37	3182	18	0	3237	16	0	149	0	165	119	2436	130	0	2685	174	0	20	0	194	6281
% Lights	88.1	92.3	94.7	0	92.3	94.1	0	98	0	97.6	100	87.2	99.2	0	88.2	98.3	0	100	0	97.5	90.8
Mediums	4	146	1	0	151	1	0	3	0	4	0	224	1	0	225	2	2	0	0	4	384
% Mediums	9.5	4.2	5.3	0	4.3	5.9	0	2	0	2.4	0	8	0.8	0	7.4	1.1	100	0	0	2	5.6
Articulated Trucks																					
% Articulated Trucks	2.4	3.4	0	0	3.4	0	0	0	0	0	0	4.7	0	0	4.3	0.6	0	0	0	0.5	3.6
Bicycles on Road	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

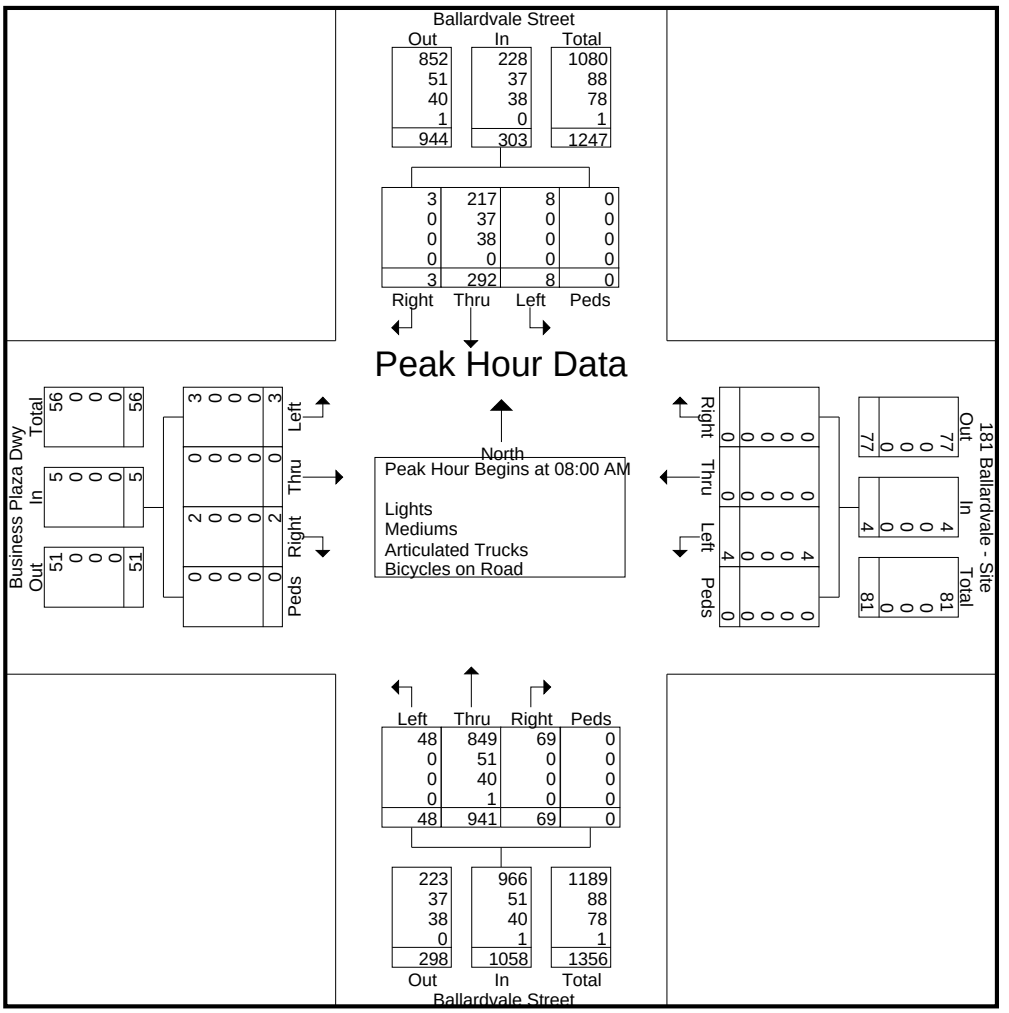
MDM Transportation Consultants, Inc.

28 Lord Road, Suite 280
Marlborough, MA, 01752

N/S: Ballardvale Street
WB: 181-187 Ballardvale Dwy
Wilmington, MA

File Name : 1325_Ballardvale_at_Site_11-02-2023
Site Code : 1325
Start Date : 11/2/2023
Page No : 2

	Ballardvale Street From North					181 Ballardvale - Site From East					Ballardvale Street From South					Business Plaza Dwy From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**1**	**86**	**3**	0	**90**	0	0	**2**	0	**2**	11	211	11	0	233	**1**	0	**1**	0	**2**	327
08:15 AM	1	65	2	0	68	0	0	1	0	1	15	246	11	0	272	0	0	1	0	1	342
08:30 AM	1	73	3	0	77	0	0	1	0	1	19	**247**	6	0	272	0	0	1	0	1	**351**
08:45 AM	0	68	0	0	68	0	0	0	0	0	**24**	237	**20**	0	**281**	1	0	0	0	1	350
Total Volume	3	292	8	0	303	0	0	4	0	4	69	941	48	0	1058	2	0	3	0	5	1370
% App. Total	1	96.4	2.6	0		0	0	100	0		6.5	88.9	4.5	0		40	0	60	0		
PHF	.750	.849	.667	.000	.842	.000	.000	.500	.000	.500	.719	.952	.600	.000	.941	.500	.000	.750	.000	.625	.976
Lights	3	217	8	0	228	0	0	4	0	4	69	849	48	0	966	2	0	3	0	5	1203
% Lights	100	74.3	100	0	75.2	0	0	100	0	100	100	90.2	100	0	91.3	100	0	100	0	100	87.8
Mediums	0	37	0	0	37	0	0	0	0	0	0	51	0	0	51	0	0	0	0	0	88
% Mediums	0	12.7	0	0	12.2	0	0	0	0	0	0	5.4	0	0	4.8	0	0	0	0	0	6.4
Articulated Trucks	0	38	0	0	38	0	0	0	0	0	0	40	0	0	40	0	0	0	0	0	78
% Articulated Trucks	0	13.0	0	0	12.5	0	0	0	0	0	0	4.3	0	0	3.8	0	0	0	0	0	5.7
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.1



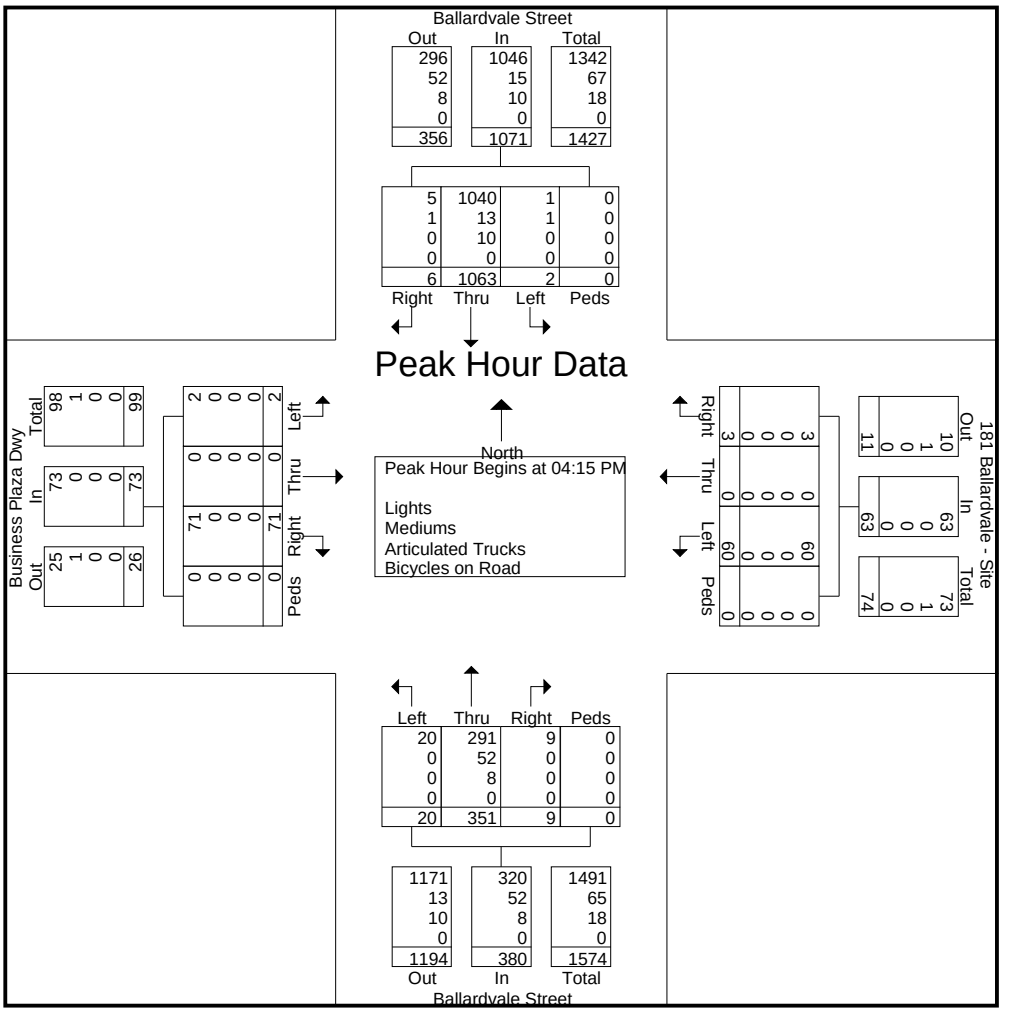
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28 Lord Road, Suite 280
Marlborough, MA, 01752

N/S: Ballardvale Street
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File Name : 1325_Ballardvale_at_Site_11-02-2023
Site Code : 1325
Start Date : 11/2/2023
Page No : 3

	Ballardvale Street From North					181 Ballardvale - Site From East					Ballardvale Street From South					Business Plaza Dwy From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	2	234	0	0	236	**1**	0	9	0	10	**4**	**103**	4	0	**111**	**26**	0	**2**	0	**28**	385
04:30 PM	0	281	**1**	0	282	1	0	16	0	17	0	82	**7**	0	89	8	0	0	0	8	396
04:45 PM	1	254	0	0	255	0	0	12	0	12	1	80	5	0	86	17	0	0	0	17	370
05:00 PM	**3**	**294**	1	0	**298**	1	0	**23**	0	**24**	4	86	4	0	94	20	0	0	0	20	**436**
Total Volume	6	1063	2	0	1071	3	0	60	0	63	9	351	20	0	380	71	0	2	0	73	1587
% App. Total		99.3						95.2				92.4				97.3					
PHF	.500	.904	.500	.000	.898	.750	.000	.652	.000	.656	.563	.852	.714	.000	.856	.683	.000	.250	.000	.652	.910
Lights	5	1040	1	0	1046	3	0	60	0	63	9	291	20	0	320	71	0	2	0	73	1502
% Lights	83.3	97.8	50.0									82.9									
Mediums	1	13	1	0	15	0	0	0	0	0	0	52	0	0	52	0	0	0	0	0	67
% Mediums	16.7	1.2	50.0	0	1.4	0	0	0	0	0	0	14.8	0	0	13.7	0	0	0	0	0	4.2
Articulated Trucks	0	10	0	0	10	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	18
% Articulated Trucks	0	0.9	0	0	0.9	0	0	0	0	0	0	2.3	0	0	2.1	0	0	0	0	0	1.1
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



MDM Transportation Consultants, Inc.

28 Lord Road, Suite 280
Marlborough, MA, 01752

E/W: Route 125
SB: Ballardvale Street
Wilmington, MA

File Name : 1325_Route_125_at_Ballardvale_TMC_11-02-2023
Site Code : 1325
Start Date : 11/2/2023

Groups Printed- Lights - Mediums - Articulated Trucks - Bicycles on Road

	Ballardvale Street From North				Route 125 From East				Route 125 From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	69	12	0	81	24	169	0	193	110	164	0	274	548
07:15 AM	69	13	0	82	40	193	0	233	137	138	0	275	590
07:30 AM	68	15	0	83	35	207	0	242	157	159	0	316	641
07:45 AM	70	16	0	86	53	172	0	225	174	202	0	376	687
Total	276	56	0	332	152	741	0	893	578	663	0	1241	2466
08:00 AM	70	13	0	83	40	177	0	217	167	195	0	362	662
08:15 AM	45	20	0	65	43	171	0	214	134	220	0	354	633
08:30 AM	63	18	0	81	44	160	0	204	137	226	0	363	648
08:45 AM	54	13	0	67	33	171	0	204	140	255	0	395	666
Total	232	64	0	296	160	679	0	839	578	896	0	1474	2609
03:00 PM	205	43	0	248	22	131	0	153	148	87	0	235	636
03:15 PM	196	39	0	235	13	146	0	159	131	106	0	237	631
03:30 PM	217	56	0	273	30	163	0	193	160	82	0	242	708
03:45 PM	200	37	0	237	21	149	0	170	167	97	0	264	671
Total	818	175	0	993	86	589	0	675	606	372	0	978	2646
04:00 PM	241	67	0	308	20	182	0	202	166	95	0	261	771
04:15 PM	207	57	0	264	23	133	0	156	196	91	0	287	707
04:30 PM	235	62	0	297	27	188	0	215	208	61	0	269	781
04:45 PM	231	56	0	287	14	164	0	178	215	70	0	285	750
Total	914	242	0	1156	84	667	0	751	785	317	0	1102	3009
05:00 PM	261	59	0	320	26	213	0	239	202	61	0	263	822
05:15 PM	228	68	0	296	18	182	0	200	145	57	0	202	698
05:30 PM	160	34	0	194	24	190	0	214	152	57	0	209	617
05:45 PM	163	40	0	203	11	155	0	166	146	65	0	211	580
Total	812	201	0	1013	79	740	0	819	645	240	0	885	2717
Grand Total	3052	738	0	3790	561	3416	0	3977	3192	2488	0	5680	13447
Apprch %	80.5	19.5	0		14.1	85.9	0		56.2	43.8	0		
Total %	22.7	5.5	0	28.2	4.2	25.4	0	29.6	23.7	18.5	0	42.2	
Lights	2811	712	0	3523	519	3275	0	3794	3073	2178	0	5251	12568
% Lights	92.1	96.5	0	93	92.5	95.9	0	95.4	96.3	87.5	0	92.4	93.5
Mediums	121	19	0	140	38	108	0	146	89	177	0	266	552
% Mediums	4	2.6	0	3.7	6.8	3.2	0	3.7	2.8	7.1	0	4.7	4.1
Articulated Trucks	120	7	0	127	4	33	0	37	30	132	0	162	326
% Articulated Trucks	3.9	0.9	0	3.4	0.7	1	0	0.9	0.9	5.3	0	2.9	2.4
Bicycles on Road	0	0	0	0	0	0	0	0	0	1	0	1	1
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0

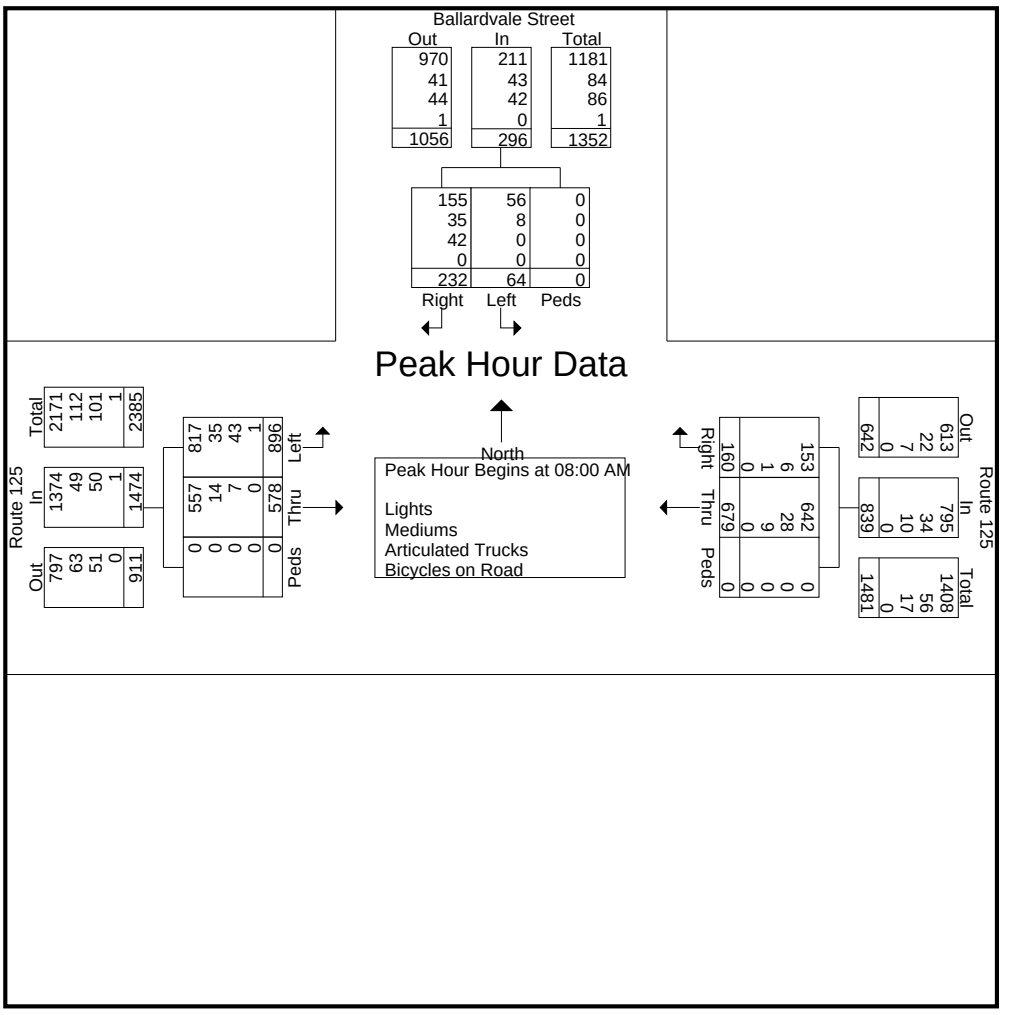
MDM Transportation Consultants, Inc.

28 Lord Road, Suite 280
Marlborough, MA, 01752

E/W: Route 125
SB: Ballardvale Street
Wilmington, MA

File Name : 1325_Route_125_at_Ballardvale_TMC_11-02-2023
Site Code : 1325
Start Date : 11/2/2023
Page No : 2

	Ballardvale Street From North				Route 125 From East				Route 125 From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	**70**	13	0	**83**	40	**177**	0	**217**	**167**	195	0	362	662
08:15 AM	45	**20**	0	65	43	171	0	214	134	220	0	354	633
08:30 AM	63	18	0	81	**44**	160	0	204	137	226	0	363	648
08:45 AM	54	13	0	67	33	171	0	204	140	**255**	0	**395**	**666**
Total Volume	232	64	0	296	160	679	0	839	578	896	0	1474	2609
% App. Total	78.4	21.6	0		19.1	80.9	0		39.2	60.8	0		
PHF	.829	.800	.000	.892	.909	.959	.000	.967	.865	.878	.000	.933	.979
Lights	155	56	0	211	153	642	0	795	557	817	0	1374	2380
% Lights	66.8	87.5	0	71.3	95.6	94.6	0	94.8	96.4	91.2	0	93.2	91.2
Mediums	35	8	0	43	6	28	0	34	14	35	0	49	126
% Mediums	15.1	12.5	0	14.5	3.8	4.1	0	4.1	2.4	3.9	0	3.3	4.8
Articulated Trucks	42	0	0	42	1	9	0	10	7	43	0	50	102
% Articulated Trucks	18.1	0	0	14.2	0.6	1.3	0	1.2	1.2	4.8	0	3.4	3.9
Bicycles on Road	0	0	0	0	0	0	0	0	0	1	0	1	1
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0.0



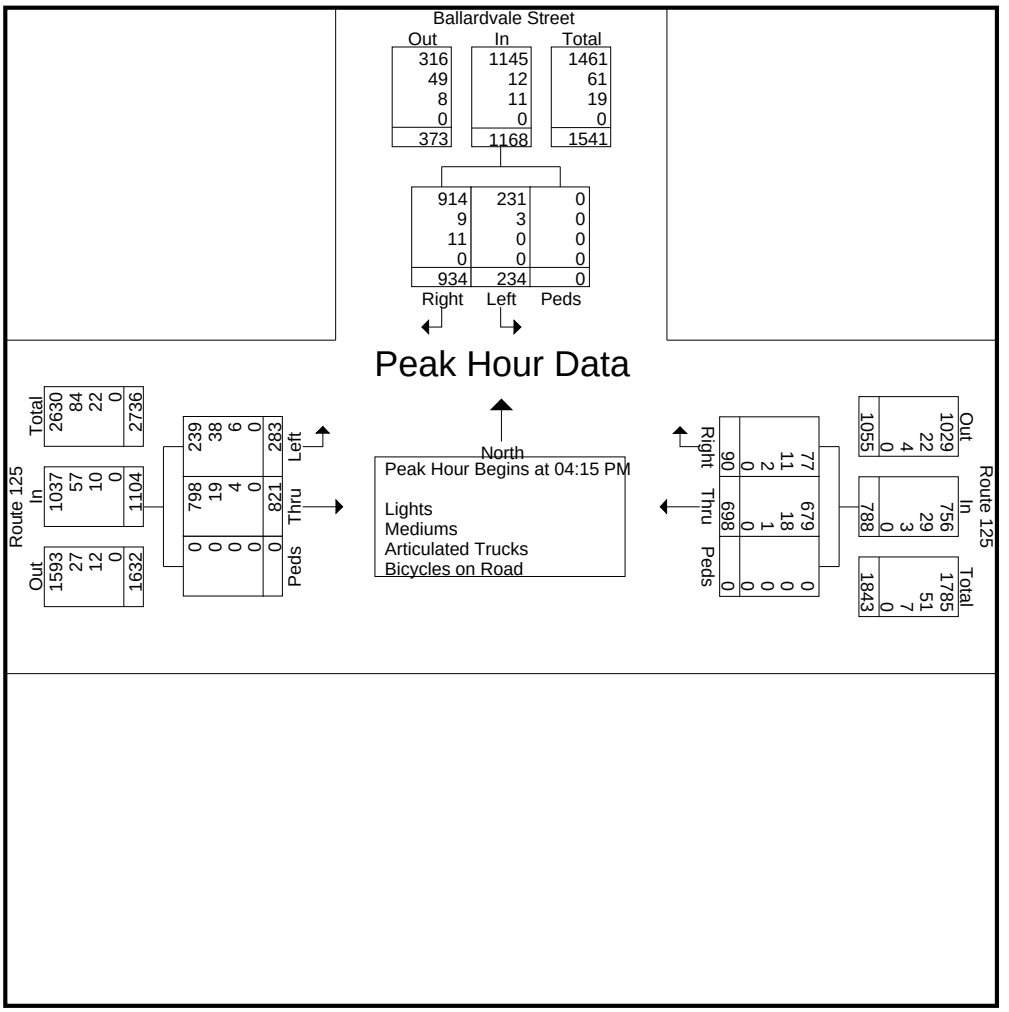
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28 Lord Road, Suite 280
Marlborough, MA, 01752

E/W: Route 125
SB: Ballardvale Street
Wilmington, MA

File Name : 1325_Route_125_at_Ballardvale_TMC_11-02-2023
Site Code : 1325
Start Date : 11/2/2023
Page No : 3

	Ballardvale Street From North				Route 125 From East				Route 125 From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	207	57	0	264	23	133	0	156	196	**91**	0	**287**	707
04:30 PM	235	**62**	0	297	**27**	188	0	215	208	61	0	269	781
04:45 PM	231	56	0	287	14	164	0	178	**215**	70	0	285	750
05:00 PM	**261**	59	0	**320**	26	**213**	0	**239**	202	61	0	263	**822**
Total Volume	934	234	0	1168	90	698	0	788	821	283	0	1104	3060
% App. Total	80	20	0		11.4	88.6	0		74.4	25.6	0		
PHF	.895	.944	.000	.913	.833	.819	.000	.824	.955	.777	.000	.962	.931
Lights	914	231	0	1145	77	679	0	756	798	239	0	1037	2938
% Lights	97.9	98.7	0	98.0	85.6	97.3	0	95.9	97.2	84.5	0	93.9	96.0
Mediums	9	3	0	12	11	18	0	29	19	38	0	57	98
% Mediums	1.0	1.3	0	1.0	12.2	2.6	0	3.7	2.3	13.4	0	5.2	3.2
Articulated Trucks	11	0	0	11	2	1	0	3	4	6	0	10	24
% Articulated Trucks	1.2	0	0	0.9	2.2	0.1	0	0.4	0.5	2.1	0	0.9	0.8
Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0



□ Seasonal/Yearly Growth Data

STATION 5127 - ANDOVER - ANDOVER BYPASS SOUTH OF ROUTE 28

YR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
06	14,564	14,358	15,099	14,994	16,032	15,800	14,113	14,688	15,104	15,000	14,836	12,599	14,766
	-22%	-13%	-5%	-3%	-14%	-7%	5%	-5%	-2%	-2%	-2%	24%	-1%
09	11,428	12,502	14,278	14,509	13,736	14,681	14,800	13,939	14,846	14,700	14,486	15,580	14,124
	27%	3%	1%	5%	12%	-5%	-1%	9%	9%	12%	14%	-17%	1%
13	14,509	12,825	14,383	15,177	15,418	13,989	14,587	15,137	16,205	16,471	16,534	12,907	14,845
	-6%	8%	4%	2%	2%	15%	1%	2%	1%	3%	-13%	5%	2%
14	13,612	13,830	14,898	15,465	15,677	16,134	14,732	15,426	16,368	16,917	14,392	13,615	15,089
	17%	16%	6%	13%	12%	11%	10%	9%	9%	9%	19%	12%	3%
18	15,928	16,034	15,719	17,431	*17,499*	*17,924*	*16,198*	16,774	17,839	18,505	17,126	15,313	16,858
	0%	3%	5%	0%	1%	1%	2%	2%	2%	0%	-10%	-36%	-2%
19	15,970	16,473	16,543	17,355	*17,613*	*18,119*	*16,507*	17,114	18,128	18,454	15,464	9,843	16,465
	-33%	-36%	-28%	-25%	-22%	-19%	-16%	-17%	-16%	-16%	-6%	18%	-10%
21	10,625	10,593	11,924	12,951	*13,780*	*14,607*	*13,825*	14,178	15,150	15,570	14,518	11,602	13,277
	9%	33%	12%	13%	9%	4%	6%	2%	1%	1%	2%	18%	8%
22	11,621	14,081	13,414	14,623	15,041	*15,162*	*14,699*	14,476	15,339	15,775	14,741	13,662	14,386
Seasonal Adjustment Factor (to average month)	1.12	1.07	1.03	0.99	0.97	0.95	1.00	0.99	0.94	0.93	1.00	1.15	
												Growth	**0.1%**

Average Yearly Growth Calculated 0.1%

ITALICS = ESTIMATED DATA

MADT

□ Sight Distance Calculations

Stopping Sight Distance - Posted Speed

Ballardvale Street

		SPEED (MPH)	BRAKE REACTION DISTANCE (FT)	BRAKING DISTANCE (FT)	CALCULATED STOPPING SIGHT DISTANCE (FT)
Direction 1	NB	40	147	153.3	300.3
Direction 2	SB	40	147	153.3	300.3

INPUTS	Direction 1	Direction 2
Travel Direction	NB	SB
Speed	40	40
Grade	0	0
t	2.5	2.5
a	11.2	11.2

Stopping Sight Distance (SSD) - Source: AASHTO

SSD = Reaction Distance + Brake Distance

Reaction Distance = 1.47 x t x V

Brake Distance = V^2 / (30 x ((a/32.2)+G))

Where:
t = reaction time (sec)
V = travel speed (mph)
G= roadway grade
a - deceleration rate (ft/sec^2)

Intersection Sight Distance Calculations

Source: *A Policy on Geometric Design of Highways and Street, 6th Edition;* AASHTO; 2011.

Passenger Car
ISD = 1.47 * V * t

V = speed
t = time gap

t = 7.5 s for a passenger car for Left Turn from a Stop
t = 6.5 s for a passenger car for Right Turn from a Stop

Ballardvale Street

		Average Speed		Ideal ISD	SAY
Looking North (left-turn from a stop)	ISD = 1.47*	40	* 7.5 =	441	**445 feet**
Looking South (right-turn from a stop)	ISD = 1.47*	40	* 6.5 =	382.2	**385 feet**

- Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wilmington, MA COUNT DATE : Nov-23

DISTRICT : 4 UNSIGNALIZED : X SIGNALIZED :

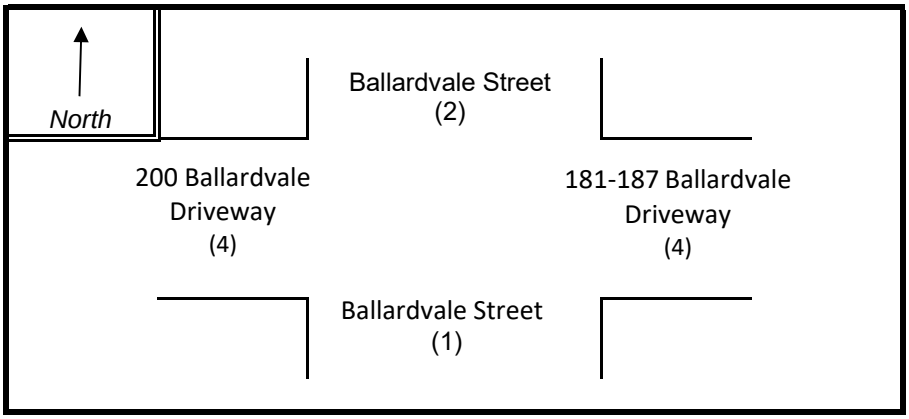
~ INTERSECTION DATA ~

MAJOR STREET : Ballardvale Street

MINOR STREET(S) : 181-187 Ballardvale Street Driveway

200 Ballardvale Street Driveway

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	390	1,071	73	63		**1,597**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **17,744**

TOTAL # OF CRASHES : 9

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **1.80**

CRASH RATE CALCULATION : **0.28**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT District 4 Avg: Signalized = 0.73; Unsignalized = 0.57

Project Title & Date: 1325 - Wilmington

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wilmington, MA COUNT DATE : Nov-23

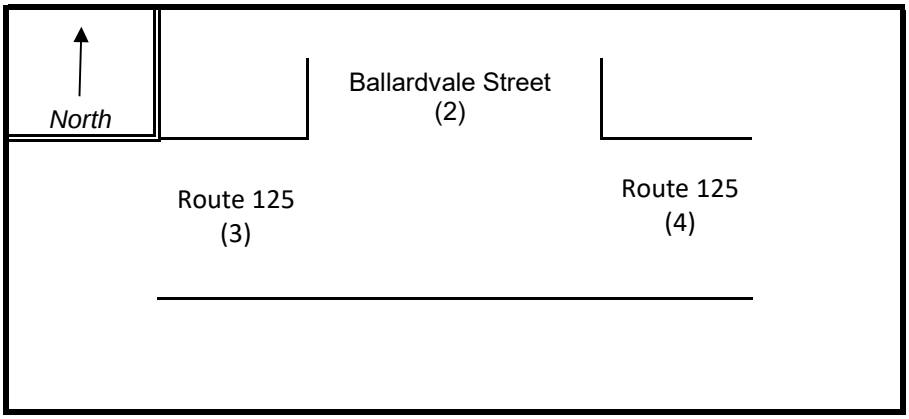
DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X]

~ INTERSECTION DATA ~

MAJOR STREET : Route 125

MINOR STREET(S) : Ballardvale Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :		1,194	1,109	790		**3,093**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **34,367**

TOTAL # OF CRASHES : 25

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **5.00**

CRASH RATE CALCULATION : 0.40

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : MassDOT District 4 Avg: Signalized = 0.73; Unsignalized = 0.57

Project Title & Date: 1325 - Wilmington

Crash Number	Crash Date	Crash Severity	Crash Time	Number of Vehicles	Light Conditions	Manner of Collision	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Most Harmful Event (All Vehicles)	X	Y	Roadway
4482490	01/05/2018	Property damage only (none injured)	1:56 PM	2	Daylight	Rear-end	Dry		0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.2655	926374.0197	ROUTE 125 Rte 125 N
4507826	01/11/2018	Non-fatal injury	3:00 AM	2	Dark - lighted roadway	Rear-end	Dry		2	V2: Travelling straight ahead / V1: Slowing or stopped in traffic	V2:(Passenger car) / V1:(Unknown heavy truck, cannot classify)	V2: E / V1: E	Clear	V2:(Collision with motor vehicle in traffic) / V1:(Collision with motor vehicle in traffic)	228283.2468	926373.8573	BALLARDVALE STREET / ROUTE 125
4518223	02/06/2018	Property damage only (none injured)	12:28 PM	2	Daylight	Angle	Dry		0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: S / V2: W	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.4225	926373.8617	BALLARDVALE STREET Rte W / ROUTE 125
4519491	03/09/2018	Property damage only (none injured)	9:47 AM	3	Daylight	Angle	Dry		0	V1: Turning left / V3: Slowing or stopped in traffic / V2: Turning left	V1:(Light truck(van, mini-van, pickup, sport utility)) / V3:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Single-unit truck (2-axle, 6-tires))	V1: N / V3: S / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.7872	926374.4057	BALLARDVALE STREET / ROUTE 125 Rte SR125 N
4556628	05/15/2018	Property damage only (none injured)	7:46 AM	2	Daylight	Sideswipe, same direction	Dry		0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228278.2157	926378.0975	BALLARDVALE ST
4605057	08/15/2018	Non-fatal injury	6:33 AM	3	Daylight	Sideswipe, opposite direction	Dry		1	V1: Turning right / V2: Slowing or stopped in traffic / V3: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1: W / V2: E / V3: E	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	228282.7872	926374.4057	BALLARDVALE STREET Rte 125 N / ROUTE 125 Rte SR125 N
4614528	09/20/2018	Property damage only (none injured)	6:45 AM	2	Dawn	Sideswipe, same direction	Dry		0	V1: Turning right / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	Rte SR125 S / BALLARDVALE STREET
4624998	10/25/2018	Property damage only (none injured)	1:05 PM	2	Daylight	Sideswipe, same direction	Dry		0	V1: Turning left / V2: Turning left	V1:(Passenger car) / V2:(Other)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	BALLARDVALE ST / Rte 125 E
4640488	11/30/2018	Property damage only (none injured)	11:01 PM	2	Dark - roadway not lighted	Sideswipe, same direction	Dry		0	V1: Slowing or stopped in traffic / V2: Overtaking/passing	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	/ Rte SR125 N / BALLARDVALE STREET
4732837	06/18/2019	Property damage only (none injured)	6:21 PM	2	Daylight	Angle			0	V1: Turning right / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: E	Cloudy/Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.7872	926374.4057	BALLARDVALE STREET / ROUTE 125 Rte SR125 W
4755462	08/19/2019	Property damage only (none injured)	9:42 AM	2	Daylight	Rear-end	Dry		0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.7872	926374.4057	BALLARDVALE STREET / ROUTE 125 Rte SR125 N
4779766	10/12/2019	Property damage only (none injured)	2:14 PM	2	Daylight	Angle	Dry		0	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: W / V2: N	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	BALLARDVALE ST Rte 125 / ROUTE 125 HWY
4795011	12/05/2019	Property damage only (none injured)	9:50 AM	2	Daylight	Sideswipe, same direction	Dry		0	V1: Turning right / V2: Turning right	V1:(Passenger car) / V2:(Tractor/semi-trailer)	V1: W / V2: W	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.7872	926374.4057	BALLARDVALE STREET / ROUTE 125 Rte SR125 W
4876417	08/20/2020	Property damage only (none injured)	10:49 AM	2	Daylight	Angle	Dry		0	V1: Making U-turn / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	ROUTE 125 Rte SR125 N
4895002	10/30/2020	Non-fatal injury	12:45 PM	2	Daylight	Rear-end	Wet		0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: N	Cloudy/Snow	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	ROUTE 125 Rte SR125 N / BALLARDVALE STREET
4930472	01/12/2021	Property damage only (none injured)	1:37 PM	1	Daylight	Rear-end	Dry		0	V1: Slowing or stopped in traffic	V1:(Passenger car)	V1: N	Clear	V1:(Collision with motor vehicle in traffic)	228282.8433	926373.438	BALLARDVALE STREET Rte SR125 N / ROUTE 125 Rte SR125
5033980	11/14/2021	Property damage only (none injured)	4:18 PM	2	Daylight	Sideswipe, opposite direction	Dry		0	V1: Turning right / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	BALLARDVALE STREET / ROUTE 125 Rte SR125 S
5079418	12/14/2021	Property damage only (none injured)	10:19 AM	2	Daylight	Rear-end	Dry		0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228272.367	926383.9865	BALLARDVALE ST
5079423	12/14/2021	Property damage only (none injured)	12:21 PM	2	Daylight	Rear to Side	Dry		0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228272.367	926383.9865	BALLARDVALE ST
5091177	04/04/2022	Property damage only (none injured)	4:13 PM	2	Daylight	Rear-end	Dry		0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: S / V2: S	Cloudy	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8433	926373.438	Rte SR125 S
5099287	04/22/2022	Property damage only (none injured)	12:23 PM	2	Daylight	Rear-end	Dry		0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Truck/trailer) / V2:(Tractor/semi-trailer)	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228274.7557	926366.0612	BALLARDVALE STREET Rte SR125 S
5160353	10/07/2022	Property damage only (none injured)	4:02 PM	2	Daylight	Angle	Dry		0	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8434	926373.4379	Rte SR125 N
5171518	10/29/2022	Property damage only (none injured)	11:15 PM	2	Dark - roadway not lighted	Rear-end	Dry		0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: N / V2: N	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8434	926373.4379	ROUTE 125 Rte 125 N
5184910	11/23/2022	Non-fatal injury	7:04 AM	2	Daylight	Rear-end	Dry		1	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8434	926373.4379	ROUTE 125 Rte SR125 N / BALLARDVALE STREET
5194730	12/19/2022	Property damage only (none injured)	8:05 AM	2	Daylight	Rear-end	Dry		0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Truck/trailer) / V2:(Truck/trailer)	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228282.8434	926373.4379	ROUTE 125 Rte SR125 S / BALLARDVALE STREET

Crash Number	Crash Date	Crash Severity	Crash Time	Number of Vehicles	Light Conditions	Manner of Collision	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Most Harmful Event (All Vehicles)	X	Y	Roadway
4507624	01/10/2018	Property damage only (none injured)	12:12 PM	2	Daylight	Angle	Dry	0	0	V1: Changing lanes / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Tractor/semi-trailer)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228150.9252	926508.1291	BALLARDVALE ST
4812872	12/31/2019	Property damage only (none injured)	9:53 AM	2	Daylight	Front to Rear	Wet	0	0	V1: Travelling straight ahead / V2: Backing	V1:(Passenger car) / V2:(Passenger car)	V1: N / V2: S	Rain	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228142.5987	926516.7653	BALLARDVALE ST
4956735	03/19/2021	Property damage only (none injured)	7:36 AM	2	Daylight	Angle	Dry	0	0	V1: Turning left / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1: W / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228142.5987	926516.7653	BALLARDVALE ST
5047518	07/31/2021	Property damage only (none injured)	6:41 PM	2	Daylight	Rear-end	Dry	0	0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1: E / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228160.2683	926498.4386	BALLARDVALE ST
5054859	09/23/2021	Non-fatal injury	5:39 PM	5	Daylight	Rear-end	Dry	0	2	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic / V3: Slowing or stopped in traffic / V4: Slowing or stopped in traffic / V5: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car) / V4:(Passenger car) / V5:(Tractor/semi-trailer)	V1: S / V2: S / V3: S / V4: S / V5: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic) / V4:(Collision with motor vehicle in traffic) / V5:(Collision with motor vehicle in traffic)	228156.4205	926502.4294	BALLARDVALE ST
5117342	06/06/2022	Property damage only (none injured)	3:38 PM	2	Daylight	Angle	Dry	0	0	V1: Travelling straight ahead / V2: Entering traffic lane	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: S / V2: E	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228156.4205	926502.4294	BALLARDVALE STREET
5117343	06/06/2022	Non-fatal injury	5:09 PM	2	Daylight	Angle	Dry	0	2	V1: Turning right / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: E / V2: S	Clear/Other	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228160.2683	926498.4386	BALLARDVALE STREET
5117346	06/07/2022	Property damage only (none injured)	5:38 PM	2	Daylight	Rear-end	Dry	0	0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1: S / V2: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	228160.2683	926498.4386	BALLARDVALE STREET
5166844	10/06/2022	Property damage only (none injured)	2:47 PM	3	Daylight	Rear-end	Dry	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic / V3: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car) / V3:(Light truck(van, mini-van, pickup, sport utility))	V1: S / V2: S / V3: S	Clear	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	228156.4205	926502.4294	BALLARDVALE STREET

- Background Projects

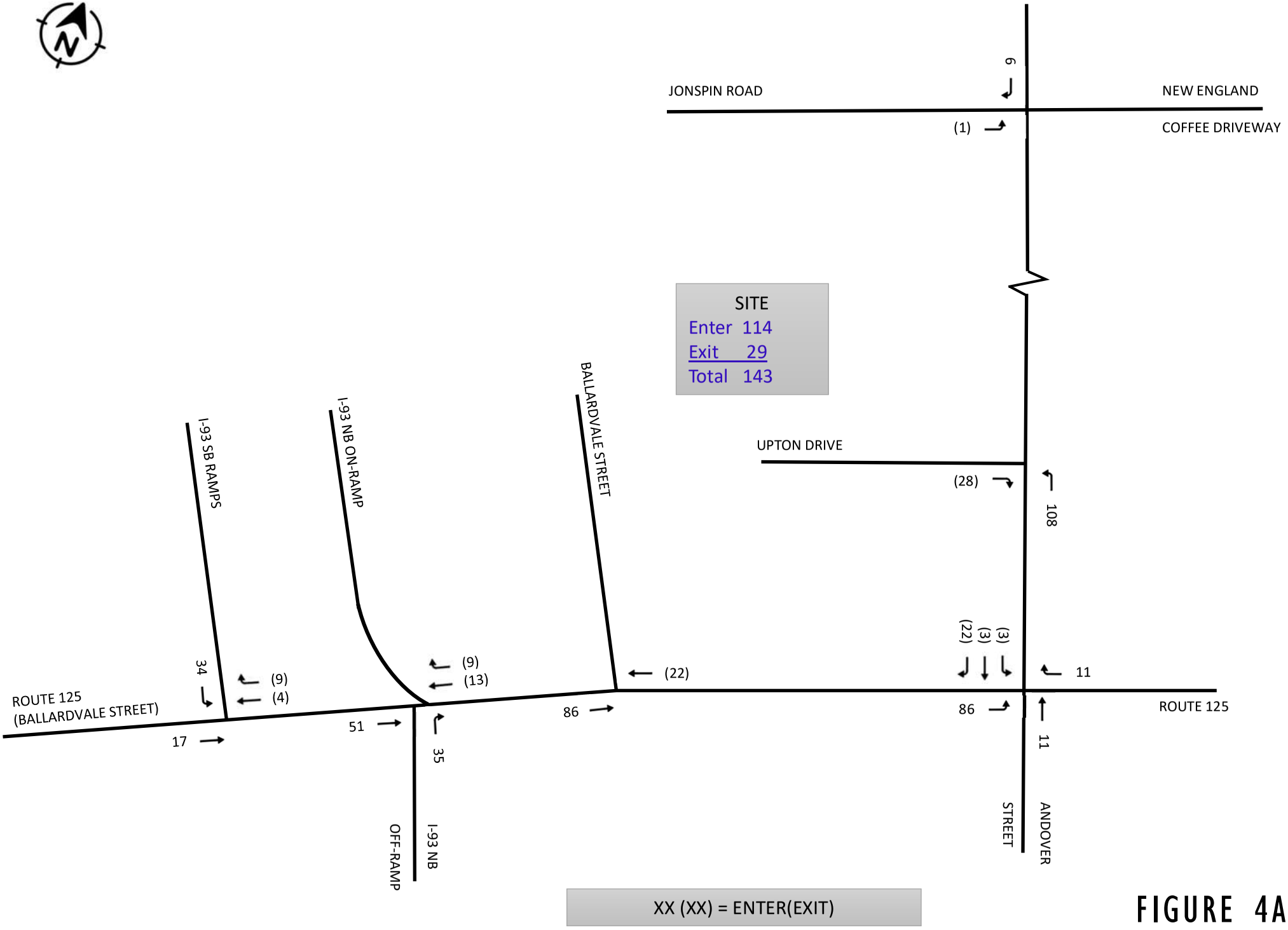


FIGURE 4A

AM SITE-GENERATED WEEKDAY PEAK HOUR TRAFFIC VOLUMES

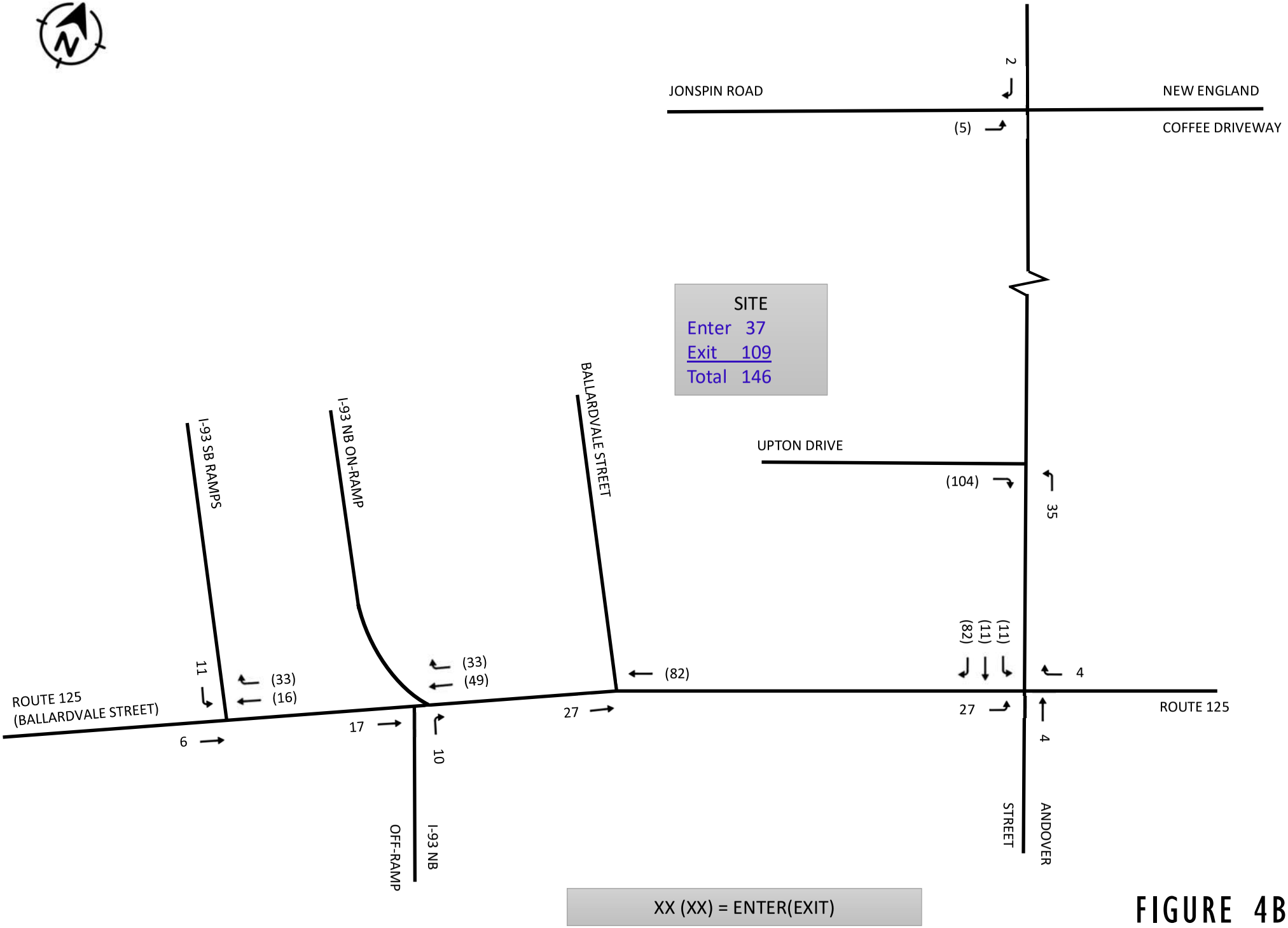


FIGURE 4B

PM SITE-GENERATED WEEKDAY PEAK HOUR TRAFFIC VOLUMES

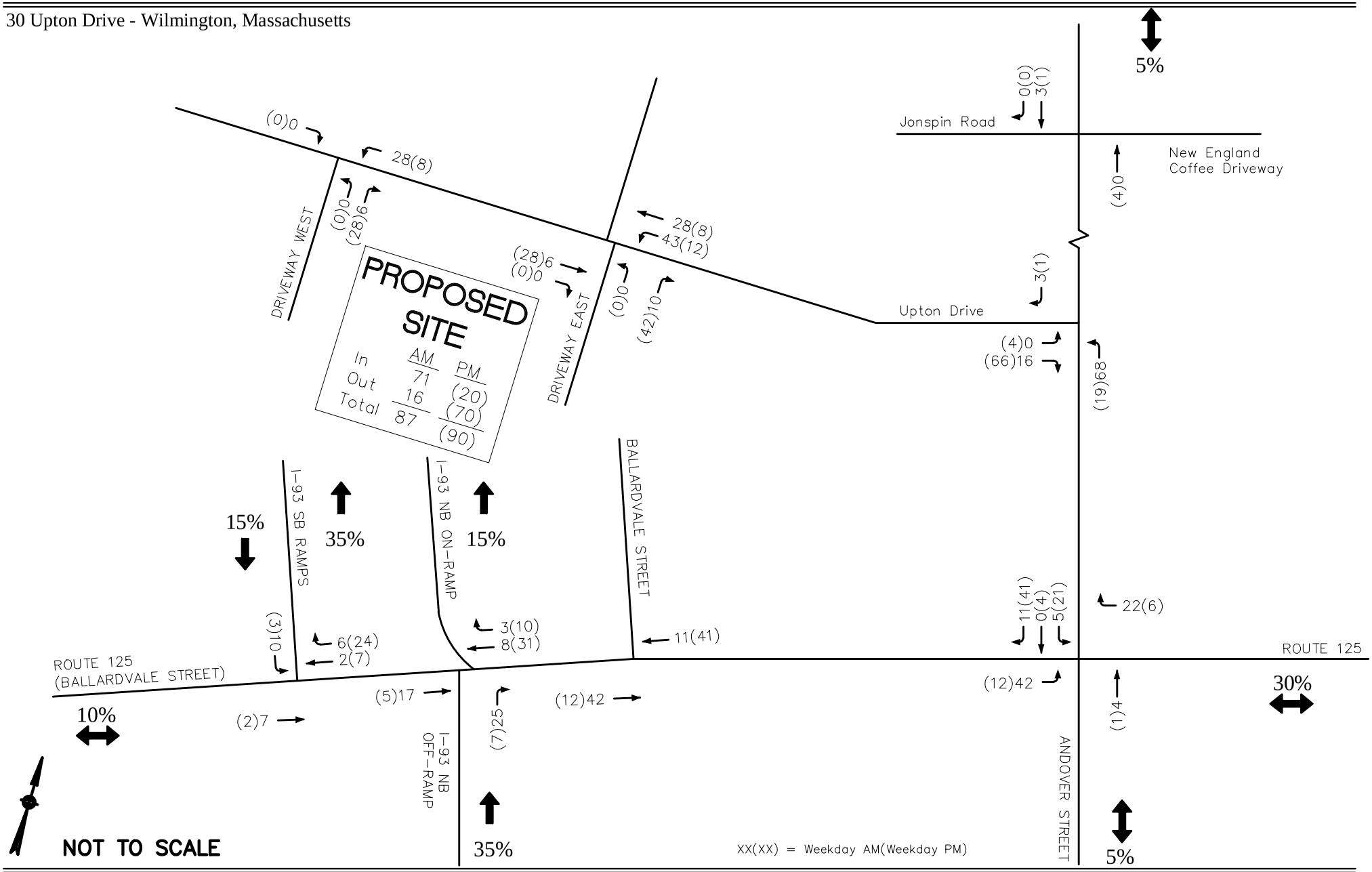


Figure 5

Site Generated Trips
Peak Hour Traffic Volumes

GPI Greenman-Pedersen, Inc.

Engineering and Construction Services

ITE TRIP GENERATION WORKSHEET

(10th Edition, Updated 2017)

LANDUSE: Specialty Trade Contractor
LANDUSE CODE: 180 Independent Variable --- 1,000 Sq. Feet Gross Floor Area
LOCATION: General Urban / Suburban
JOB NAME: **FLOOR AREA (KSF):** 20.0
JOB NUMBER:

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	19	--	10.22	3.00	43.33	6	2	13	50%	50%
AM PEAK OF GENERATOR	19	--	2.01	0.47	11.25	6	2	13	76%	24%
PM PEAK OF GENERATOR	19	--	2.23	0.85	10.83	6	2	13	38%	62%
AM PEAK (ADJACENT ST)	19	--	1.66	0.12	9.17	6	2	13	73%	27%
PM PEAK (ADJACENT ST)	18	--	1.97	0.38	10.83	6	2	13	32%	68%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	204	102	102	--	--	--
AM PEAK OF GENERATOR	41	31	10	--	--	--
PM PEAK OF GENERATOR	45	17	28	--	--	--
AM PEAK (ADJACENT ST)	33	24	9	--	--	--
PM PEAK (ADJACENT ST)	40	13	27	--	--	--

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
PEAK OF GENERATOR	--	--	--	--	--	--	--	--	--	--

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
PEAK OF GENERATOR	--	--	--	--	--	--

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
PEAK OF GENERATOR	--	--	--	--	--	--	--	--	--	--

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
PEAK OF GENERATOR	--	--	--	--	--	--

- Trip Generation

Institute of Transportation Engineers (ITE) 11th Edition
Land Use Code (LUC) 140 - Manufacturing

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 42.8

AVERAGE WEEKDAY DAILY

T = 4.75 * (X)
T = 4.75 * 42.8
T = 203.30
T = 204 vehicle trips
with 50% (102 vpd) entering and 50% (102 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.68 * (X)
T = 0.68 * 42.8
T = 29.10
T = 29 vehicle trips
with 76% (22 vph) entering and 24% (7 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.74 * (X)
T = 0.74 * 42.8
T = 31.67
T = 32 vehicle trips
with 31% (10 vph) entering and 69% (22 vph) exiting.

Institute of Transportation Engineers (ITE) 11th Edition
Land Use Code (LUC) 710 - General Office Building

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 28.5

AVERAGE WEEKDAY DAILY

T = 10.84 * (X)
T = 10.84 * 28.5
T = 308.94
T = 308 vehicle trips
with 50% (**154** vpd) entering and 50% (**154** vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 1.52 * (X)
T = 1.52 * 28.5
T = 43.32
T = 43 vehicle trips
with 88% (**38** vph) entering and 12% (**5** vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 1.44 * (X)
T = 1.44 * 28.5
T = 41.04
T = 41 vehicle trips
with 17% (**7** vph) entering and 83% (**34** vph) exiting.

SATURDAY DAILY

T = 2.21 * (x)
T = 2.21 * 28.5
T = 62.99
T = 62 vehicle trips
with 50% (**31** vpd) entering and 50% (**31** vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

T = 0.53 * (X)
T = 0.53 * 28.5
T = 15.11
T = 15 vehicle trips
with 54% (**8** vph) entering and 46% (**7** vph) exiting.

□ Trip Distribution Calculations

1325 Wilmington
Trip Distribution Calculations
Existing Travel Patterns

	Weekday Morning			Weekday Evening				
Ballardvale Street	Entering	Exiting		Entering	Exiting			**Say**
To/From the West	8	0	10%	2	3	7%	8%	**10%**
To/From the East	69	4	90%	9	60	93%	92%	90%
Total	77	4	100%	11	63	100%	100%	

Route 125	IN	OUT		IN	OUT			**Say**
To/From the North	161	64	16%	92	239	19%	17%	**15%**
To/From the South	897	161	74%	288	955	71%	73%	**75%**
Total	1058	225	90%	380	1194	90%	90%	

MDM TRANSPORTATION CONSULTANTS, INC.
Planners & Engineers

PRINCIPALS
Robert J. Michaud, P.E.
Daniel J. Mills, P.E., PTOE

M E M O R A N D U M

DATE: April 23, 2024

TO: Valerie Gingrich
Director of Planning and Conservation
121 Glen Road
Wilmington, MA 01887

FROM: Robert J. Michaud, P.E. – Managing Principal
Daniel A. Dumais, P.E. – Senior Project Manager

RE: **Response to Comments – Wilmington Engineering/ Planning & Conservation**
Proposed Life Science/Biomanufacturing Facility
181-187 Ballardvale Street – Wilmington, MA

MDM Transportation Consultants, Inc. (MDM) has prepared the following responses to transportation-related comments as issued in a letter by the Town of Wilmington Engineering Division dated February 6, 2024, a letter by the Town of Wilmington Department of Planning and Conservation dated January 29, 2024, and a letter by The Engineering Corporation (TEC) dated March 7, 2024. The. To facilitate review, specific transportation related comments are paraphrased with corresponding responses.

Town of Wilmington Engineering Division Letter

Traffic and Site Layout Comments

Comment 3: *"The Engineering Division recommends that the Traffic Memorandum provided be peer reviewed by a third-party traffic engineer. The study area should also be expanded to include the junction of Route 93 and Route 125. Further, at Community Development Technical Review (CDTR), Town staff discussed with the Applicant the Town's desire to improve pedestrian mobility and connectivity along this section of Ballardvale Street. The Town engaged VHB, Inc. in c.2021 to study pedestrian mobility in this location and develop concept level plans to improve pedestrian safety and connectivity in the area. This study is furnishable to the Applicant and Planning Board upon request. The project may present an opportunity to advance (in part) the goal of pedestrian improvements along the corridor with such improvements being mutually beneficial to both the Town and Applicant."*

Response: The Traffic Memorandum (TM) by MDM dated November 8, 2023, has been sent out for peer review by TEC with comments received on March 7, 2024. MDM's responses are provided in a subsequent section of this memo.

As shown in the TM, the project will result in a nominal increase in traffic activity at the Ballardvale Street (Route 125) signalized intersection with I-93. Specifically, the increase in trips due to the project is not expected to alter operating conditions compared to No-Build conditions with less than 1 vehicle trip or less per minute. A review of crash history indicates that neither of the Ballardvale Street intersections with I-93 are listed as high crash locations (HSIP) by MassDOT. MDM finds the relative traffic increases for the proposed project represent an inconsequential change in area roadway volumes - a level of change that falls well within normal day-to-day fluctuations in traffic entering and exiting the study area. Therefore, there is no material benefit to studying the Route 125 and 93 interchange ramps as part of this project.

The Proponent will work with the Town to provide an easement along the site frontage to accommodate the planned multi-modal improvements along this section of Ballardvale Street. For reference, the concept level plans to improve pedestrian safety and connectivity in the area prepared by the Town by VHB, Inc. in c.2021 are provided in the **Attachments**.

Comment 4: "*A truck turning maneuverability plan shall be provided for review. Turning exhibits shall be provided for the largest truck size expected to use the site, as well as trash pickup, and the Wilmington Ladder Truck.*"

Response: Truck turning maneuverability plans which include a WB-50, refuse vehicle, and Wilmington Ladder truck as prepared by Highpoint Engineering, Inc. are provided in the **Attachments** for reference. As shown the site has been designed to accommodate the largest design vehicle, refuse vehicle, and Wilmington Ladder truck.

Comment 5: "*The proposed layout does not appear to comply with the Town's Zoning Bylaw Section 6.4 Parking and Site Design Standards. Specifically, offset/setback of paved surfaces to property lines. The Applicant's cover letter indicates that the Applicant is seeking a waiver request from this zoning bylaw section, however, there appears to be an opportunity to increase the offset of the proposed parking bay to the northerly adjoining property boundary without sacrificing parking or impeding circulation. The Board may wish to discuss this with the Applicant.*"

Response: The site plan set has been updated by Highpoint Engineering, Inc. to remove the need for the requested waiver for offset/setback (see **Attachments** for reference).

Comment 6: "*The parking chart shown on the plans provides a split of 40% office and 60% Industrial/Manufacturing for the two existing buildings and the proposed building. The Applicant should provide additional information on existing uses, including floor plans, to demonstrate that the 40/60 split is appropriate."*

Response: The existing tenant list indicates a split of 38% office space and 62% R&D space. A breakdown of existing tenants is provided in the **Attachments**. The Proponent will continue to convert office to R&D space as opportunity presents. Furthermore, as shown in **Table 6** of the TA the existing uses of the site are generating trips at approximately half the industry standard ITE rate. Therefore, based on the existing tenant mix a 40/60 split is appropriate and results in a conservative parking estimate.

Comment 7: "*The Applicant's Engineer shall evaluate reducing the entrance radii proposed at the existing site driveway intersection at Ballardvale Street. Further, the Department of Public Works requests vertical granite curbing for each radii (proposed within the Public Right of Way) with details and plan callouts for appropriate transition curbing accordingly.*"

Response: Highpoint considered reducing the entrance radius from 35 ft to 30 ft as suggested by the Town. However, it was found that the 30 ft radii would not allow a WB-50 trailer to make a right turn into the property from Ballardvale Street without the rear tired riding up on the curb. Therefore, the entrance radii were kept at 35 feet. The site layout has been revised to include vertical granite curb within the right-of-way as requested by the Department of Public Works.

Town of Wilmington Department of Planning and Conservation Letter

Comment 8: "*As discussed at the January 22, 2024, Community Development Technical Review (CDTR) team meeting, a peer review of the traffic memorandum will be recommended to the Planning Board. As requested by the applicant, the review can be initiated prior to the Planning Board meeting.*"

Response: The Traffic Memorandum (TM) by MDM dated November 8, 2023, has been sent out for peer review by TEC with comments received on March 7, 2024. MDM's responses are provided in a subsequent section of this memo.

Comment 9: "*A truck turning exhibit shall be included with the revisions. This should show the turn radius of the Wilmington Fire Truck apparatus as well as any other large trucks that will access loading docks and dumpsters.*"

Response: Truck turning maneuverability plans which include a WB-50, refuse vehicle, and Wilmington Ladder truck as prepared by Highpoint Engineering, Inc. are provided in the **Attachments** for reference. As shown the site has been designed to accommodate the largest design vehicle, refuse vehicle, and Wilmington Ladder truck.

The Engineering Corp (TEC) Letter

Traffic Impact Assessment Comments

TEC Comment 5: *"To assess sight distance, the Applicant utilized the posted speed limit of 40 MPH along Ballardvale Street northwest bound rather than using 85th percentile travel speeds in each direction. Since the access drive to the Ballardvale Technology Center is located roughly 450 feet northwest of Route 125, TEC believes the posted speed limit is a conservative estimate of travel speed. Vehicles turning from Route 125 onto Ballardvale Street will likely not attain a speed of 40 MPH prior to the access drive. In addition, the posted speed along Ballardvale Street southeast bound prior to the access drive is 25 MPH, so TEC believes using a 40 MPH speed in this direction is also a conservative approach. The sight distances reported in Tables 3 and 4 of the TIA are in accordance with the American Association of State Highway and Transportation Officials (AASHTO) requirements. In a field review conducted on February 15, 2024, TEC confirmed the measured Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD) provided in the TIA. The Applicant has recommended that any new plantings or physical landscape features within the proposed Project driveway should be maintained at a height of 2 feet or less to ensure unobstructed lines of sight. The site plans should show the sight line triangles based on the AASHTO criteria provided in MDM's report. The Applicant should also commit to maintain vegetation along the site frontage consistently to ensure that sight lines remain unobstructed at the site driveway intersection with Ballardvale Street."*

Response: MDM concurs, the sight line triangles will be provided on the final site plan set by Highpoint Engineering. The Site Layout Plan will also include a note citing that "Signs, landscaping and other features located within sight triangle areas shall be designed, installed and maintained so as not to exceed 2-feet in height. Snow windrows located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed."

TEC Comment 6: "*The TIA presents motor vehicle crash data for the study intersections between 2018 and 2022, the most recent five-year period available from MassDOT. During this period, there were 25 crashes at the Route 125/Ballardvale Street intersection, 4 of which resulted in personal injury, and 9 crashes at the Ballardvale Street/181-187 and 200 Ballardvale Street driveways, 2 of which resulted in personal injury. Neither of the intersections had fatalities or crashes involving bicycles or pedestrians. The crash rates at each of the intersections were determined to be 0.40 for the former and 0.28 for the latter. Both are below MassDOT District 4 averages for signalized and unsignalized intersections, 0.73 and 0.57, respectively. Neither of the intersections contains a Highway Safety Improvement Plan (HSIP) cluster, so MDM has not recommended any immediate term safety countermeasures. TEC generally agrees with this assessment. However, on Ballardvale Street northwest bound, there is a transition from two lanes to one at the 181-187 and 200 Ballardvale Street driveways, which may have contributed to some of the crashes. TEC also observed queues that extend back from the Route 125 traffic signal that can frequently block the site driveway during the late afternoon and evening peak period. TEC recommends that the Applicant explore options to revise the pavement markings and signs along Ballardvale Street northwest bound to improve safety, including a striped 'Do Not Block' box."*

Response: The Proponent will work with the Town and if approved by the DPW the pavement markings will be updated to revise the northwest bound lane drop markings an signage as appropriate and to install a striped "Do Not Block box" markings and signage at the 181/187 driveway.

TEC Comment 10: "*There was no capacity or queue analysis conducted as part of the TIA. Rather, MDM provided a qualitative assessment of operations, essentially comparing 2030 No-Build volumes with 2030 Build volumes. On page 14, they have shown in Table 7 and have stated that the increase in traffic at each of the study locations will be less than 5%, and therefore, will have minimal impact on operations. While TEC generally concurs with the qualitative results, MDM should also provide 2023 Existing, 2030 No-Build and 2030 Build capacity and queue analyses as part of the TIA utilizing Highway Capacity Manual (HCM) methodologies if the Board desires additional quantitative analysis to assess the incremental increase in vehicle delays.*"

Response: As previously indicated, the project will result in a nominal increase in traffic activity at the study intersections. Specifically, the increase in trips due to the project is not expected to alter operating conditions compared to No-Build conditions with approximately 1 directional vehicle trip or less per minute. MDM finds the relative traffic increases for the proposed project represent an inconsequential change in area roadway volumes - a level of change that falls well within normal day-to-day fluctuations in traffic entering and exiting the study area. Therefore, there is no material benefit to providing capacity and queue analysis.

TEC Comment 11: "*MDM has recommended several mitigation measures for the Project: a) Access/ Egress Improvements, b) Pedestrian and Bicycle Accommodations, and c) Transportation Demand Management (TDM). These are described on page 15 of the TIA. TEC generally concurs with the identified measures. However, TEC understands that the Town is considering multi-mode improvements to Ballardvale Street between the Target Plaza and the 181-187 and 200 Ballardvale Street driveways. These improvements include a Shared Use Path (SUP) and/or sidewalk along both sides of Ballardvale Street and a crosswalk with a Pedestrian Hybrid Beacon (PHB) between 193 and 206 Ballardvale Street. In lieu of other data collection, analysis, or physical mitigation to address their increase in vehicular traffic, TEC recommends that the Applicant provide sidewalks along the site access to Ballardvale Street and provide fair-share mitigation funding to be utilized by the Town for the planning and design phase of the Ballardvale Street multi-modal improvements.*"

Response: The Proponent is not providing a walkway from the development to Ballardvale Street but will work with the Town to provide an easement along the site frontage to accommodate the planned multi-modal improvements along this section of Ballardvale Street and will work with the Town to provide appropriate fair share mitigation funding for the planning and design of the multi-modal improvements by the Town.

Site Plan Comments

TEC Comment 14: "*The Applicant should provide an Autoturn truck sweep analysis to demonstrate the ability of the expected delivery vehicles, service vehicles, or emergency vehicles to circulate around the site without leaving the paved surface and access the loading docks for each building. The Applicant should review any potential need for cross-access easements for employee and/or truck access.*"

Response: Truck turning maneuverability plans which include a WB-50, refuse vehicle, and Wilmington Ladder truck as prepared by Highpoint Engineering, Inc. are provided in the **Attachments** for reference. As shown the site has been designed to accommodate the largest design vehicle, refuse vehicle, and Wilmington Ladder truck. No cross-access easements for employee and/or truck access is required.

TEC Comment 15: "*The Applicant should coordinate with the Town of Wilmington Fire Department for preferred locations of fire lanes (if needed), confirmation of on-site hydrant locations (if needed), and sign requirements for fire lanes within the site.*"

Response: Based on discussions with the Town of Wilmington Fire Department no fire lanes or further requirements are needed. Highpoint Engineering, Inc. will continue to coordinate with WFD as needed.

TEC Comment 16: "*The plans should depict a 12" stop line and stop sign at the access drive as described in the*
TIA."

Response: A 12" STOP line and STOP sign (R1-1) will be included on the final site plan set prepared by Highpoint Engineering.

TEC Comment 17: "*The bottom of all traffic signs on-site should be a minimum of 7 feet above the ground surface per the Manual on Uniform Traffic Control Devices (MUTCD) when directly impeding sidewalks or travel paths. Detail C1 on Sheet C600 and Detail C4 on Sheet C601 show the height to be 6 feet above the ground surface.*"

Response: The updated bottom of all traffic signs on-site will be updated to a minimum of 7 feet above the ground surface per MUTCD guidance. This will be included on the final site plan set prepared by Highpoint Engineering.

TEC Comment 18: "*Details should be provided showing the layout and dimensions of compact vehicle parking spaces. Alternatively, a note could be added to Detail C1 on Sheet C601 denoting the size as 8' x 16'.*"

Response: The site proposes two different sized compact spaces; (7.5' x 16') and (8′ x 16′). The site layout has been revised to include where the compact spaces are proposed, and site details have been revised to include both on the site plan sets prepared by Highpoint Engineering.

TEC Comment 19: "*The Applicant has proposed to provide sidewalks connecting building entrances with the parking areas. As noted in Comment 11 above, TEC recommends that the Applicant also provide sidewalks along the reconstructed access drive to its intersection with Ballardvale Street. This will provide a continuous connection from the proposed building to the future Ballardvale Street improvements. There are several informal footpaths that lead from the northerly edge of the parking lot toward the north in the direction of the powerline easement and Upton Drive. A sidewalk along the driveway will potentially provide a connection for other walkers in the area.*"

Response: See Response to TEC Comment 11.

TEC Comment 20: "*The site plans should include a plan sheet depicting the sight triangles to and from the site driveway and identify areas to restrict vegetation, signage, and off-street parking to maintain AASHTO minimum recommendations. Notes should indicate: "Signs, landscaping and other features located within sight triangle areas shall be designed, installed, and maintained so as not to exceed 2.0 feet in height. Snow windrows located within sight triangle areas that exceed 3.5 feet in height or that would otherwise inhibit sight lines shall be promptly removed." All permanent and temporary signs should be located outside the sight line triangles.*"

Response: See Response to TEC Comment 5.

TEC Comment 21: "*The Applicant should denote the designated locations of secure and weather protected bicycle racks as described in the TIA.*"

Response: The site plan has been updated by Highpoint Engineering to include the location of the bicycle racks. The design of the shelter will be coordinated with the architect to fit into the overall design.

TEC Comment 22: "*Since the property abuts Route 125, a MassDOT-owned roadway, it is likely that an Indirect Access Permit will be required. The Applicant should be prepared to submit the appropriate Permit Application and supporting documents to the District 4 Office in Arlington.*"

Response: After the site plan review process, if required a Highway Access Permit will be submitted to MassDOT for the driveway.

TEC Comment 23: "*Although snow storage areas are shown on the plan, the Applicant should provide a snow removal and parking management plan for Town staff review.*"

Response: Given the adequate snow storage areas on the Site, the Proponent doesn't anticipate a snow storage problem. If snow was overly restricting parking the excess snow from any parking areas blocked will be removed from the Site at the expense of the Proponent.

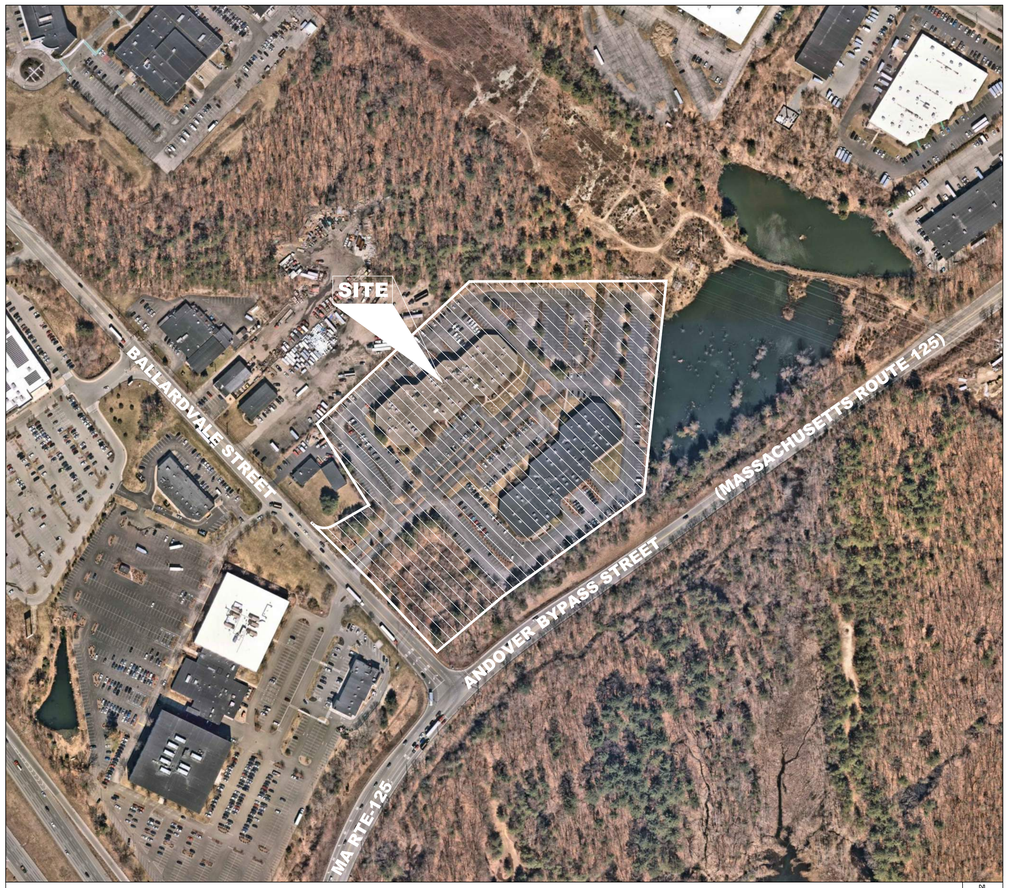
ATTACHMENTS

- □ Updated Site Plan
- □ Improvement Plan
- □ Existing Tenant Split

□ Updated Site Plan

PROPOSED OFFICE CAMPUS RE-USE
LIFE SCIENCE / BIOMANUFACTURING CONVERSION
181-187 BALLARDVALE STREET
WILMINGTON, MASSACHUSETTS 01887

PERMIT SUBMISSION: JANUARY 10, 2024
REVISED: APRIL 22, 2024



LOCUS
SCALE: N.T.S.

OWNER/APPLICANT:

CIMINELLI REAL ESTATE CORPORATION
800 HINGHAM STREET | SUITE 31
ROCKLAND, MA 02370
TEL: (617) 922-0512
ATTN: CHRISTOPHER NEELON
www.ciminelli.com

ASSESSOR'S ID:

MAP: R2
PARCEL: 20A & 20G

PROJECT TEAM:

CIVIL ENGINEER/LANDSCAPE DESIGN:
HIGHPOINT ENGINEERING
980 WASHINGTON STREET | SUITE 216
DEDHAM, MA 02021
TEL: (781) 770-0971
ATTN: NICHOLE LANGLEY
www.highpointeng.com

LAND SURVEY:
NITSCH ENGINEERING
2 CENTER PLAZA | SUITE 430
BOSTON, MA 02108
TEL: (617) 338-0063
ATTN: MARK VIOLETTE, PLS
www.nitscheng.com

ARCHITECT:
Ci DESIGN INC
250 SUMMER STREET | 1ST FLOOR
BOSTON, MA 02210
TEL: (617) 848-9511 x387
ATTN: MICHAEL STICKNEY
www.ci-designinc.com

ATTORNEY:
RIEMER BRAUNSTEIN
700 DISTRICT AVENUE | 11TH FLOOR
BURLINGTON, MA 01803
TEL: (617) 880-3498
ATTN: KRISTINE HUNG, ESQ.
www.riemerlaw.com

INDEX OF DRAWINGS

ISSUE HISTORY:		PERMIT SUBMISSION JANUARY 10, 2024	RESPONSE TO COMMENTS #1 APRIL 22, 2024				
CIVIL							
T100	TITLE SHEET	●	●				
G001	GENERAL NOTES SHEET	●	●				
G002	GENERAL LEGEND SHEET	●	●				
C100	SITE PREPARATION & EROSION CONTROL PLAN	●	●				
C200	LAYOUT AND MATERIALS PLAN	●	●				
C300	OVERALL GRADING & DRAINAGE PLAN	●	●				
C301	GRADING AND DRAINAGE PLAN	●	●				
C302	GRADING AND DRAINAGE PLAN	●	●				
C303	GRADING AND DRAINAGE PLAN	●	●				
C400	UTILITY PLAN	●	●				
C500	SITE LIGHTING AND PHOTOMETRICS PLAN	●	●				
C600	DETAILS SHEET	●	●				
C601	DETAILS SHEET	●	●				
C602	DETAILS SHEET	●	●				
C603	DETAILS SHEET	●	●				
C604	DETAILS SHEET	●	●				
C700	FIRE TRUCK TURN PLAN #1		●				
C701	FIRE TRUCK TURN PLAN #2		●				
C702	WB-50 TRUCK TURN PLAN		●				
C703	REFUSE TRUCK TURN PLAN		●				
LANDSCAPE							
L100	LANDSCAPE PLAN	●	●				
L101	LANDSCAPE PLAN	●	●				
ARCHITECTURE (BY OTHERS)							
T000	TITLE SHEET	●	●				
A101	FLOOR PLAN - LEVEL 1	●	●				
A102	FLOOR PLAN - LEVEL 2	●	●				
A500	EXTERIOR ELEVATIONS	●	●				
A501	EXTERIOR ELEVATIONS	●	●				
LAND SURVEY (BY OTHERS)							
EX-1	EXISTING CONDITIONS PLAN DATED MARCH 27, 2023 (1 OF 4)	●	●				
EX-2	EXISTING CONDITIONS PLAN DATED MARCH 27, 2023 (2 OF 4)	●	●				
EX-3	EXISTING CONDITIONS PLAN DATED MARCH 27, 2023 (3 OF 4)	●	●				
EX-4	EXISTING CONDITIONS PLAN DATED MARCH 27, 2023 (4 OF 4)	●	●				

HIGHPOINT ENGINEERING, INC.
LAND PLANNING
PERMIT EXPEDITING
CIVIL ENGINEERING
CONSULTING
DEDHAM EXECUTIVE CENTER
980 WASHINGTON ST., SUITE 216
DEDHAM, MA 02026
www.HighpointEng.com

CLIENT:
Ciminelli REAL ESTATE CORPORATION
CIMINELLI REAL ESTATE CORP.
800 HINGHAM STREET, SUITE 31
ROCKLAND, MA 02370
t 617.922.0512

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
04-22-2024

DATE APPROVED:

WILMINGTON PLANNING BOARD

OFFICE CAMPUS REUSE
LIFE SCIENCE/BIOMANUFACTURING CONVERSION
181-187 BALLARDVALE STREET
WILMINGTON, MA
OWNER/APPLICANT: BALLARDVALE OWNER, LLC

REV	DATE	DESCRIPTION
1	04.22.2024	RESPONSE TO COMMENTS #1

ISSUE TYPE:
DESIGN DEVELOPMENT
ISSUE DATE:
01/10/2024
PROJECT NUMBER:
22047

DRAWN BY: JMP
CHECKED BY: HK/NCL

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SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T100

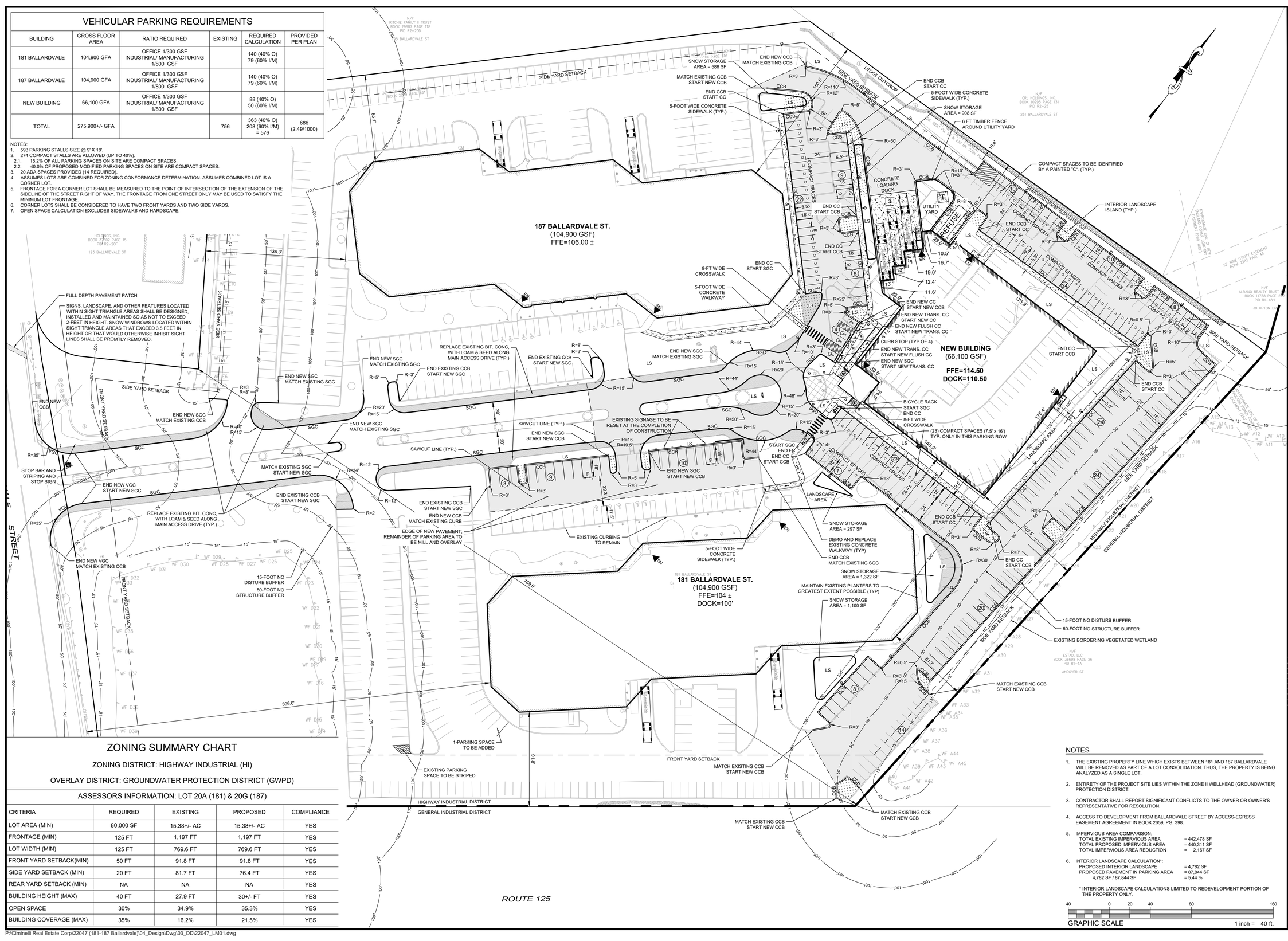
P:\Ciminelli Real Estate Corp\22047 (181-187 Ballardvale)\04_Design\Dwg\03_DD\22047_TS.dwg

ISSUED FOR : **PERMIT SET**

VEHICULAR PARKING REQUIREMENTS

BUILDING	GROSS FLOOR AREA	RATIO REQUIRED	EXISTING	REQUIRED CALCULATION	PROVIDED PER PLAN
181 BALLARDVALE	104,900 GFA	OFFICE 1/300 GSF INDUSTRIAL/ MANUFACTURING 1/800 GSF		140 (40% O) 79 (60% I/M)	
187 BALLARDVALE	104,900 GFA	OFFICE 1/300 GSF INDUSTRIAL/ MANUFACTURING 1/800 GSF		140 (40% O) 79 (60% I/M)	
NEW BUILDING	66,100 GFA	OFFICE 1/300 GSF INDUSTRIAL/ MANUFACTURING 1/800 GSF		88 (40% O) 50 (60% I/M)	
TOTAL	275,900+/- GFA		756	363 (40% O) 208 (60% I/M) = 576	686 (2.49/1000)

NOTES:
1. 593 PARKING STALLS SIZE @ 9' X 18'.
2. 274 COMPACT STALLS ARE ALLOWED (UP TO 40%).
   2.1. 15.2% OF ALL PARKING SPACES ON SITE ARE COMPACT SPACES.
   2.2. 40.0% OF PROPOSED MODIFIED PARKING SPACES ON SITE ARE COMPACT SPACES.
3. 20 ADA SPACES PROVIDED (14 REQUIRED).
4. ASSUMES LOTS ARE COMBINED FOR ZONING CONFORMANCE DETERMINATION. ASSUMES COMBINED LOT IS A CORNER LOT.
5. FRONTAGE FOR A CORNER LOT SHALL BE MEASURED TO THE POINT OF INTERSECTION OF THE EXTENSION OF THE SIDELINE OF THE STREET RIGHT OF WAY. THE FRONTAGE FROM ONE STREET ONLY MAY BE USED TO SATISFY THE MINIMUM LOT FRONTAGE.
6. CORNER LOTS SHALL BE CONSIDERED TO HAVE TWO FRONT YARDS AND TWO SIDE YARDS.
7. OPEN SPACE CALCULATION EXCLUDES SIDEWALKS AND HARDSCAPE.



ZONING SUMMARY CHART

ZONING DISTRICT: HIGHWAY INDUSTRIAL (HI)

OVERLAY DISTRICT: GROUNDWATER PROTECTION DISTRICT (GWPD)

ASSESSORS INFORMATION: LOT 20A (181) & 20G (187)

CRITERIA	REQUIRED	EXISTING	PROPOSED	COMPLIANCE
LOT AREA (MIN)	80,000 SF	15.38+/- AC	15.38+/- AC	YES
FRONTAGE (MIN)	125 FT	1,197 FT	1,197 FT	YES
LOT WIDTH (MIN)	125 FT	769.6 FT	769.6 FT	YES
FRONT YARD SETBACK(MIN)	50 FT	91.8 FT	91.8 FT	YES
SIDE YARD SETBACK (MIN)	20 FT	81.7 FT	76.4 FT	YES
REAR YARD SETBACK (MIN)	NA	NA	NA	YES
BUILDING HEIGHT (MAX)	40 FT	27.9 FT	30+/- FT	YES
OPEN SPACE	30%	34.9%	35.3%	YES
BUILDING COVERAGE (MAX)	35%	16.2%	21.5%	YES

NOTES

1. THE EXISTING PROPERTY LINE WHICH EXISTS BETWEEN 181 AND 187 BALLARDVALE WILL BE REMOVED AS PART OF A LOT CONSOLIDATION. THUS, THE PROPERTY IS BEING ANALYZED AS A SINGLE LOT.
2. ENTIRETY OF THE PROJECT SITE LIES WITHIN THE ZONE II WELLHEAD (GROUNDWATER) PROTECTION DISTRICT.
3. CONTRACTOR SHALL REPORT SIGNIFICANT CONFLICTS TO THE OWNER OR OWNER'S REPRESENTATIVE FOR RESOLUTION.
4. ACCESS TO DEVELOPMENT FROM BALLARDVALE STREET BY ACCESS-EGRESS EASEMENT AGREEMENT IN BOOK 2659, PG. 398.
5. IMPERVIOUS AREA COMPARISON:
   TOTAL EXISTING IMPERVIOUS AREA = 442,478 SF
   TOTAL PROPOSED IMPERVIOUS AREA = 440,311 SF
   TOTAL IMPERVIOUS AREA REDUCTION = 2,167 SF
6. INTERIOR LANDSCAPE CALCULATION*:
   PROPOSED INTERIOR LANDSCAPE = 4,782 SF
   PROPOSED PAVEMENT IN PARKING AREA = 87,844 SF
   4,782 SF / 87,844 SF = 5.44 %

   * INTERIOR LANDSCAPE CALCULATIONS LIMITED TO REDEVELOPMENT PORTION OF THE PROPERTY ONLY.

GRAPHIC SCALE 40 0 20 40 80 160 — 1 inch = 40 ft.

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LAND PLANNING
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DEDHAM, MA 02026
www.HighpointEng.com

CLIENT:
Ciminelli REAL ESTATE CORPORATION
CIMINELLI REAL ESTATE CORP.
800 HINGHAM STREET, SUITE 31
ROCKLAND, MA 02370
t 617.922.0512

CONSULTANT:

SEAL
COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
04-22-2024

DATE APPROVED:

WILMINGTON PLANNING BOARD

OFFICE CAMPUS REUSE
LIFE SCIENCE/BIOMANUFACTURING CONVERSION

181-187 BALLARDVALE STREET
WILMINGTON, MA

OWNER/APPLICANT: BALLARDVALE OWNER, LLC

REV	DATE	DESCRIPTION
1	04.22.2024	RESPONSE TO COMMENTS #1

ISSUE TYPE: DESIGN DEVELOPMENT
ISSUE DATE: 01/10/2024
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DRAWN BY: JMP
CHECKED BY: HK/NCL

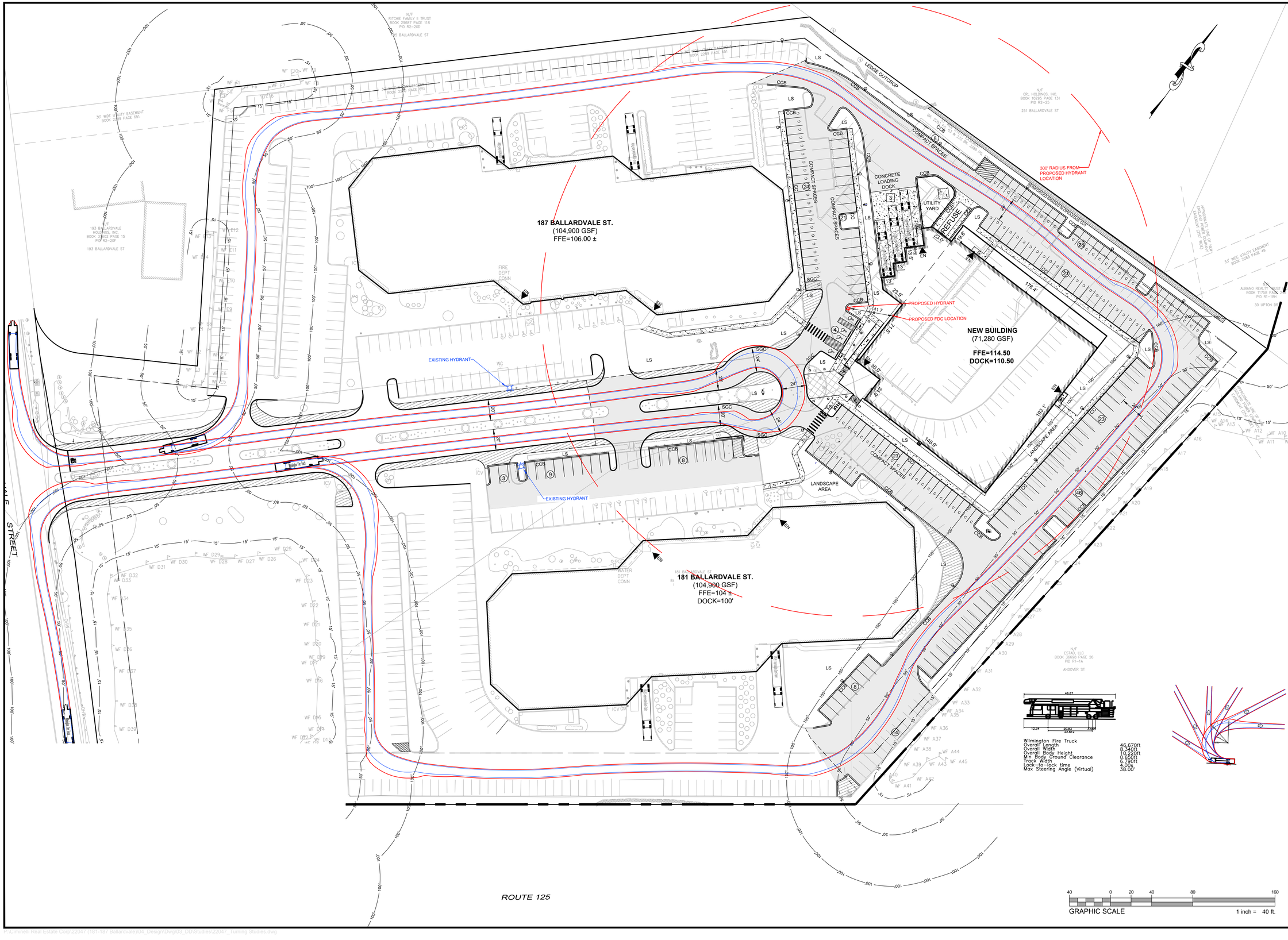
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SHEET TITLE:
LAYOUT & MATERIALS PLAN

SHEET NUMBER:
C200

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www.HighpointEng.com

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Ciminelli REAL ESTATE CORPORATION

CIMINELLI REAL ESTATE CORP.
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ROCKLAND, MA 02370
t 617.922.0512

CONSULTANT:

SEAL

COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER

04-22-2024

DATE APPROVED:

WILMINGTON PLANNING BOARD

OFFICE CAMPUS REUSE
LIFE SCIENCE/BIOMANUFACTURING CONVERSION

181-187 BALLARDVALE STREET
WILMINGTON, MA

OWNER/APPLICANT: BALLARDVALE OWNER, LLC

REV	DATE	DESCRIPTION
1	04.22.2024	RESPONSE TO COMMENTS #1

ISSUE TYPE:
DESIGN DEVELOPMENT

ISSUE DATE:
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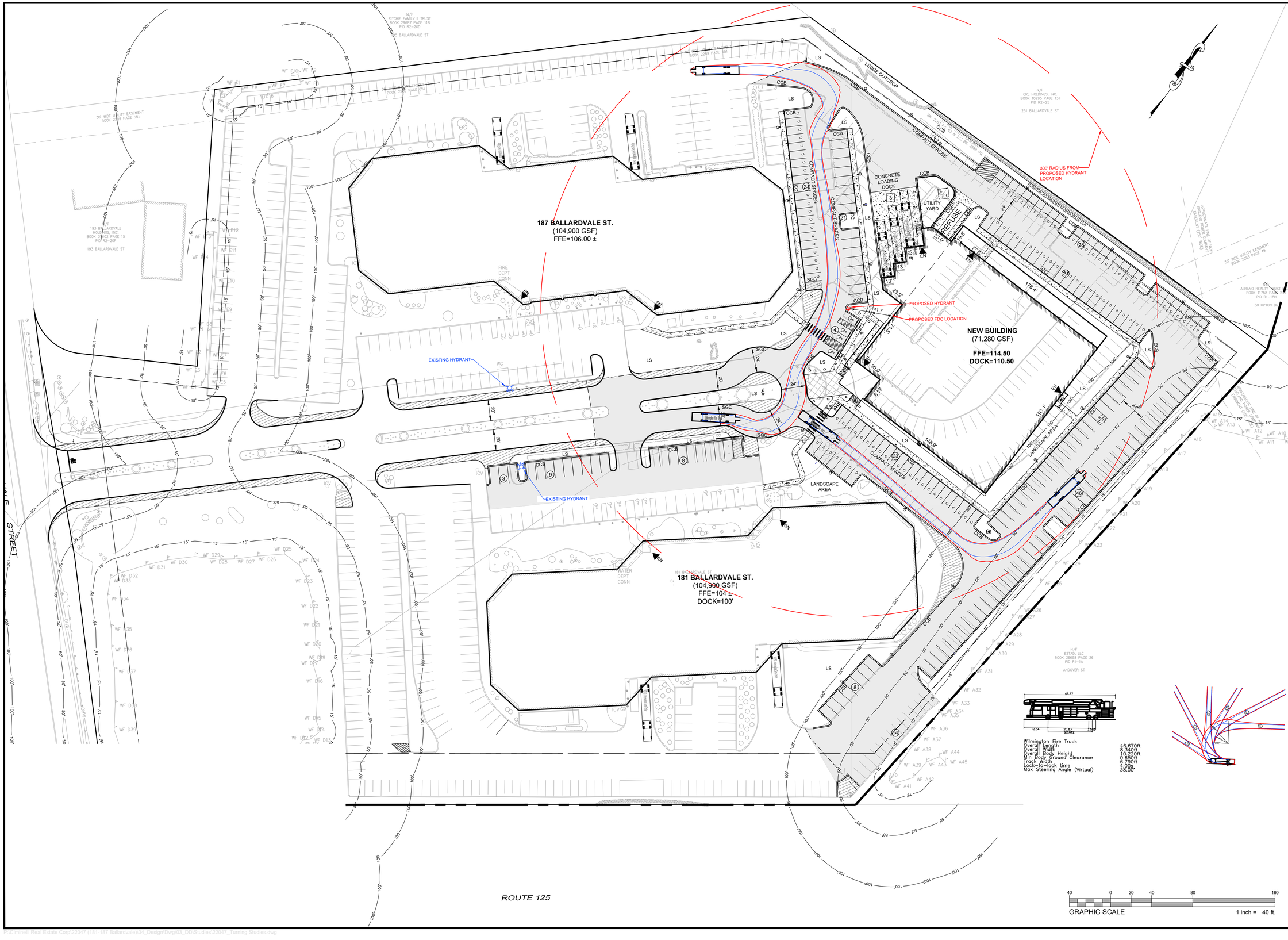
FIRE TRUCK TURN PLAN #1

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CIMINELLI REAL ESTATE CORP.
800 HINGHAM STREET, SUITE 31
ROCKLAND, MA 02370
t 617.922.0512

CONSULTANT:

SEAL

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DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER

04-22-2024

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WILMINGTON, MA

OWNER/APPLICANT: BALLARDVALE OWNER, LLC

REV	DATE	DESCRIPTION
1	04.22.2024	RESPONSE TO COMMENTS #1

ISSUE TYPE:
DESIGN DEVELOPMENT

ISSUE DATE:
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PROJECT NUMBER:
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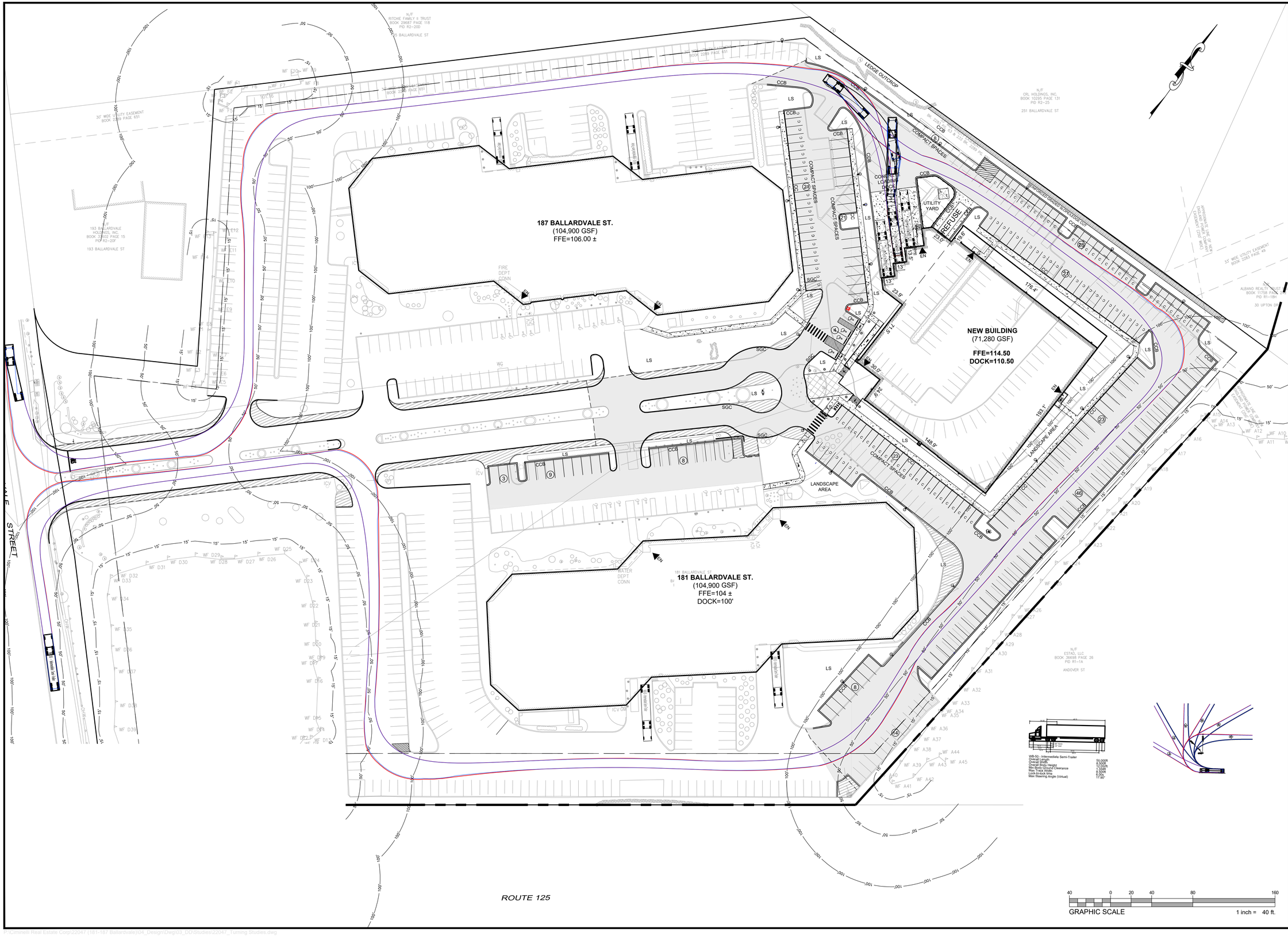
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FIRE TRUCK TURN PLAN #2

SHEET NUMBER:

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www.HighpointEng.com

CLIENT:

Ciminelli REAL ESTATE CORPORATION

CIMINELLI REAL ESTATE CORP.
800 HINGHAM STREET, SUITE 31
ROCKLAND, MA 02370
t 617.922.0512

CONSULTANT:

SEAL

COMMONWEALTH OF MASSACHUSETTS
DOUGLAS J. HARTNETT
CIVIL
No. 37796
REGISTERED PROFESSIONAL ENGINEER
04-22-2024

DATE APPROVED:

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181-187 BALLARDVALE STREET
WILMINGTON, MA

OWNER/APPLICANT: BALLARDVALE OWNER, LLC

REV	DATE	DESCRIPTION
1	04.22.2024	RESPONSE TO COMMENTS #1

ISSUE TYPE:
DESIGN DEVELOPMENT

ISSUE DATE:
03/01/2024

PROJECT NUMBER:
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SHEET TITLE:

WB-50 TRUCK TURN PLAN

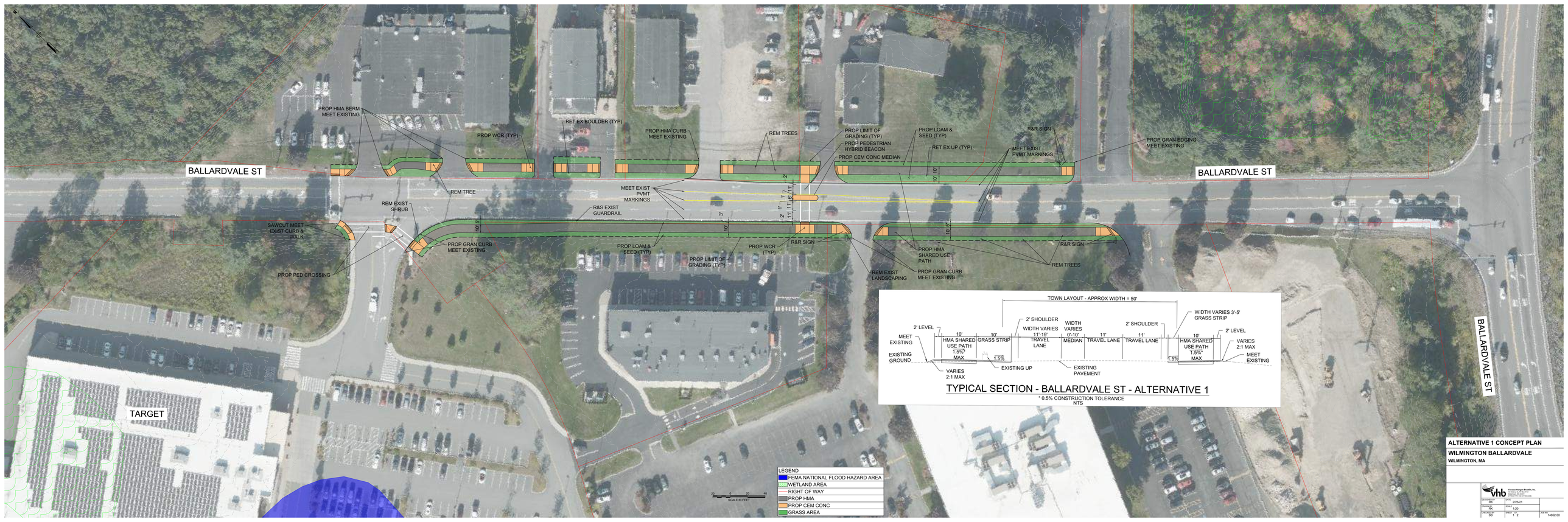
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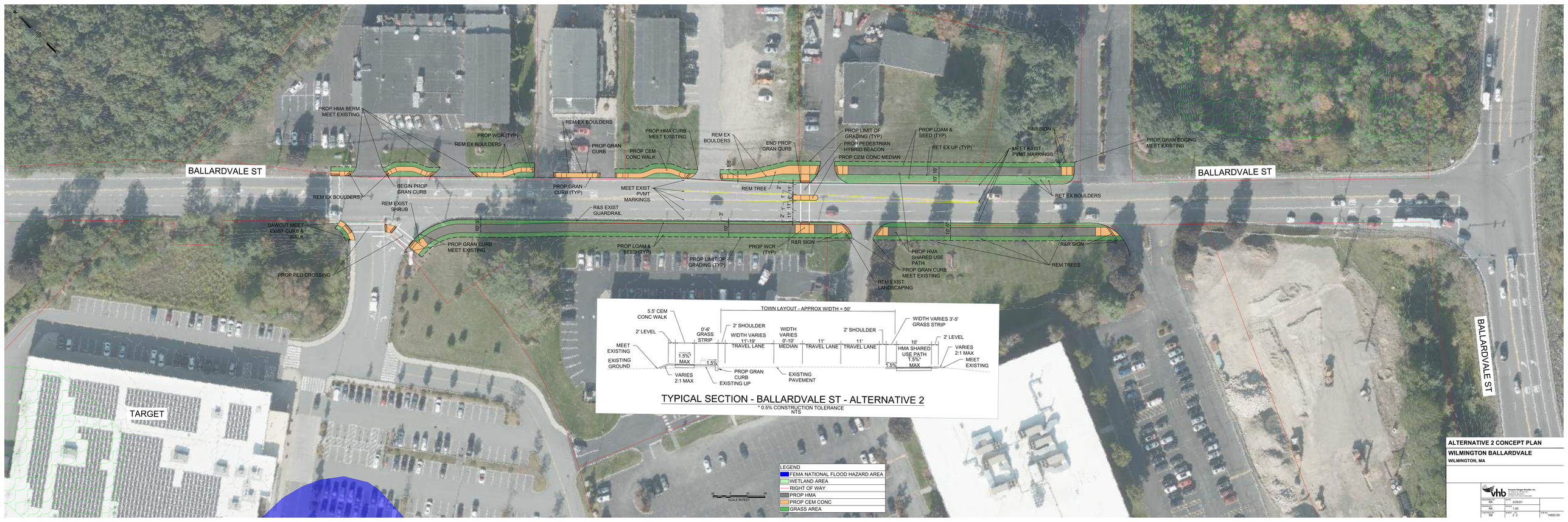
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□ Improvement Plan


BALLARDVALE ST
BALLARDVALE ST
BALLARDVALE ST
TARGET
PROP HMA BERM MEET EXISTING
PROP WCR (TYP)
RET EX BOULDER (TYP)
PROP HMA CURB MEET EXISTING
REM TREES
PROP LIMIT OF GRADING (TYP)
PROP PEDESTRIAN HYBRID BEACON
PROP CEM CONC MEDIAN
PROP LOAM & SEED (TYP)
RET EX UP (TYP)
R&R SIGN
MEET EXIST PVMT MARKINGS
PROP GRAN EDGING MEET EXISTING
REM TREE
REM EXIST SHRUB
SAWCUT MEET EXIST CURB & WALK
PROP GRAN CURB MEET EXISTING
PROP PED CROSSING
MEET EXIST PVMT MARKINGS
R&S EXIST GUARDRAIL
PROP LOAM & SEED (TYP)
PROP WCR (TYP)
R&R SIGN
PROP LIMIT OF GRADING (TYP)
REM EXIST LANDSCAPING
PROP HMA SHARED USE PATH
PROP GRAN CURB MEET EXISTING
R&R SIGN
REM TREES
2'
1'
1'
11'
11'
11'
2'
3'
10' 10'
10'
10' 5'
10' 5'
TOWN LAYOUT - APPROX WIDTH = 50'
2' LEVEL
MEET EXISTING
EXISTING GROUND
10' HMA SHARED USE PATH 1.5%* MAX
10' GRASS STRIP
2' SHOULDER
WIDTH VARIES 11'-19' TRAVEL LANE
WIDTH VARIES 0'-10' MEDIAN
11' TRAVEL LANE
11' TRAVEL LANE
2' SHOULDER
10' HMA SHARED USE PATH 1.5%* MAX
WIDTH VARIES 3'-5' GRASS STRIP
2' LEVEL
VARIES 2:1 MAX
MEET EXISTING
1.5%
1.5%
VARIES 2:1 MAX
EXISTING UP
EXISTING PAVEMENT
TYPICAL SECTION - BALLARDVALE ST - ALTERNATIVE 1
* 0.5% CONSTRUCTION TOLERANCE
NTS
LEGEND
FEMA NATIONAL FLOOD HAZARD AREA
WETLAND AREA
RIGHT OF WAY
PROP HMA
PROP CEM CONC
GRASS AREA
20 0 20 40
SCALE IN FEET
ALTERNATIVE 1 CONCEPT PLAN
WILMINGTON BALLARDVALE
WILMINGTON, MA
vhb
Vanasse Hangen Brustlin, Inc.
DESIGNED RK
DRAWN RK
CHECKED SB
DATE 2/25/21
SCALE 1:20
SHEET 1 OF 2
PROJECT NO. 14852.00


BALLARDVALE ST
BALLARDVALE ST
BALLARDVALE ST
TARGET
PROP HMA BERM MEET EXISTING
REM EX BOULDERS
PROP WCR (TYP)
REM EX BOULDERS
REM EX BOULDERS
PROP GRAN CURB
PROP HMA CURB MEET EXISTING
PROP CEM CONC WALK
REM EX BOULDERS
END PROP GRAN CURB
PROP LIMIT OF GRADING (TYP)
PROP PEDESTRIAN HYBRID BEACON
PROP CEM CONC MEDIAN
PROP LOAM & SEED (TYP)
RET EX UP (TYP)
R&R SIGN
MEET EXIST PVMT MARKINGS
PROP GRAN EDGING MEET EXISTING
BEGIN PROP GRAN CURB
REM EX BOULDERS
PROP GRAN CURB (TYP)
MEET EXIST PVMT MARKINGS
REM TREE
RET EX BOULDERS
REM EXIST SHRUB
R&S EXIST GUARDRAIL
SAWCUT MEET EXIST CURB & WALK
PROP GRAN CURB MEET EXISTING
PROP LOAM & SEED (TYP)
PROP WCR (TYP)
R&R SIGN
PROP LIMIT OF GRADING (TYP)
PROP HMA SHARED USE PATH
PROP GRAN CURB MEET EXISTING
REM EXIST LANDSCAPING
R&R SIGN
REM TREES
PROP PED CROSSING
TOWN LAYOUT - APPROX WIDTH = 50'
5.5' CEM CONC WALK
2' LEVEL
MEET EXISTING
EXISTING GROUND
0'-6' GRASS STRIP
2' SHOULDER
WIDTH VARIES 11'-10'
TRAVEL LANE
WIDTH VARIES 0'-10'
MEDIAN
11'
TRAVEL LANE
2' SHOULDER
11'
TRAVEL LANE
WIDTH VARIES 3'-5' GRASS STRIP
10'
HMA SHARED USE PATH
2' LEVEL
VARIES 2:1 MAX
MEET EXISTING
1.5%* MAX
1.5%
1.5%
1.5%*
MAX
VARIES 2:1 MAX
PROP GRAN CURB
EXISTING UP
EXISTING PAVEMENT
TYPICAL SECTION - BALLARDVALE ST - ALTERNATIVE 2
* 0.5% CONSTRUCTION TOLERANCE
NTS
LEGEND
FEMA NATIONAL FLOOD HAZARD AREA
WETLAND AREA
RIGHT OF WAY
PROP HMA
PROP CEM CONC
GRASS AREA
20 0 20 40
SCALE IN FEET
ALTERNATIVE 2 CONCEPT PLAN
WILMINGTON BALLARDVALE
WILMINGTON, MA
vhb
Vanasse Hangen Brustlin, Inc.
DESIGNED BY: RK
DRAWN BY: RK
CHECKED BY: SB
DATE: 2/25/21
SCALE: 1:20
SHEET: 2 OF 2
PROJECT NO.: 14852.00

□ Existing Tenant Split

181/187 Ballardvale

Tenant Name	R&D Square Feet	Office Square Feet
Viant	19,253	
Gener8	20,401	
Ledvance	20,134	
Re:Build Fikst	35,789	
Liberty Defense	9,920	
Universal Services of America	14,406	
IDEX	8,216	
XOS Technologies		6,810
Greenman Pedersen		12,110
Caretenders		5,113
Trane		22,189
Unifirst		8,275
Righter Group		3,580
Security Innovation		6,042
WB Engineering		5,465
Parker Ibrahim & Berg		2,364
Transperfect		5,058
Kuberre Systems		2,294
Total	128,119	79,300
	62%	38%

Memorandum

To: David Wilkinson
Managing Partner
Camber Development
1 International Place, Suite 1440
Boston, MA 02110

Date: January 27, 2025

Project #: 16050.01

From: Vinod Kalikiri PE, PTOE
Noah Yoskowitz PE

Re: Proposed Warehouse Building
800 Salem Street
Wilmington, Massachusetts
Supplemental Traffic Evaluation based on New Traffic Counts

Introduction

VHB has prepared this supplemental memorandum as an update to the January 8, 2025 traffic evaluation that was previously prepared in support of the occupancy of the 237,880± square foot (sf) industrial development at 800 Salem Street (Route 62) in Wilmington, Massachusetts (the Project). Specifically, the updated evaluation presented in this supplemental memorandum uses new traffic counts collected in December 2024, as recommended by the Town of Wilmington's traffic peer review consultant. The analysis methodology for the preparation of this supplemental evaluation is consistent with the methodology used in the January 8, 2025 traffic evaluation.

Summary

The tenant proposes to operate a parcel delivery service to customers, referred to as a Sub-Same Day (SSD) Delivery service, within an approximately 30-minute drive from the Site. All deliveries will be made by passenger vehicles. Below are some of the highlights of the updated evaluation documented in this memorandum. The remainder of the memorandum includes detailed analysis supporting the summary below.

- Existing condition peak hour through traffic volume on Salem Street has generally increased by about 9 to 10 percent between March 2022 (when data used in the January 8, 2025 traffic evaluation was collected) and the December 2024 data that was collected for the preparation of this updated evaluation. Turning movements at various intersections along the corridor have gone up and down by various degrees over the same period. Use of the updated traffic counts ensures that the latest traffic volume patterns are analyzed for reviewing the impacts of the proposed use.
- At full capacity of the building operations, the tenant would generate approximately 215 total trips (108 in and 107 out) during the weekday morning peak hour and 204 total trips (102 in and 102 out) during the weekday evening peak hour. I.e., the peak hour trip generation will be evenly split between entering and exiting vehicles. On Salem Street in the vicinity of the Woburn Street signalized intersection, the estimated peak hour Site traffic represents approximately 8 to 9 percent of the roadway traffic. East of the Woburn Street traffic signal, Site traffic represents approximately 9 to 12 percent of the peak hour roadway traffic.
- Approximately 71 percent of Site trips are projected to use I-93, and the remaining 29 percent would use local roadways.
- The signalized intersection of Route 62 at Woburn Street is projected to operate over capacity during certain peak times in the future <u>independent of the Project</u>. The proposed auxiliary lane improvements to the West

101 Walnut Street
Watertown, MA 02472-4026
P 617.924.1770

Memorandum

side of Woburn St will result in the overall intersection level of service improving from the No-Build to Build condition.

- The analysis shows that the unsignalized intersections of Route 62 at the I-93 ramps are over capacity independent of the Project.
- To offset the Project impacts and to address the existing deficiencies along the Salem Street corridor, the Proponent proposes the following strategies.
    - Construct a dedicated left turn lane on Salem Street at the east Site driveway prior to Certificate of Occupancy.
    - Prepare design plans for the reconfiguration of the existing short right turn lane in the westbound direction at the signalized intersection of Salem Street at Woburn Street into a shared through-right turn lane, including associated striping, signage and traffic signal timing improvements at the intersection. The construction documents for these improvements will be submitted to the Town prior to Certificate of Occupancy. This enhancement would improve the overall intersection peak hour operations to levels comparable to or better than the No-Build conditions.
    - Prepare an updated Conceptual Design Report (CDR) for the I-93 ramp intersections to reflect the additional Site generated traffic and expand the study coverage to include the Woburn Street signalized intersection on Salem Street. This Study would be completed prior to certificate of occupancy.
    - Contribute monetary funds to a Town controlled escrow account to be used by the Town to implement improvements along the Salem Street corridor (for example, I-93 ramp intersections, Woburn Street/Salem Street intersection, deficient culvert across Salem Street, etc.). The monetary contribution, calculated based on a "fair share" formula, will be made prior to the issuance of the Certificate of Occupancy. The Proponent will work with the Town to define the specifics of the fair share formula for sharing the corridor improvement cost.
    - Commit to performing a post-occupancy traffic monitoring study six months after the Certificate of Occupancy to confirm the findings of the analyses presented in this report.

Study Area

The study area for this updated evaluation includes the same locations, listed below, that were previously reviewed in the January 8, 2025 traffic evaluation.

1. Route 62 at the I-93 Southbound Ramps (*Stop-sign control)*
2. Route 62 at the I-93 Northbound Ramps *(Stop-sign control)*
3. Route 62 at Woburn Street *(Signalized)*
4. Route 62 at the West Site Driveway *(Stop-sign control)*

Memorandum

5. Route 62 at the East Site Driveway *(Stop-sign control)*

New Existing Traffic Volumes

Turning movement counts (TMC) were conducted on Thursday, December 19, 2024 at the study intersections from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM on each day. The peak hours for the Study were identified to occur from 7:30 AM to 8:30 AM during the weekday morning and from 4:00 PM to 5:00 PM during the weekday evening commuter periods.

Additionally, a 48-hour automatic traffic recorder (ATR) was conducted from Wednesday, December 18, 2024 through Thursday, December 19, 2024. The data collected by the ATR is presented below in Table 1. The March 2022 and December 2023 traffic volume summary presented in the January 8, 2025 traffic evaluation is also included in the table for comparison.

Table 1 ATR Volume Summary: Salem Street Near the Site

	Weekday		Weekday AM Peak Period			Weekday PM Peak Period		
	ADT[1]	ADT % Change	Volume[2]	K[3]	Dir. Dist[4]	Volume[2]	K[3]	Dir. Dist[4]
March 2022 Data	14,130	--	1,123	8%	57% WB	1,260	9%	58% EB
December 2023 Data	14,200	+ 0.5%	1,030	7%	57% WB	1,215	9%	54% EB
December 2024 Data	15,900	+ 10.7%	1,105	7%	56% WB	1,410	9%	55% EB

1 daily traffic expressed in vehicles per day
2 peak period volumes expressed in vehicles per hour
3 percent of daily traffic that occurs during the peak period
4 directional distribution of peak period traffic

Prior data was seasonally adjusted based on data from MassDOT Count Station 4095 (I-93 North of Ramp Route 62 to I-93 NB). A review of the same permanent count location indicated that a seasonal adjustment factor of four percent is appropriate for the new data collected in December 2024. Additionally, the traffic volumes were increased by the previously established annual growth rate of one percent to develop the 2025 existing conditions traffic volumes. The resulting adjusted data was then balanced between intersections where appropriate. The 2025 Existing Traffic Volumes used in the analysis are shown in Figures 1 and 2 for the weekday morning and weekday evening peak hours, respectively. The raw traffic count data is enclosed with this memorandum.

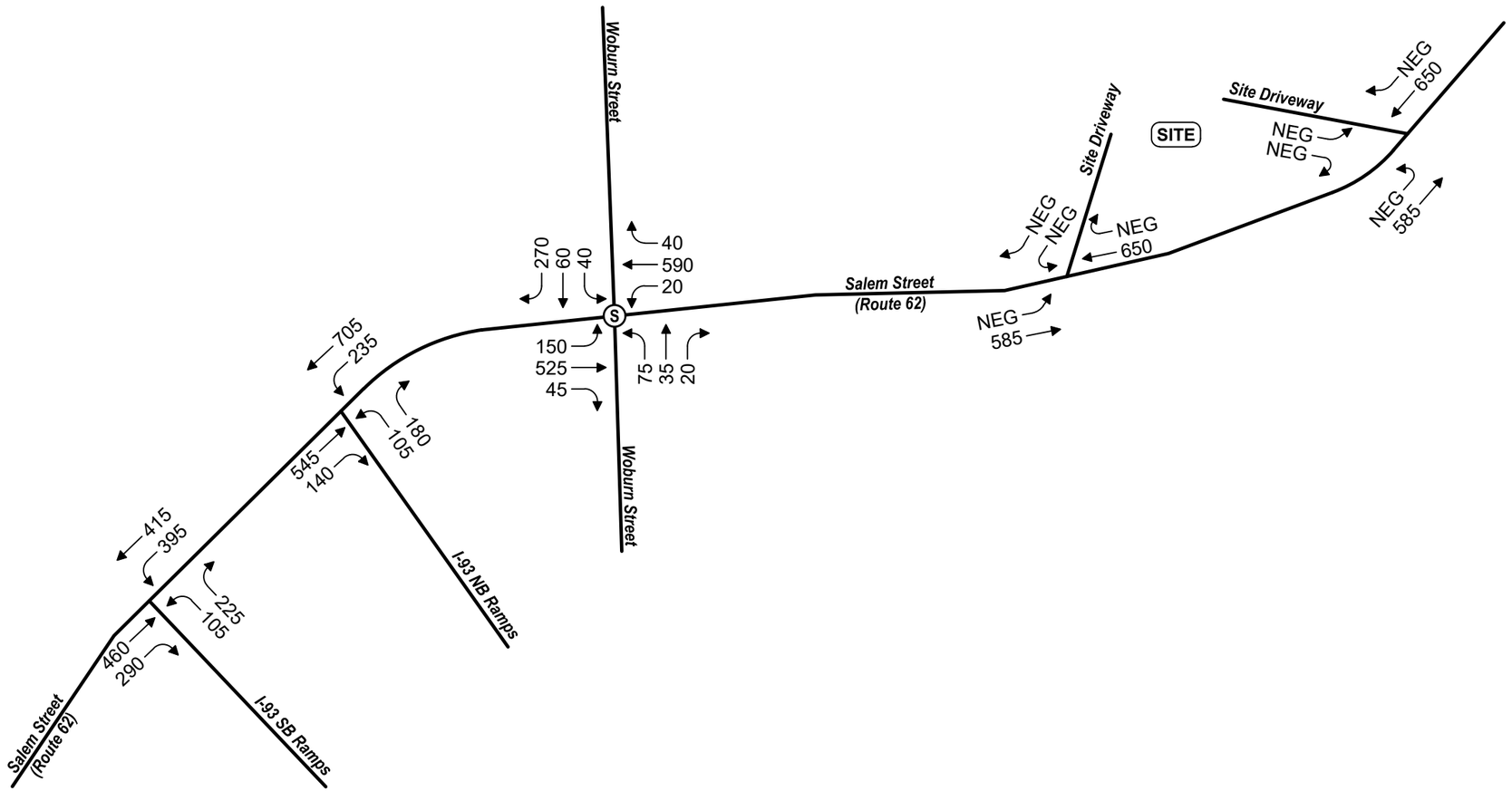
Future No-Build Conditions

Using the methodology presented in the January 8, 2025 traffic evaluation, the 2025 existing conditions volumes were grown to a 7-year horizon year of 2032 by applying a one percent per year growth factor to the existing volumes. Based on conversations with the Town of Wilmington and Town of North Reading Planning Department staff, volumes generated by the following planned developments were included in the future conditions traffic volumes:

Figure 1: 2025 Existing Conditions - Weekday Morning Peak Hour Traffic Volumes
800 Salem Street | Wilmington, MA

1.13.2025

Ⓢ **Signalized Intersection**
neg **= Negligible**



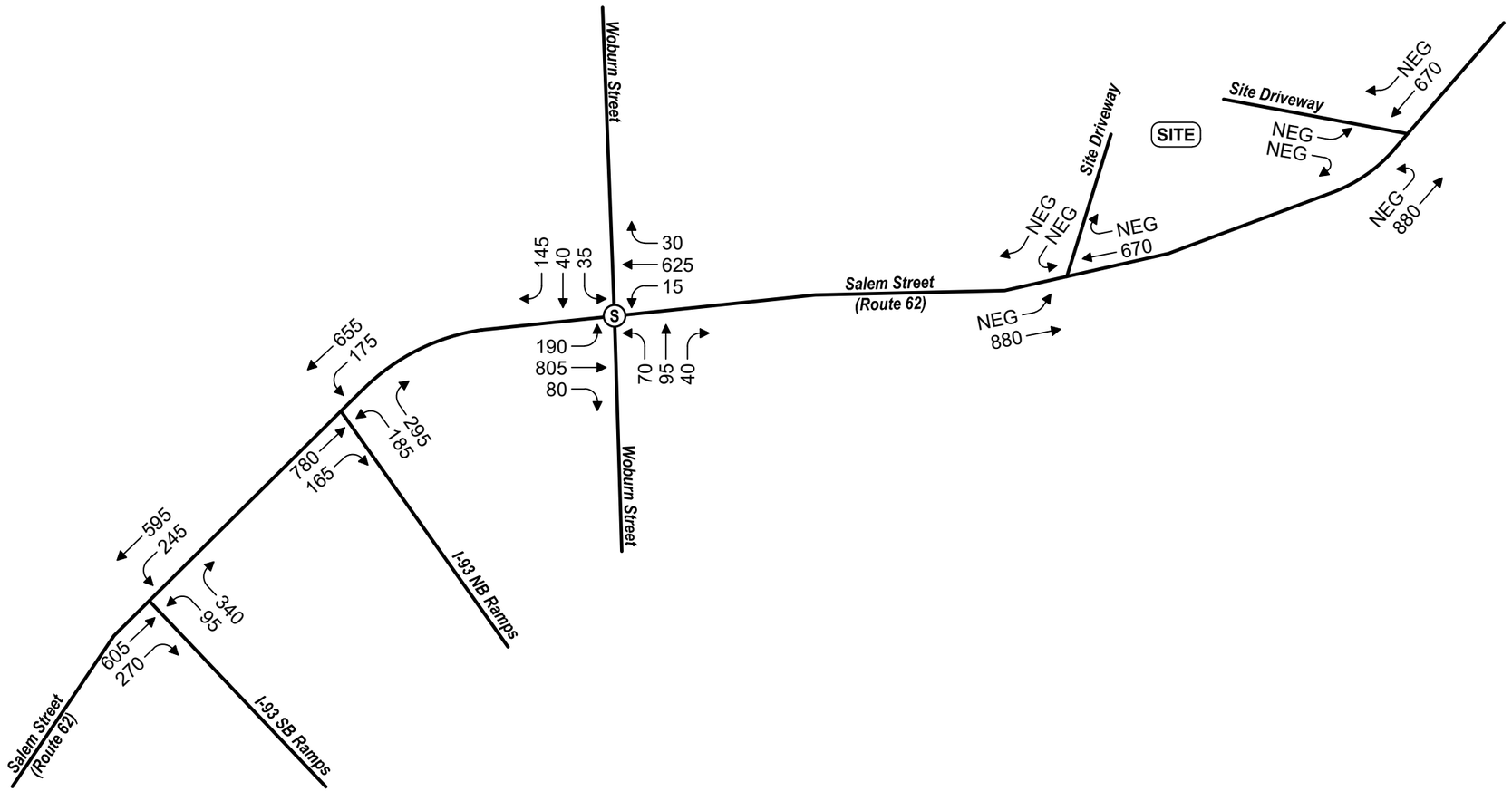
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Figure 2: 2025 Existing Conditions - Weekday Evening Peak Hour Traffic Volumes
800 Salem Street | Wilmington, MA

1.13.2025

Ⓢ **Signalized Intersection**
neg **= Negligible**



Not to Scale

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Memorandum

- **Proposed Multifamily Residential Development, Middlesex Avenue/Jefferson Road, Wilmington.** This project involves approximately 108 multifamily residential units on the northeast corner of the intersection of Middlesex Avenue at Jefferson Road southwest of the Project Site. These volumes were incorporated into the future conditions traffic volumes.
- **Proposed Age-Restricted (55+) Condos at 104 Lowell Road (Route 62), North Reading.** This project involves approximately 502 age-restricted (55+) condominiums to be located at 104 Lowell Road. The traffic volumes for this development were incorporated into the future conditions traffic volumes.

Figures 3 and 4 present the resulting 2032 Future No-Build Traffic Volumes for the weekday morning and weekday evening peak hours, respectively.

Trip Generation

Project trip generation summarized in the January 8, 2025 traffic evaluation is repeated in Table 2 below.

Table 2 Peak Hour Trip Generation Comparison (Original Study vs. Currently Proposed)

Time Period		2022 Original Study (Based on ITE Guidelines)			Tenant Data for Proposed Operations (Empirical Data)			Increase from Approved Trip Generation
		Personal Automobile Trips	Truck Trips	Total Trips	Personal Automobile Trips	Truck Trips	Total Trips	
Weekday Morning	Enter	38	2	**40**	107	1	**108**	+ 68
Peak Hour	Exit	9	3	**12**	107	0	**107**	+ 95
	Total	47	5	**52**	214	1	**215**	+163
Weekday Evening	Enter	11	4	**15**	101	1	**102**	+ 87
Peak Hour	Exit	37	3	**40**	102	0	**102**	+ 62
	Total	48	7	**55**	203	1	**204**	+149

Trip Distribution and Assignment

The anticipated trip distribution of project-related delivery vehicle trips, as documented in the January 8, 2025 evaluation, are shown in Figure 5. Figures 6 and 7 show the Project-generated traffic volumes for the weekday morning and weekday evening peak hours, respectively that were developed by applying the trip distribution assumptions for each vehicle type to the corresponding tenant trip generation data summarized in Table 2.

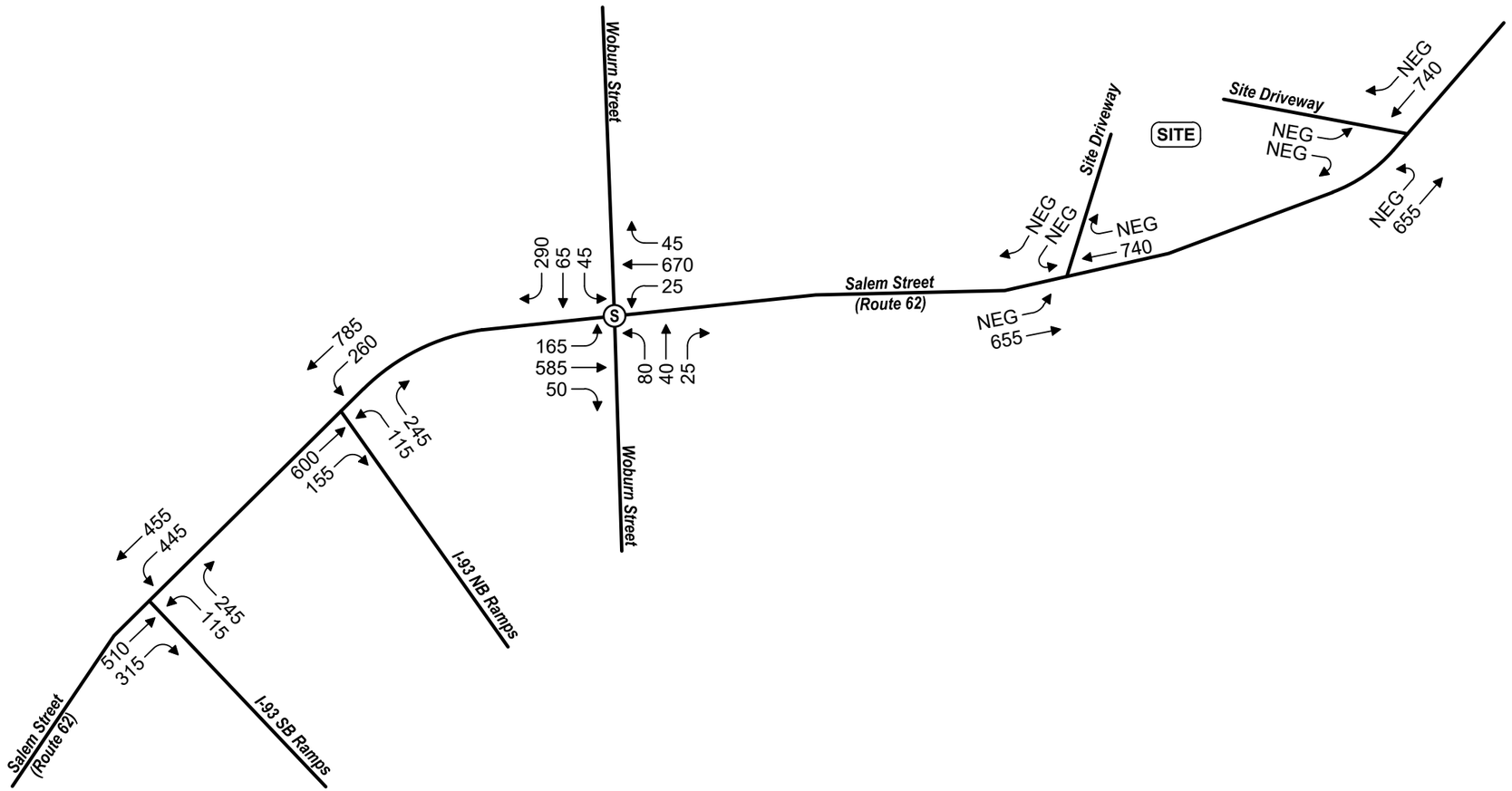
Build Traffic Volumes

Consistent with the methodology used in the January 8, 2025 evaluation, the Build condition traffic volumes were developed by applying the Project-generated trips to the No-Build volumes. Figures 8 and 9 show the resulting Build weekday morning and weekday evening peak hour traffic volumes at the study area intersections.

Figure 3: 2032 No-Build Conditions - Weekday Morning Peak Hour Traffic Volumes
800 Salem Street | Wilmington, MA

1.13.2025

Ⓢ **Signalized Intersection**
neg **= Negligible**



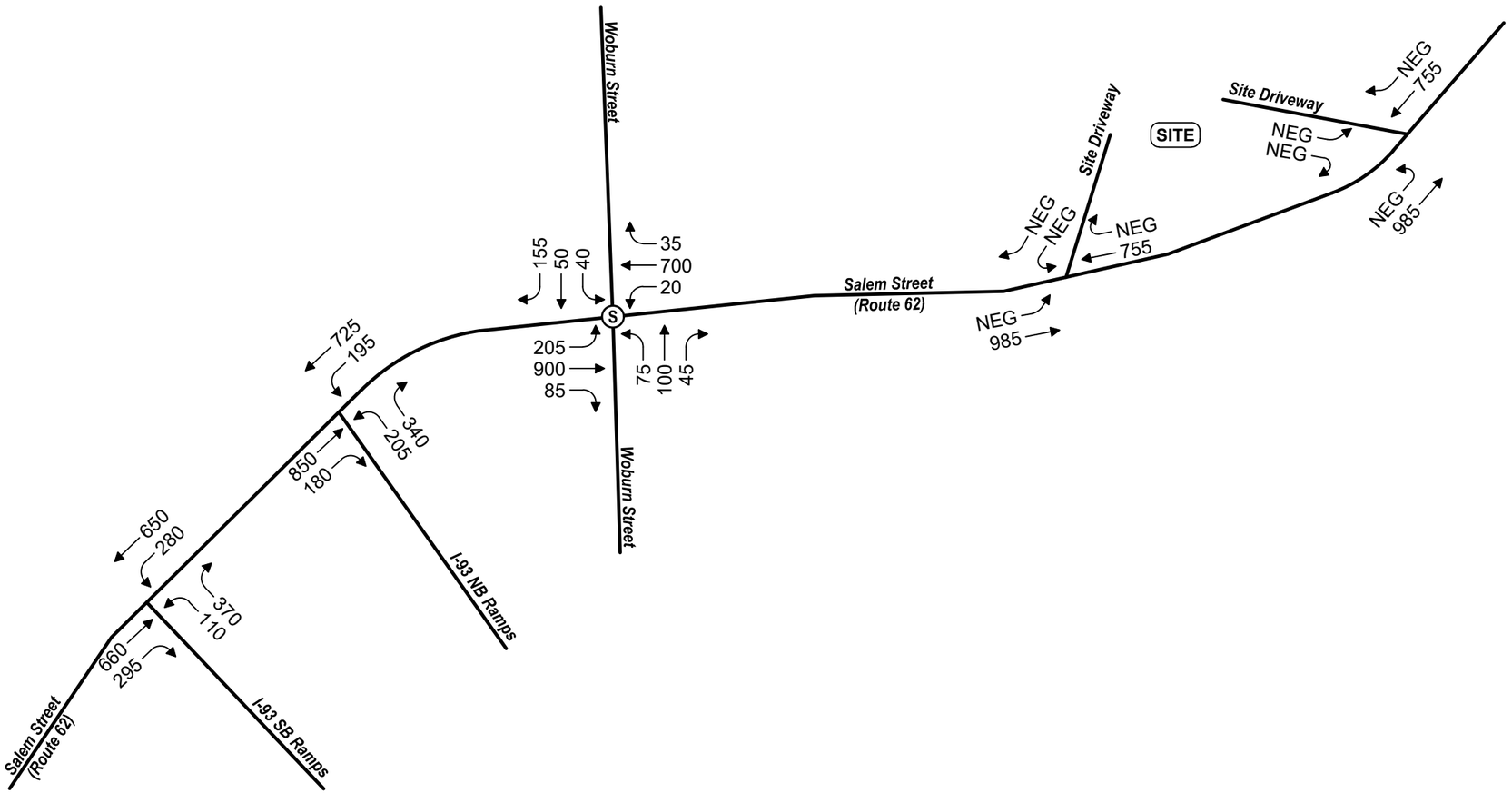
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Figure 4: 2032 No-Build Conditions - Weekday Evening Peak Hour Traffic Volumes
800 Salem Street | Wilmington, MA

1.13.2025

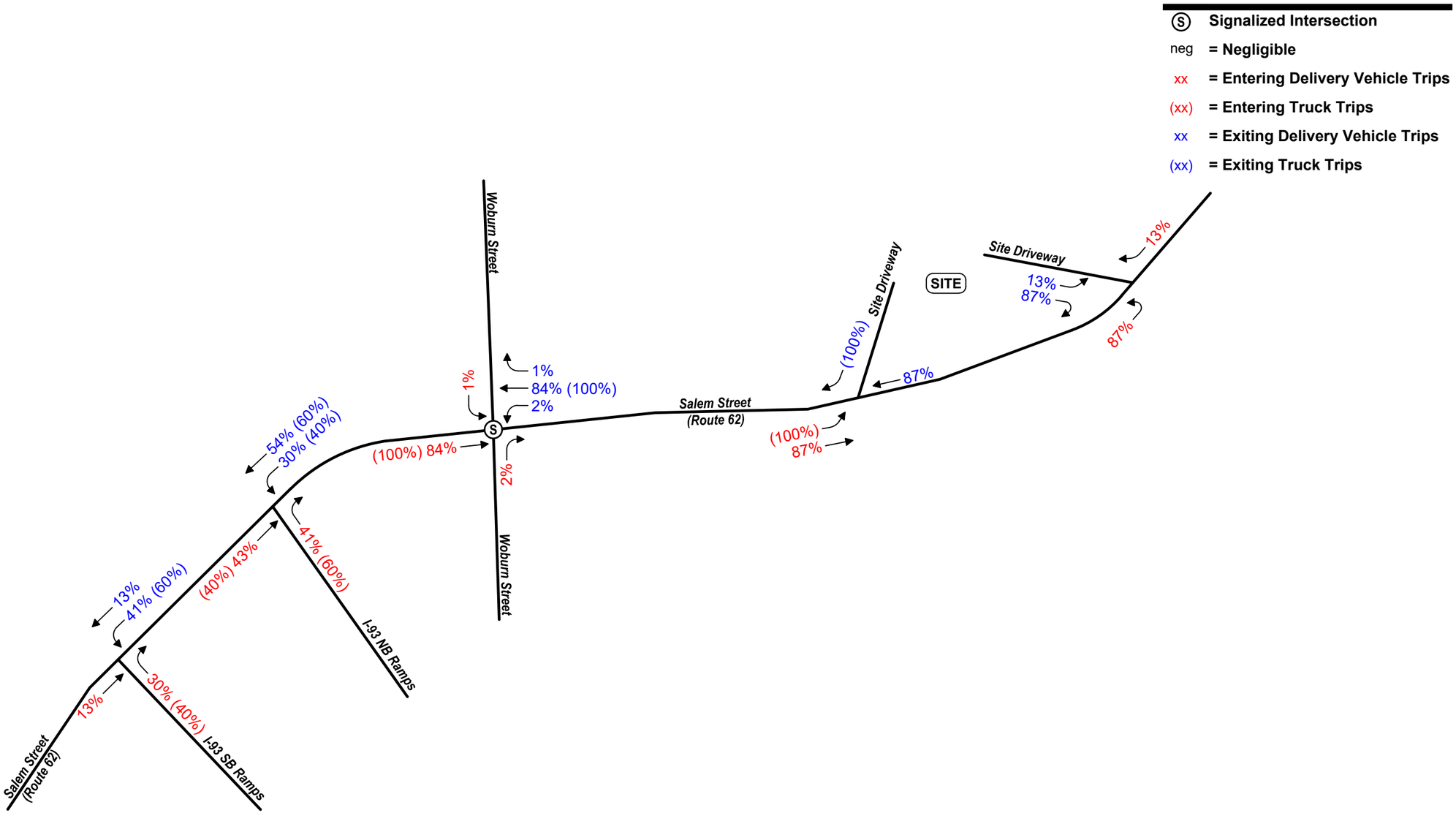
Ⓢ **Signalized Intersection**
neg **= Negligible**



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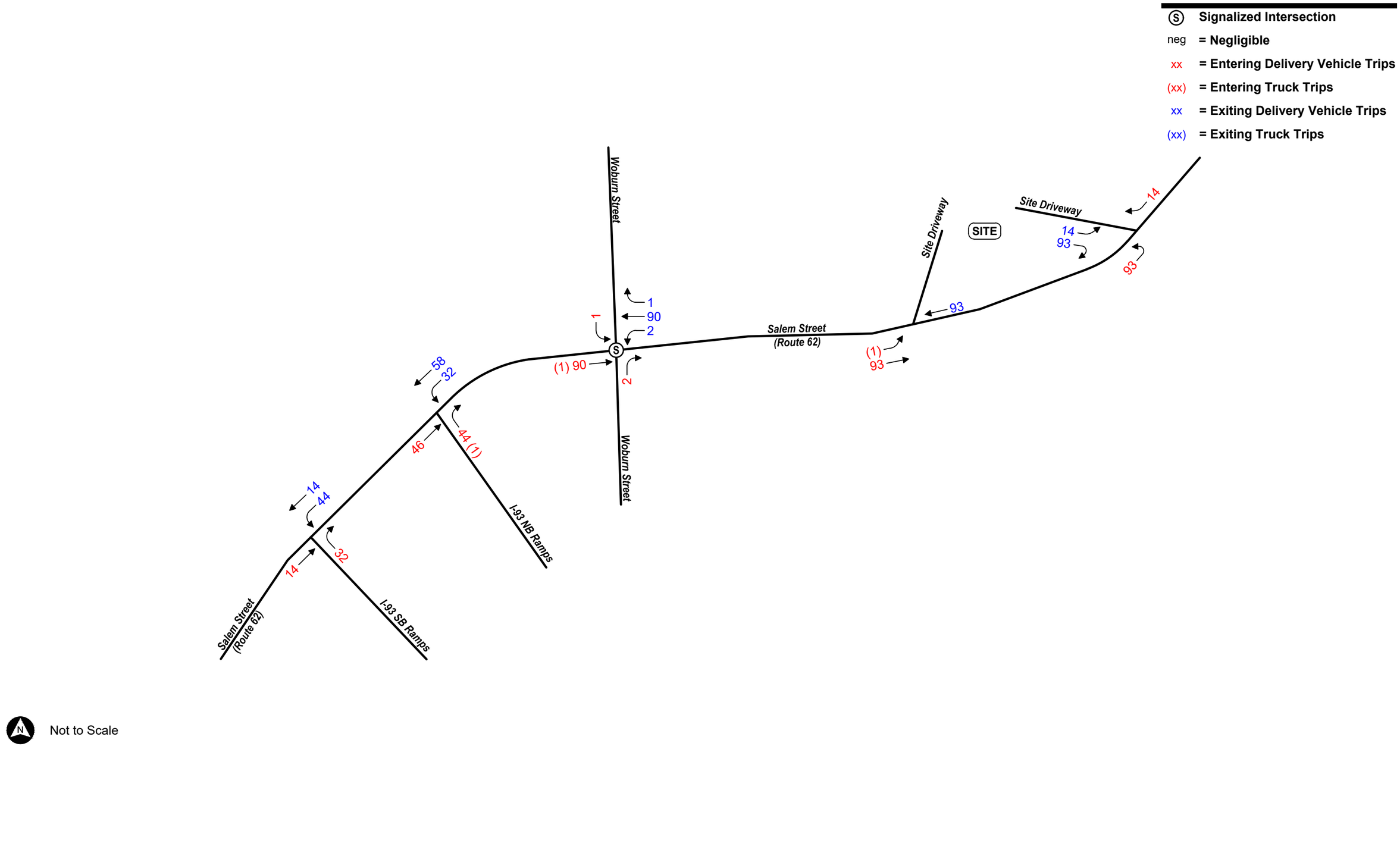
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Figure 5: Trip Distribution
Wilmington Warehouse | Wilmington, MA



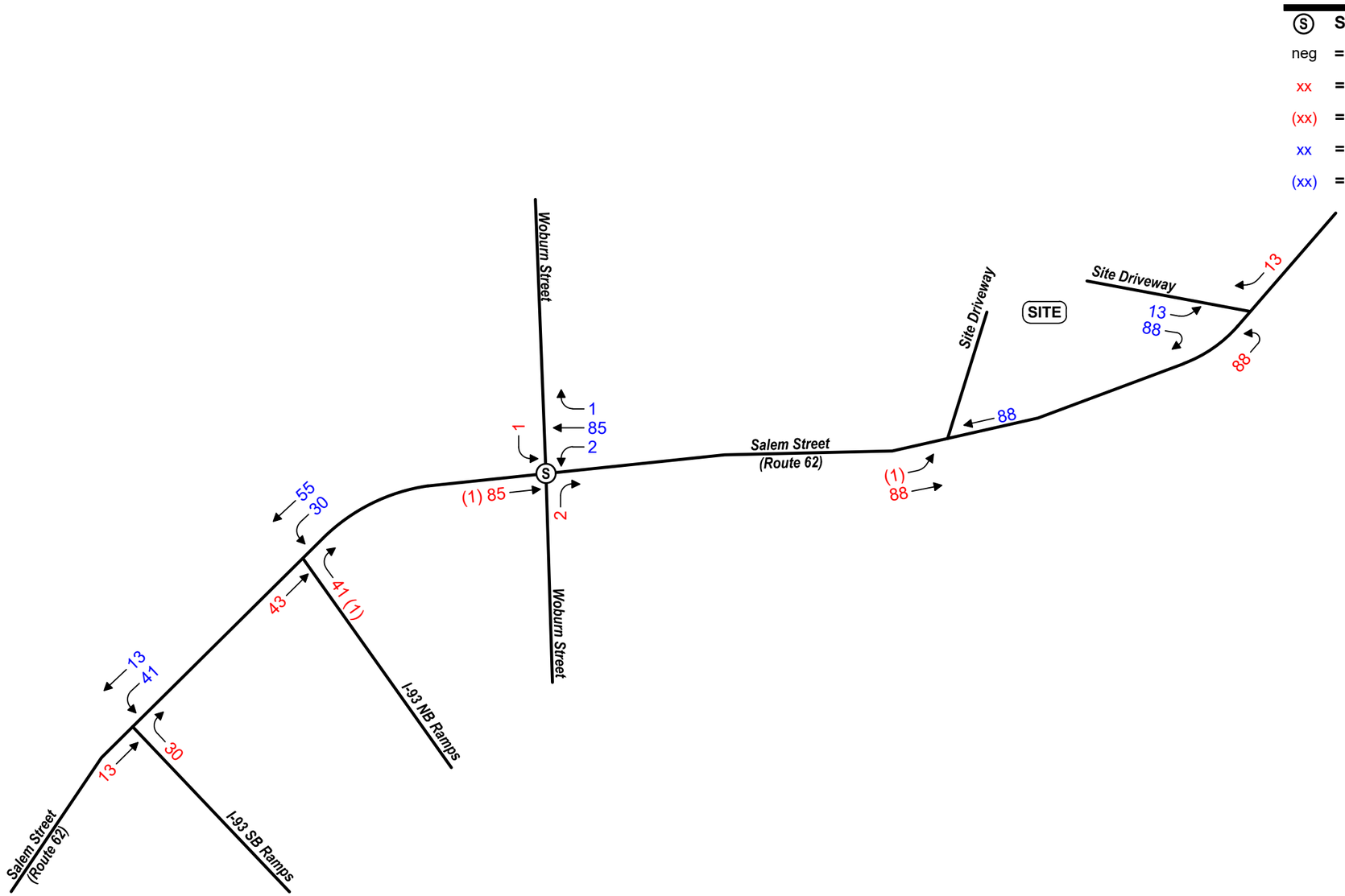
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Figure 6: Project-Generated Traffic Volumes Weekday Morning Peak Hour
Wilmington Warehouse | Wilmington, MA



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Figure 7: Project-Generated Traffic Volumes Weekday Evening Peak Hour
Wilmington Warehouse | Wilmington, MA



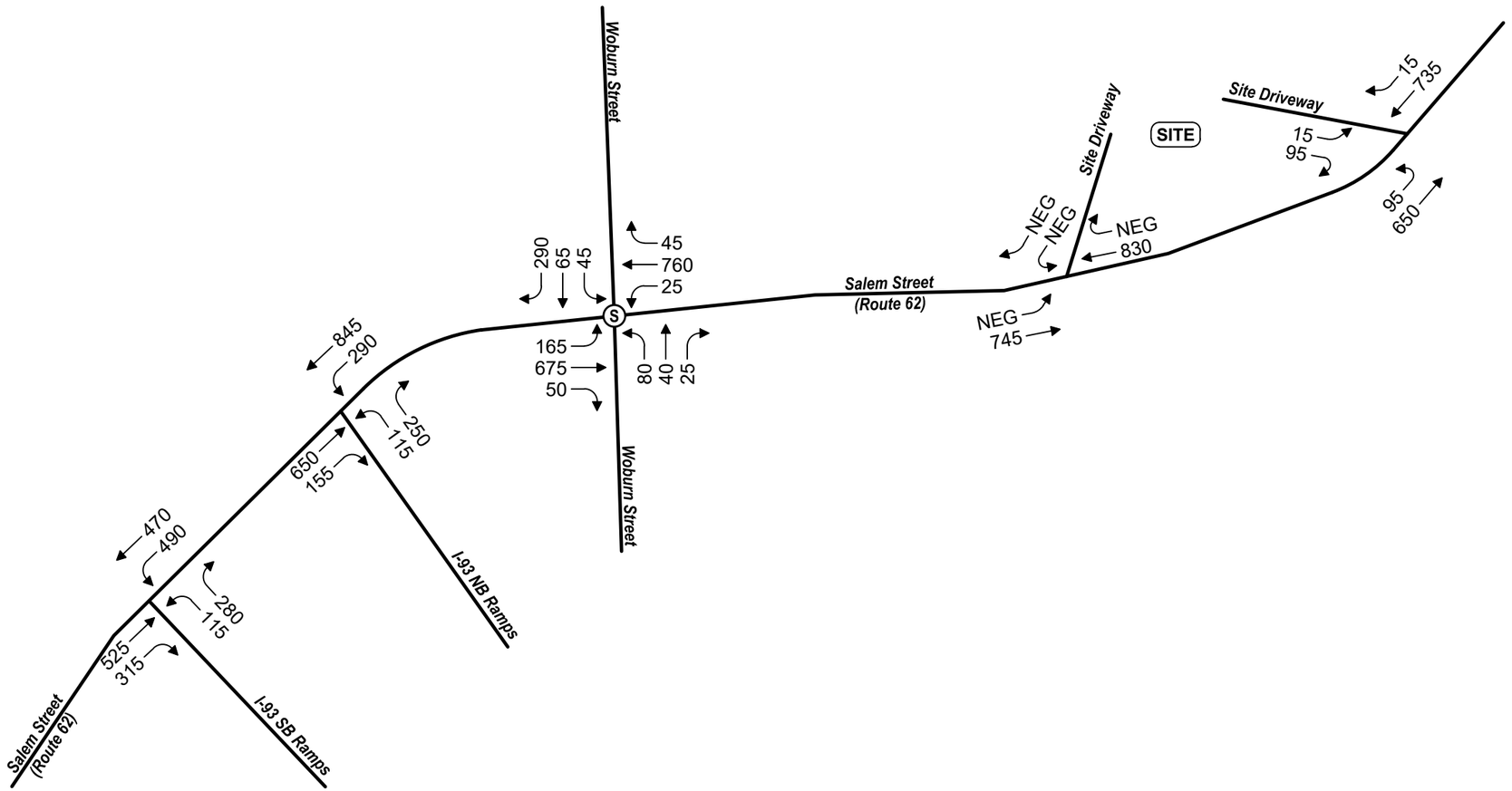
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Figure 8: Build Conditions Traffic Volumes Weekday Morning Peak Hour
800 Salem Street | Wilmington, MA

1.13.25

Ⓢ **Signalized Intersection**
neg **= Negligible**



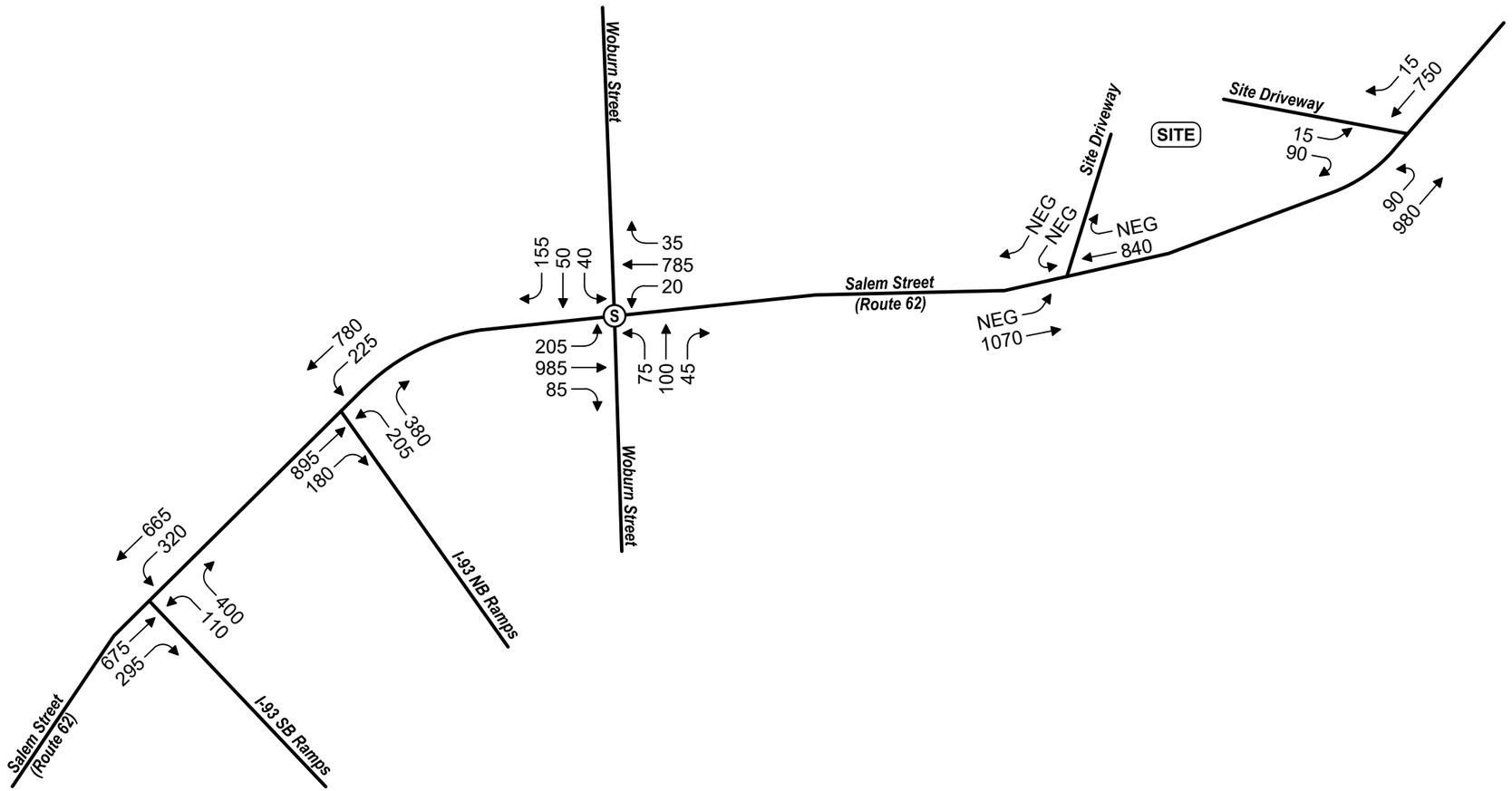
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Figure 9: Build Conditions Traffic Volumes Weekday Evening Peak Hour
800 Salem Street | Wilmington, MA

1.13.25

Ⓢ **Signalized Intersection**
neg **= Negligible**



Not to Scale

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Memorandum

Peak Hour Traffic Volume Increase

Table 3 shows a summary of the peak-hour projected traffic volume changes at various locations within the study area as a result of the Site generated traffic. As shown, the contribution of Site generated traffic to traffic volume increases west of the Site driveways. Site traffic volume tapers down to the west of the I-93 southbound ramps. The volume of Site traffic on Woburn Street and to the east of the Site are relatively small.

Updated Capacity Analysis

To assess quality of flow, new roadway capacity analyses were conducted for existing conditions, no-build conditions, and build conditions.

Tables 4 through 6 present the signalized and unsignalized peak hour capacity analysis, respectively, for the study area intersections under 2025 existing conditions, 2032 no-build conditions, and 2032 build conditions.

Note: A review of two different sets of traffic count data (2022 and 2024 data) indicated that there is limited pedestrian activity (three pedestrians or less over the course of the entire two-hour weekday morning and weekday evening count periods) at the intersection of Salem Street at Woburn Street. Therefore, the analysis of the intersection was performed in two different ways; one set of results assume no actuation of the pedestrian signal (Table 4), and the second set of results (shown in Table 5) that assume that the pedestrian phase is activated.

Memorandum

Table 3 Peak Hour Traffic-Volume Increases

Location/Peak Hour	Existing Volumes	No Build Volumes	Build Volumes	Traffic-Volume Increase Due to Project	Percent Increase Over No Build
Route 62, west of I-93					
Weekday Morning	1270	1395	1425	30	2.1%
Weekday Evening	1565	1715	1745	30	1.7%
Route 62, along the I-93 overpass					
Weekday Morning	1495	1655	1765	110	6.2%
Weekday Evening	1785	1960	2060	100	4.9%
Route 62, between I-93 and Woburn Street					
Weekday Morning	1665	1890	2070	180	8.7%
Weekday Evening	1905	2110	2280	170	7.5%
Route 62, between Woburn Street and the Project Site					
Weekday Morning	1235	1395	1575	180	11.4%
Weekday Evening	1550	1740	1910	170	8.9%
Route 62, east of the Project Site					
Weekday Morning	1235	1395	1415	20	1.4%
Weekday Evening	1550	1740	1760	20	1.1%
I-93 Southbound On/Off Ramps					
Weekday Morning	1015	1120	1200	80	6.7%
Weekday Evening	950	1055	1125	70	6.2%
I-93 Northbound On/Off Ramps					
Weekday Morning	660	775	850	75	8.8%
Weekday Evening	820	920	990	70	7.1%
Woburn Street, north of Route 62					
Weekday Morning	595	650	650	Negligible	Negligible
Weekday Evening	535	585	585	Negligible	Negligible
Woburn Street, south of Route 62					
Weekday Morning	255	285	285	Negligible	Negligible
Weekday Evening	340	375	375	Negligible	Negligible

Memorandum

Table 4 Signalized Intersection Capacity Analysis – Pedestrian Phase Not Activated

Location	Movement	2025 Existing Conditions v/c[a]	Del[b]	LOS[c]	50 Q[d]	95 Q[e]	2032 No-Build Conditions v/c	Del	LOS	50 Q	95 Q	2032 Build Conditions v/c	Del	LOS	50 Q	95 Q
Salem Street (Route 62) at Woburn Street																
Weekday	EB L	0.45	12	B	31	52	0.52	15	B	33	80	0.60	24	C	46	116
Morning	EB T/R	0.59	10	A	171	242	0.59	9	A	189	280	0.66	10	A	240	359
	WB L/T	0.90	36	D	301	474	0.95	42	D	415	#682	1.02	59	E	~583	#821
	WB R	0.03	13	B	0	2	0.03	12	B	0	6	0.03	12	B	0	6
	NB L/T/R	0.99	103	F	~81	#225	>1.20	>120	F	~127	#259	>1.20	>120	F	~131	#263
	SB L/T/R	0.98	72	E	~190	#386	1.03	96	F	~244	#441	1.10	119	F	~246	#442
	Overall		**39**	**D**				**52**	**D**				**65**	**E**		
Weekday	EB L	0.62	21	C	46	119	0.71	27	C	59	140	0.77	40	D	86	#190
Evening	EB T/R	0.73	11	B	294	435	0.87	19	B	427	663	0.91	27	C	528	#946
	WB L/T	0.92	37	D	425	509	0.98	51	D	429	#721	>1.20	>120	F	~691	#925
	WB R	0.03	12	B	0	0	0.03	12	B	0	1	0.03	12	B	0	1
	NB L/T/R	0.82	52	D	133	#272	0.84	56	E	141	#296	0.96	87	F	147	#305
	SB L/T/R	0.57	36	D	93	180	0.63	37	D	111	#231	0.70	44	D	115	#235
	Overall		**27**	**C**				**34**	**C**				**65**	**E**		

a. Volume to capacity ratio.
b. Average total delay, in seconds per vehicle.
c. Level-of-service.
d. 50th percentile queue,
e. 95th percentile queue
~ volume to capacity ratio exceeds 1.0 and queues may be longer
# 95th percentile volume exceeds capacity and queues may be longer

Memorandum

Table 5 Signalized Intersection Capacity Analysis – when Pedestrian Phase is Activated

		2025 Existing Conditions					2032 No-Build Conditions					2032 Build Conditions				
Location	**Movement**	**v/c[a]**	**Del [b]**	**LOS [c]**	**50 Q [d]**	**95 Q [e]**	**v/c**	**Del**	**LOS**	**50 Q**	**95 Q**	**v/c**	**Del**	**LOS**	**50 Q**	**95 Q**
Salem Street (Route 62) at Woburn Street																
Weekday	EB L	0.40	11	B	31	52	0.48	14	B	33	65	0.59	25	C	48	119
Morning	EB T/R	0.56	9	A	172	243	0.58	8	A	191	281	0.66	10	A	242	361
	WB L/T	0.82	27	C	311	473	0.91	35	D	424	#682	1.02	61	E	~589	#821
	WB R	0.03	12	B	0	2	0.03	12	B	0	5	0.03	12	B	0	5
	NB L/T/R	>1.20	>120	F	~126	#244	>1.20	>120	F	~135	#266	>1.20	>120	F	~135	#266
	SB L/T/R	1.16	>120	F	~287	#417	1.17	>120	F	~279	#472	1.17	>120	F	~279	#472
	Overall		**61**	**E**				**64**	**E**				**71**	**E**		
Weekday	EB L	0.58	18	B	37	104	0.63	19	B	43	121	0.75	39	D	86	#190
Evening	EB T/R	0.71	11	B	295	438	0.84	16	B	429	665	0.91	22	C	531	#947
	WB L/T	0.89	32	C	411	509	0.88	31	C	429	#686	1.18	119	F	~679	#913
	WB R	0.03	12	B	0	0	0.03	12	B	0	0	0.03	12	B	0	0
	NB L/T/R	0.89	70	E	139	#282	0.99	97	F	149	#309	0.99	97	F	149	#309
	SB L/T/R	0.66	42	D	108	#209	0.76	49	D	127	#256	0.76	49	D	127	#256
	Overall		**27**	**C**				**32**	**C**				**63**	**E**		

a. Volume to capacity ratio.
b. Average total delay, in seconds per vehicle.
c. Level-of-service.
d. 50th percentile queue
e. 95th percentile queue
~ volume to capacity ratio exceeds 1.0 and queues may be longer
# 95th percentile volume exceeds capacity and queues may be longer

Memorandum

Table 6 Unsignalized Intersection Capacity Analysis

Location / Movement	2025 Existing Conditions					2032 No-Build Conditions					2032 Build Conditions				
	D[1]	v/c[2]	Del[3]	LOS[4]	95 Q[5]	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
Salem Street (Route 62) at I-93 SB Ramps															
Weekday Morning															
WB L/T	810	0.42	11	B	53	900	0.49	12	B	70	960	0.55	13	B	85
NB L	105	>1.20	>120	F	338	115	>1.20	>120	F	413	115	>1.20	>120	F	430
NB R	225	0.46	17	C	60	245	0.65	29	D	113	280	0.76	37	E	155
Weekday Evening															
WB L/T	840	0.27	10	B	28	930	0.34	11	B	38	985	0.40	12	B	48
NB L	95	>1.20	>120	F	250	110	>1.20	>120	F	380	110	>1.20	>120	F	400
NB R	340	0.88	52	F	220	370	1.16	>120	F	405	400	>1.20	>120	F	503
Salem Street (Route 62) at I-93 NB Ramps															
Weekday Morning															
WB L/T	940	0.28	10	B	30	1045	0.32	11	B	35	1135	0.37	12	B	43
NB L	105	>1.20	>120	F	380	115	>1.20	>120	F	398	115	>1.20	>120	F	428
NB R	180	0.50	21	C	68	245	0.66	30	D	115	250	0.73	37	E	140
Weekday Evening															
WB L/T	830	0.25	11	B	25	920	0.29	12	B	30	1005	0.35	13	B	40
NB L	185	>1.20	>120	F	668	205	>1.20	>120	F	700	205	>1.20	>120	F	730
NB R	295	1.08	109	F	335	340	>1.20	>120	F	460	380	>1.20	>120	F	620
Salem Street (Route 62) at West Site Driveway															
Weekday Morning															
EB L	--	--	--	--	--	--	--	--	--	--	0	0.00	0	A	0
SB L	--	--	--	--	--	--	--	--	--	--	0	0.00	0	A	0
SB R	--	--	--	--	--	--	--	--	--	--	0	0.00	0	A	0
Weekday Evening															
EB L	--	--	--	--	--	--	--	--	--	--	0	0.00	0	A	0
SB L	--	--	--	--	--	--	--	--	--	--	0	0.00	0	A	0
SB R	--	--	--	--	--	--	--	--	--	--	0	0.00	0	A	0
Salem Street (Route 62) at East Site Driveway															
Weekday Morning															
EB L	--	--	--	--	--	--	--	--	--	--	95	0.13	10	B	10
SB L	--	--	--	--	--	--	--	--	--	--	15	0.19	56	F	18
SB R	--	--	--	--	--	--	--	--	--	--	95	0.27	18	C	28
Weekday Evening															
EB L	--	--	--	--	--	--	--	--	--	--	90	0.12	10	B	10
SB L	--	--	--	--	--	--	--	--	--	--	15	0.32	106	F	28
SB R	--	--	--	--	--	--	--	--	--	--	90	0.26	18	C	25

1 Demand
2 Volume to capacity ratio
3 Average total delay, in seconds per vehicle
4 Level-of-service
5 95th percentile queue
neg Negligible

Memorandum

As shown in Tables 4 through 6, independent of the Project (comparing the No-Build Condition to the Current Project) the study locations are either currently experiencing congested operating conditions or would experience congestion in the future.

Specifically, independent of the project, the signalized intersection of Route 62 at Woburn Street is expected to operate at overall LOS E with or without incorporating the pedestrian phase during the weekday morning and weekday evening peak hours while the northbound and southbound approaches are expected to operate at LOS F. The westbound left/through lane is expected to operate at LOS E during the weekday morning peak hour and at LOS F during the weekday evening peak hour.

At the stop-controlled intersection of Route 62 at the I-93 southbound ramps, Table 6 shows that independent of the Project during both the weekday morning and weekday evening peak hour, the northbound left-turn is expected to operate at LOS F and the northbound right-turn is expected to operate at LOS E.

At the stop-controlled intersection of Route 62 at the I-93 northbound ramps, Table 6 shows that independent of the Project during both the weekday morning and weekday evening peak hour, the northbound left-turn is expected to operate at LOS F. The northbound right-turn is expected to operate at LOS D during the weekday morning peak hour and at LOS F during the weekday evening peak hour.

At the west site driveway, all critical movements are projected to operate at LOS A. At the east site driveway, the southbound left-turn from the driveway is projected to operate at LOS F during the weekday morning and weekday evening peak hours. It should be noted however, that the delay associated with the southbound left-turn from the driveway is a function of the volume of major street traffic and the expected queue lengths at the driveway are expected to be less than one vehicle long, on an average. Because these queues will be managed on the Site and not on Salem Street, the impact on Salem Street would be minimal.

The detailed analysis worksheets are included in the attachment to this memorandum.

Traffic Improvements

For the intersection of Salem Street at Woburn Street, the Proponent will prepare construction documents for the reconfiguration of the existing short right turn lane in the westbound direction into a shared through-right turn lane, including associated striping, signage and traffic signal timing improvements. The construction documents for these improvements will be submitted to the Town prior to Certificate of Occupancy. These lane configuration and signal timing improvements are modeled to offset the project-related impacts and to improve the overall intersection operations. These changes are estimated to improve the intersection from the No-Build condition (LOS E) to the Current Project Build condition (LOS C).

The methodology for modeling the implementation of a short auxiliary through lane (ATL) was presented in the January 8, 2025 traffic evaluation. With the reconfiguration of the existing short right turn lane in the westbound

Memorandum

direction at the signalized intersection of Salem Street at Woburn Street into a shared through-right turn lane, including associated traffic signal timing improvements at the intersection, traffic operations at the intersection are projected to improve.

Tables 7 and 8 presents the analysis of the intersection of Salem Street at Woburn Street with the short ATL, with and without the pedestrian phase, respectively. Detailed analysis worksheets are included in the attachment to the memorandum. As shown, with the availability of an auxiliary through lane which allows two westbound through lanes to form at the intersection, the intersection is projected to operate at overall LOS C during the weekday morning and weekday evening peak hours.

The results in Tables 7 and 8 were compared to the corresponding analysis results presented in the January 8, 2025 traffic evaluation which were based on baseline traffic counts conduced in March 2022. The differences in the results between the two reports are attributable to the differing traffic volumes observed at the Salme Street at Woburn Street intersection between 2022 and 2024. For example, during the weekday morning peak hour, several of the movements at the intersection generally had less traffic in 2024 than in 2022, including the southbound right-turn volume. The lower southbound approach traffic volume results in better operations for the weekday morning peak hour for this analysis than was presented in the January 8, 2025 memorandum. On the other hand, during the weekday evening peak hour, the eastbound and westbound through traffic volumes in 2024 were 15 to 20 percent higher than the corresponding volumes observed in 2022. This resulted in the Salem Street approaches, particularly the westbound direction, having more congested operations for the weekday afternoon peak hour for this analysis than was presented in the January 8, 2025 memorandum.

Notwithstanding the volume differences between 2022 and 2024, which was the reason for updating the entire analysis with new count data, the results presented in Tables 7 and 8 indicate that the relative impact of the Project (difference between the No-Build and Build conditions) can be offset with the auxiliary through lane improvement that is modeled in the analysis. While this improvement, in and of itself, does not address the underlying corridor wide capacity constraints that contribute to peak hour congestion that occurs independent of the Project, the Project provides the opportunity to implement this change to achieve some immediate benefit in terms of added capacity. As discussed later in this memorandum, and in the January 8, 2025 evaluation, the Proponent is willing to make additional commitments to advance longer term, town-led initiatives for enhancing the Salem Street corridor operations.

Memorandum

Table 7 Signalized Intersection Capacity Analysis – Pedestrian Phase Not Activated

		2032 No-Build Conditions					2032 Build Conditions					2032 Build Conditions – with Improvements				
Location	**Movement**	**v/c[a]**	**Del [b]**	**LOS [c]**	**50 Q [d]**	**95 Q [e]**	**v/c**	**Del**	**LOS**	**50 Q**	**95 Q**	**v/c**	**Del**	**LOS**	**50 Q**	**95 Q**
Salem Street (Route 62) at Woburn Street																
Weekday	EB L	0.52	15	B	33	80	0.60	24	C	46	116	0.47	11	B	39	69
Morning	EB T/R	0.59	9	A	189	280	0.66	10	A	240	359	0.75	14	B	285	448
	WB L/T	0.95	42	D	415	#682	1.02	59	E	~583	#821	0.89	31	C	319	#550
	WB R	0.03	12	B	0	6	0.03	12	B	0	6	-	-	-	-	-
	NB L/T/R	>1.20	>120	F	~127	#259	>1.20	>120	F	~131	#263	0.76	42	D	74	#173
	SB L/T/R	1.03	96	F	~244	#441	1.10	119	F	~246	#442	0.81	39	D	155	#316
	Overall		**52**	**D**				**65**	**E**				**26**	**C**		
Weekday	EB L	0.71	27	C	59	140	0.77	40	D	86	#190	0.49	9	A	46	75
Evening	EB T/R	0.87	19	B	427	663	0.91	27	C	528	#946	0.92	25	C	572	#971
	WB L/T	0.98	51	D	429	#721	>1.20	>120	F	~691	#925	0.96	45	D	407	#675
	WB R	0.03	12	B	0	1	0.03	12	B	0	1	-	-	-	-	-
	NB L/T/R	0.84	56	E	141	#296	0.96	87	F	147	#305	0.90	71	E	142	#283
	SB L/T/R	0.63	37	D	111	#231	0.70	44	D	115	#235	0.66	41	D	110	201
	Overall		**34**	**C**				**65**	**E**				**35**	**C**		

a. Volume to capacity ratio.
b. Average total delay, in seconds per vehicle.
c. Level-of-service.
d. 50th percentile queue
e. 95th percentile queue
~ volume to capacity ratio exceeds 1.0 and queues may be longer
# 95th percentile volume exceeds capacity and queues may be longer

Memorandum

Table 8 Signalized Intersection Capacity Analysis – when Pedestrian Phase is Activated

Location	Movement	2032 No-Build Conditions v/c[a]	Del [b]	LOS [c]	50 Q [d]	95 Q [e]	2032 Build Conditions v/c	Del	LOS	50 Q	95 Q	2032 Build Conditions – with Improvements v/c	Del	LOS	50 Q	95 Q
Salem Street (Route 62) at Woburn Street																
Weekday	EB L	0.48	14	B	33	65	0.59	25	C	48	119	0.42	12	B	43	72
Morning	EB T/R	0.58	8	A	191	281	0.66	10	A	242	361	0.74	16	B	312	467
	WB L/T	0.91	35	D	424	#682	1.02	61	E	~589	#821	0.94	46	D	398	#649
	WB R	0.03	12	B	0	5	0.03	12	B	0	5	-	-	-	-	-
	NB L/T/R	>1.20	>120	F	~135	#266	>1.20	>120	F	~135	#266	0.72	43	D	84	#190
	SB L/T/R	1.17	>120	F	~279	#472	1.17	>120	F	~279	#472	0.84	47	D	206	#389
	Overall		**64**	**E**				**71**	**E**				**33**	**C**		
Weekday	EB L	0.63	19	B	43	121	0.75	39	D	86	#190	0.48	9	A	45	72
Evening	EB T/R	0.84	16	B	429	665	0.91	22	C	531	#947	0.92	24	C	553	#960
	WB L/T	0.88	31	C	429	#686	1.18	119	F	~679	#913	0.95	41	D	392	#661
	WB R	0.03	12	B	0	0	0.03	12	B	0	0	-	-	-	-	-
	NB L/T/R	0.99	97	F	149	#309	0.99	97	F	149	#309	0.92	75	E	146	#296
	SB L/T/R	0.76	49	D	127	#256	0.76	49	D	127	#256	0.71	45	D	125	#243
	Overall		**32**	**C**				**63**	**E**				**34**	**C**		

a. Volume to capacity ratio.
b. Average total delay, in seconds per vehicle.
c. Level-of-service.
d. 50th percentile queue
e. 95th percentile queue
~ volume to capacity ratio exceeds 1.0 and queues may be longer
# 95th percentile volume exceeds capacity and queues may be longer

In addition to preparing construction documents for the reconfiguration of the existing short right turn lane in the westbound direction at the signalized intersection of Salem Street at Woburn Street into a shared through-right turn lane, the Proponent proposes the following mitigation strategies to offset the Project impacts and to address the existing deficiencies along the Salem Street corridor. These measures were also outlined in the January 8, 2025 traffic evaluation.

- Construct a dedicated left turn lane on Salem Street at the east Site driveway prior to Certificate of Occupancy.
- Prepare an updated Conceptual Design Report (CDR) for the I-93 ramp intersections to reflect the additional Site generate traffic and expand the study coverage to include the Woburn Street signalized intersection on Salem Street. This Study would be completed prior to certificate of occupancy.
- Contribute monetary funds to a Town controlled escrow account to be used by the Town to implement improvements along the Salem Street corridor (for example, I-93 ramp intersections, Woburn Street/Salem Street intersection, deficient culvert across Salem Street, etc.) The monetary contribution, calculated based on a "fair

Memorandum

share" formula to be developed in consultation with the Town, will be made prior to the issuance of the Certificate of Occupancy.

- Commit to performing a post-occupancy traffic monitoring study six months after certificate of occupancy to confirm the findings of the analyses presented in this report.

APPENDIX

- December 2024 Traffic Count Data
- ATL Calculation Worksheet
- Updated Capacity Analysis Worksheets

Salem Street (Route 62) east of
Winchester Hospital West Driveway
City, State: Wilmington, MA
Client: VJB/ V. Kalikiri
Site Code: TBA

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File # **240374 ATR-A**

Count Date: **Wednesday, December 18, 2024**
Direction: **EB**

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	10	0	1	11
12:15 AM	6	0	1	7
12:30 AM	8	1	2	11
12:45 AM	3	0	0	3
1:00 AM	3	0	0	3
1:15 AM	2	0	0	2
1:30 AM	3	0	1	4
1:45 AM	2	0	0	2
2:00 AM	3	0	0	3
2:15 AM	3	0	0	3
2:30 AM	1	0	1	2
2:45 AM	5	0	0	5
3:00 AM	2	1	1	4
3:15 AM	3	0	0	3
3:30 AM	5	0	0	5
3:45 AM	4	2	4	10
4:00 AM	6	0	1	7
4:15 AM	8	1	3	12
4:30 AM	11	1	0	12
4:45 AM	15	1	1	17
5:00 AM	20	0	1	21
5:15 AM	22	1	1	24
5:30 AM	37	5	1	43
5:45 AM	57	4	6	67
6:00 AM	33	9	2	44
6:15 AM	53	2	0	55
6:30 AM	46	19	1	66
6:45 AM	83	9	1	93
7:00 AM	74	13	1	88
7:15 AM	81	14	3	98
7:30 AM	92	13	4	109
7:45 AM	114	10	3	127
8:00 AM	102	12	7	121
8:15 AM	109	13	6	128
8:30 AM	102	21	5	128
8:45 AM	109	13	3	125
9:00 AM	88	15	2	105
9:15 AM	114	14	3	131
9:30 AM	92	5	5	102
9:45 AM	111	18	4	133
10:00 AM	91	10	4	105
10:15 AM	76	17	2	95
10:30 AM	106	9	4	119
10:45 AM	98	12	5	115
11:00 AM	95	9	6	110
11:15 AM	92	11	6	109
11:30 AM	121	18	3	142
11:45 AM	128	13	2	143
AM Total	**2449**	**316**	**107**	**2872**
Percentage	**85.27%**	**11.00%**	**3.73%**	
AM Peak	**11:00 AM**	**8:30 AM**	**7:45 AM**	**7:45 AM**
Volume	**436**	**63**	**21**	**504**

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	118	9	3	130
12:15 PM	124	14	4	142
12:30 PM	142	8	4	154
12:45 PM	133	15	3	151
1:00 PM	104	12	4	120
1:15 PM	125	12	4	141
1:30 PM	123	9	3	135
1:45 PM	134	13	3	150
2:00 PM	114	12	2	128
2:15 PM	129	11	3	143
2:30 PM	114	9	4	127
2:45 PM	132	3	2	137
3:00 PM	137	3	1	141
3:15 PM	150	8	1	159
3:30 PM	193	6	2	201
3:45 PM	184	2	0	186
4:00 PM	176	6	0	182
4:15 PM	193	3	1	197
4:30 PM	189	5	0	194
4:45 PM	210	5	2	217
5:00 PM	223	3	3	229
5:15 PM	222	1	1	224
5:30 PM	214	0	0	214
5:45 PM	192	1	1	194
6:00 PM	196	5	0	201
6:15 PM	141	2	0	143
6:30 PM	120	1	1	122
6:45 PM	104	2	0	106
7:00 PM	88	1	1	90
7:15 PM	82	2	1	85
7:30 PM	45	2	1	48
7:45 PM	76	1	3	80
8:00 PM	57	0	0	57
8:15 PM	58	0	0	58
8:30 PM	57	0	0	57
8:45 PM	50	0	0	50
9:00 PM	58	0	1	59
9:15 PM	36	0	1	37
9:30 PM	45	1	0	46
9:45 PM	31	1	2	34
10:00 PM	28	0	1	29
10:15 PM	24	0	1	25
10:30 PM	24	1	2	27
10:45 PM	18	0	0	18
11:00 PM	21	0	0	21
11:15 PM	14	0	1	15
11:30 PM	6	0	2	8
11:45 PM	8	0	0	8
PM Total	**5162**	**189**	**69**	**5420**
Percentage	**95.24%**	**3.49%**	**1.27%**	
PM Peak	**4:45 PM**	**12:15 PM**	**12:15 PM**	**4:45 PM**
Volume	**869**	**49**	**15**	**884**
Day Total	**7611**	**505**	**176**	**8292**
Percentage	**91.79%**	**6.09%**	**2.12%**	

Salem Street (Route 62) east of
Winchester Hospital West Driveway
City, State: Wilmington, MA
Client: VJB/ V. Kalikiri
Site Code: TBA

PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File # **240374 ATR-A**

Count Date: **Thursday, December 19, 2024**
Direction: **EB**

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	9	0	1	10
12:15 AM	8	0	1	9
12:30 AM	9	0	0	9
12:45 AM	5	0	1	6
1:00 AM	5	0	0	5
1:15 AM	3	0	1	4
1:30 AM	5	0	0	5
1:45 AM	2	0	0	2
2:00 AM	3	0	0	3
2:15 AM	7	0	1	8
2:30 AM	4	1	0	5
2:45 AM	2	0	1	3
3:00 AM	2	0	0	2
3:15 AM	6	0	2	8
3:30 AM	4	0	1	5
3:45 AM	5	0	3	8
4:00 AM	4	0	2	6
4:15 AM	3	0	3	6
4:30 AM	8	2	1	11
4:45 AM	20	2	0	22
5:00 AM	12	1	0	13
5:15 AM	24	2	3	29
5:30 AM	37	2	1	40
5:45 AM	56	3	1	60
6:00 AM	42	13	3	58
6:15 AM	50	12	1	63
6:30 AM	40	6	1	47
6:45 AM	81	11	2	94
7:00 AM	81	13	6	100
7:15 AM	91	19	1	111
7:30 AM	98	10	3	111
7:45 AM	121	6	2	129
8:00 AM	89	11	2	102
8:15 AM	128	14	5	147
8:30 AM	98	13	4	115
8:45 AM	91	16	5	112
9:00 AM	85	18	5	108
9:15 AM	78	18	2	98
9:30 AM	76	15	1	92
9:45 AM	86	19	3	108
10:00 AM	103	15	5	123
10:15 AM	91	15	3	109
10:30 AM	84	19	4	107
10:45 AM	104	21	4	129
11:00 AM	111	14	4	129
11:15 AM	117	5	10	132
11:30 AM	110	7	2	119
11:45 AM	116	12	6	134
AM Total	**2414**	**335**	**107**	**2856**
Percentage	**84.52%**	**11.73%**	**3.75%**	
AM Peak	**11:00 AM**	**9:00 AM**	**10:30 AM**	**11:00 AM**
Volume	**454**	**70**	**22**	**514**

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	115	13	2	130
12:15 PM	130	19	3	152
12:30 PM	125	18	2	145
12:45 PM	124	14	3	141
1:00 PM	129	12	2	143
1:15 PM	107	10	3	120
1:30 PM	124	10	5	139
1:45 PM	137	10	1	148
2:00 PM	97	13	3	113
2:15 PM	132	9	1	142
2:30 PM	129	4	4	137
2:45 PM	127	3	2	132
3:00 PM	159	7	1	167
3:15 PM	138	7	1	146
3:30 PM	184	8	2	194
3:45 PM	192	4	4	200
4:00 PM	186	4	2	192
4:15 PM	200	6	0	206
4:30 PM	195	5	2	202
4:45 PM	217	3	0	220
5:00 PM	192	3	3	198
5:15 PM	200	3	2	205
5:30 PM	194	3	0	197
5:45 PM	178	4	1	183
6:00 PM	150	3	1	154
6:15 PM	127	2	1	130
6:30 PM	137	0	1	138
6:45 PM	99	0	0	99
7:00 PM	82	1	0	83
7:15 PM	96	0	4	100
7:30 PM	78	2	1	81
7:45 PM	80	1	2	83
8:00 PM	58	0	2	60
8:15 PM	62	1	0	63
8:30 PM	47	0	0	47
8:45 PM	55	0	0	55
9:00 PM	49	0	1	50
9:15 PM	50	0	1	51
9:30 PM	46	0	1	47
9:45 PM	53	0	3	56
10:00 PM	38	0	0	38
10:15 PM	46	0	0	46
10:30 PM	39	0	1	40
10:45 PM	35	0	0	35
11:00 PM	22	1	0	23
11:15 PM	21	0	1	22
11:30 PM	21	0	0	21
11:45 PM	13	0	0	13
PM Total	**5215**	**203**	**69**	**5487**
Percentage	**95.04%**	**3.70%**	**1.26%**	
PM Peak	**4:15 PM**	**12:00 PM**	**12:45 PM**	**4:15 PM**
Volume	**804**	**64**	**13**	**826**
Day Total	**7629**	**538**	**176**	**8343**
Percentage	**91.44%**	**6.45%**	**2.11%**	

Salem Street (Route 62) east of
Winchester Hospital West Driveway
City, State: Wilmington, MA
Client: VJB/ V. Kalikiri
Site Code: TBA

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File # **240374 ATR-A**

Count Date: **Wednesday, December 18, 2024**
Direction: **WB**

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	6	1	2	9
12:15 AM	3	0	0	3
12:30 AM	4	0	0	4
12:45 AM	3	0	0	3
1:00 AM	3	1	0	4
1:15 AM	1	0	0	1
1:30 AM	1	0	1	2
1:45 AM	2	0	1	3
2:00 AM	2	2	2	6
2:15 AM	2	0	0	2
2:30 AM	7	0	0	7
2:45 AM	2	0	0	2
3:00 AM	0	0	0	0
3:15 AM	4	1	0	5
3:30 AM	4	0	0	4
3:45 AM	2	1	1	4
4:00 AM	8	2	0	10
4:15 AM	4	2	2	8
4:30 AM	15	1	1	17
4:45 AM	21	0	1	22
5:00 AM	30	3	3	36
5:15 AM	47	2	1	50
5:30 AM	43	4	2	49
5:45 AM	51	14	1	66
6:00 AM	67	4	6	77
6:15 AM	75	13	1	89
6:30 AM	106	5	4	115
6:45 AM	129	15	2	146
7:00 AM	129	11	3	143
7:15 AM	141	12	2	155
7:30 AM	136	9	5	150
7:45 AM	140	21	5	166
8:00 AM	129	14	10	153
8:15 AM	149	6	4	159
8:30 AM	121	13	5	139
8:45 AM	113	15	2	130
9:00 AM	102	12	4	118
9:15 AM	110	14	5	129
9:30 AM	105	12	3	120
9:45 AM	84	10	1	95
10:00 AM	87	15	4	106
10:15 AM	109	13	2	124
10:30 AM	100	13	3	116
10:45 AM	88	15	6	109
11:00 AM	107	8	6	121
11:15 AM	94	13	2	109
11:30 AM	105	14	6	125
11:45 AM	110	11	6	127
AM Total	**2901**	**322**	**115**	**3338**
Percentage	**86.91%**	**9.65%**	**3.45%**	
AM Peak	**7:30 AM**	**7:15 AM**	**7:30 AM**	**7:30 AM**
Volume	**554**	**56**	**24**	**628**

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	97	17	5	119
12:15 PM	104	16	0	120
12:30 PM	102	11	4	117
12:45 PM	119	7	1	127
1:00 PM	109	12	7	128
1:15 PM	91	7	4	102
1:30 PM	107	11	6	124
1:45 PM	104	11	1	116
2:00 PM	132	12	2	146
2:15 PM	100	8	0	108
2:30 PM	118	8	3	129
2:45 PM	110	6	2	118
3:00 PM	131	6	0	137
3:15 PM	125	4	1	130
3:30 PM	156	8	1	165
3:45 PM	142	7	0	149
4:00 PM	159	5	3	167
4:15 PM	139	0	0	139
4:30 PM	140	0	0	140
4:45 PM	125	3	3	131
5:00 PM	151	1	0	152
5:15 PM	144	2	0	146
5:30 PM	117	0	0	117
5:45 PM	121	2	1	124
6:00 PM	108	2	0	110
6:15 PM	98	3	2	103
6:30 PM	77	0	0	77
6:45 PM	109	0	0	109
7:00 PM	77	0	1	78
7:15 PM	56	0	0	56
7:30 PM	51	0	1	52
7:45 PM	62	0	0	62
8:00 PM	63	0	0	63
8:15 PM	39	0	1	40
8:30 PM	41	1	1	43
8:45 PM	35	0	1	36
9:00 PM	43	0	0	43
9:15 PM	45	0	0	45
9:30 PM	23	0	0	23
9:45 PM	29	1	0	30
10:00 PM	33	0	0	33
10:15 PM	17	0	1	18
10:30 PM	23	0	0	23
10:45 PM	17	0	2	19
11:00 PM	19	0	0	19
11:15 PM	12	0	1	13
11:30 PM	6	0	0	6
11:45 PM	5	1	0	6
PM Total	**4031**	**172**	**55**	**4258**
Percentage	**94.67%**	**4.04%**	**1.29%**	
PM Peak	**3:30 PM**	**12:00 PM**	**12:45 PM**	**3:30 PM**
Volume	**596**	**51**	**18**	**620**
Day Total	**6932**	**494**	**170**	**7596**
Percentage	**91.26%**	**6.50%**	**2.24%**	

Salem Street (Route 62) east of
Winchester Hospital West Driveway
City, State: Wilmington, MA
Client: VJB/ V. Kalikiri
Site Code: TBA

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File # **240374 ATR-A**

Count Date: **Thursday, December 19, 2024**
Direction: **WB**

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	5	0	1	6
12:15 AM	5	0	0	5
12:30 AM	3	0	0	3
12:45 AM	3	0	0	3
1:00 AM	1	0	0	1
1:15 AM	2	0	0	2
1:30 AM	2	0	0	2
1:45 AM	2	1	1	4
2:00 AM	0	1	1	2
2:15 AM	4	0	4	8
2:30 AM	8	0	1	9
2:45 AM	4	1	0	5
3:00 AM	2	0	2	4
3:15 AM	2	0	0	2
3:30 AM	3	1	1	5
3:45 AM	3	1	1	5
4:00 AM	5	2	0	7
4:15 AM	10	1	2	13
4:30 AM	17	0	0	17
4:45 AM	24	0	0	24
5:00 AM	28	1	0	29
5:15 AM	47	0	0	47
5:30 AM	48	1	4	53
5:45 AM	60	10	2	72
6:00 AM	63	1	8	72
6:15 AM	65	10	7	82
6:30 AM	96	12	3	111
6:45 AM	101	17	4	122
7:00 AM	127	5	2	134
7:15 AM	120	10	5	135
7:30 AM	137	16	8	161
7:45 AM	152	9	3	164
8:00 AM	138	8	4	150
8:15 AM	118	8	6	132
8:30 AM	125	13	4	142
8:45 AM	104	13	4	121
9:00 AM	100	12	4	116
9:15 AM	94	16	5	115
9:30 AM	113	13	0	126
9:45 AM	93	10	2	105
10:00 AM	85	14	2	101
10:15 AM	87	17	5	109
10:30 AM	88	13	4	105
10:45 AM	95	20	3	118
11:00 AM	90	11	1	102
11:15 AM	99	15	5	119
11:30 AM	113	15	9	137
11:45 AM	119	11	6	136
AM Total	**2810**	**309**	**124**	**3243**
Percentage	**86.65%**	**9.53%**	**3.82%**	
AM Peak	**7:15 AM**	**10:00 AM**	**6:00 AM**	**7:15 AM**
Volume	**547**	**64**	**22**	**610**

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	101	9	3	113
12:15 PM	120	12	6	138
12:30 PM	99	17	4	120
12:45 PM	135	11	3	149
1:00 PM	100	10	3	113
1:15 PM	94	15	5	114
1:30 PM	115	8	5	128
1:45 PM	125	11	3	139
2:00 PM	114	6	2	122
2:15 PM	96	3	7	106
2:30 PM	125	6	6	137
2:45 PM	113	6	0	119
3:00 PM	135	4	2	141
3:15 PM	121	5	0	126
3:30 PM	169	5	2	176
3:45 PM	126	7	1	134
4:00 PM	176	7	2	185
4:15 PM	142	0	2	144
4:30 PM	119	3	1	123
4:45 PM	121	2	0	123
5:00 PM	154	3	0	157
5:15 PM	144	2	0	146
5:30 PM	109	0	0	109
5:45 PM	90	0	1	91
6:00 PM	102	2	1	105
6:15 PM	91	1	0	92
6:30 PM	86	4	0	90
6:45 PM	70	1	0	71
7:00 PM	88	0	0	88
7:15 PM	70	0	0	70
7:30 PM	73	0	1	74
7:45 PM	59	1	0	60
8:00 PM	67	2	0	69
8:15 PM	52	2	0	54
8:30 PM	45	0	0	45
8:45 PM	38	1	1	40
9:00 PM	38	0	0	38
9:15 PM	45	1	0	46
9:30 PM	31	0	0	31
9:45 PM	30	0	0	30
10:00 PM	31	0	0	31
10:15 PM	25	3	0	28
10:30 PM	35	0	0	35
10:45 PM	22	0	0	22
11:00 PM	28	0	0	28
11:15 PM	26	1	0	27
11:30 PM	17	0	0	17
11:45 PM	9	1	0	10
PM Total	**4121**	**172**	**61**	**4354**
Percentage	**94.65%**	**3.95%**	**1.40%**	
PM Peak	**3:30 PM**	**12:30 PM**	**1:45 PM**	**3:30 PM**
Volume	**613**	**53**	**18**	**639**
Day Total	**6931**	**481**	**185**	**7597**
Percentage	**91.23%**	**6.33%**	**2.44%**	

Salem Street (Route 62) east of
Winchester Hospital West Driveway
City, State: Wilmington, MA
Client: VJB/ V. Kalikiri
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PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File # **240374 ATR-A**

Direction: **EB**

Weekly Report

Day	Wednesday		Thursday												Week	
Date	12/18/24		12/19/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	11	130	10	130	0	0	0	0	0	0	0	0	0	0	11	130
12:15	7	142	9	152	0	0	0	0	0	0	0	0	0	0	8	147
12:30	11	154	9	145	0	0	0	0	0	0	0	0	0	0	10	150
12:45	3	151	6	141	0	0	0	0	0	0	0	0	0	0	5	146
1:00	3	120	5	143	0	0	0	0	0	0	0	0	0	0	4	132
1:15	2	141	4	120	0	0	0	0	0	0	0	0	0	0	3	131
1:30	4	135	5	139	0	0	0	0	0	0	0	0	0	0	5	137
1:45	2	150	2	148	0	0	0	0	0	0	0	0	0	0	2	149
2:00	3	128	3	113	0	0	0	0	0	0	0	0	0	0	3	121
2:15	3	143	8	142	0	0	0	0	0	0	0	0	0	0	6	143
2:30	2	127	5	137	0	0	0	0	0	0	0	0	0	0	4	132
2:45	5	137	3	132	0	0	0	0	0	0	0	0	0	0	4	135
3:00	4	141	2	167	0	0	0	0	0	0	0	0	0	0	3	154
3:15	3	159	8	146	0	0	0	0	0	0	0	0	0	0	6	153
3:30	5	201	5	194	0	0	0	0	0	0	0	0	0	0	5	198
3:45	10	186	8	200	0	0	0	0	0	0	0	0	0	0	9	193
4:00	7	182	6	192	0	0	0	0	0	0	0	0	0	0	7	187
4:15	12	197	6	206	0	0	0	0	0	0	0	0	0	0	9	202
4:30	12	194	11	202	0	0	0	0	0	0	0	0	0	0	12	198
4:45	17	217	22	220	0	0	0	0	0	0	0	0	0	0	20	219
5:00	21	229	13	198	0	0	0	0	0	0	0	0	0	0	17	214
5:15	24	224	29	205	0	0	0	0	0	0	0	0	0	0	27	215
5:30	43	214	40	197	0	0	0	0	0	0	0	0	0	0	42	206
5:45	67	194	60	183	0	0	0	0	0	0	0	0	0	0	64	189
6:00	44	201	58	154	0	0	0	0	0	0	0	0	0	0	51	178
6:15	55	143	63	130	0	0	0	0	0	0	0	0	0	0	59	137
6:30	66	122	47	138	0	0	0	0	0	0	0	0	0	0	57	130
6:45	93	106	94	99	0	0	0	0	0	0	0	0	0	0	94	103
7:00	88	90	100	83	0	0	0	0	0	0	0	0	0	0	94	87
7:15	98	85	111	100	0	0	0	0	0	0	0	0	0	0	105	93
7:30	109	48	111	81	0	0	0	0	0	0	0	0	0	0	110	65
7:45	127	80	129	83	0	0	0	0	0	0	0	0	0	0	128	82
8:00	121	57	102	60	0	0	0	0	0	0	0	0	0	0	112	59
8:15	128	58	147	63	0	0	0	0	0	0	0	0	0	0	138	61
8:30	128	57	115	47	0	0	0	0	0	0	0	0	0	0	122	52
8:45	125	50	112	55	0	0	0	0	0	0	0	0	0	0	119	53
9:00	105	59	108	50	0	0	0	0	0	0	0	0	0	0	107	55
9:15	131	37	98	51	0	0	0	0	0	0	0	0	0	0	115	44
9:30	102	46	92	47	0	0	0	0	0	0	0	0	0	0	97	47
9:45	133	34	108	56	0	0	0	0	0	0	0	0	0	0	121	45
10:00	105	29	123	38	0	0	0	0	0	0	0	0	0	0	114	34
10:15	95	25	109	46	0	0	0	0	0	0	0	0	0	0	102	36
10:30	119	27	107	40	0	0	0	0	0	0	0	0	0	0	113	34
10:45	115	18	129	35	0	0	0	0	0	0	0	0	0	0	122	27
11:00	110	21	129	23	0	0	0	0	0	0	0	0	0	0	120	22
11:15	109	15	132	22	0	0	0	0	0	0	0	0	0	0	121	19
11:30	142	8	119	21	0	0	0	0	0	0	0	0	0	0	131	15
11:45	143	8	134	13	0	0	0	0	0	0	0	0	0	0	139	11
Total	**2872**	**5420**	**2856**	**5487**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2864**	**5454**
Day Total	**8292**		**8343**		**0**		**0**		**0**		**0**		**0**		**8318**	
Peak HR	**7:45 AM**	**4:45 PM**	**11:00 AM**	**4:15 PM**											**11:00 AM**	**4:45 PM**
Volume	**504**	**884**	**514**	**826**											**509**	**852**

Salem Street (Route 62) east of
Winchester Hospital West Driveway
City, State: Wilmington, MA
Client: VJB/ V. Kalikiri
Site Code: TBA

PRECISION
D A T A
INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File # **240374 ATR-A**

Direction: **WB**

Weekly Report

Day	Wednesday		Thursday												Week	
Date	12/18/24		12/19/24												Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	9	119	6	113	0	0	0	0	0	0	0	0	0	0	8	116
12:15	3	120	5	138	0	0	0	0	0	0	0	0	0	0	4	129
12:30	4	117	3	120	0	0	0	0	0	0	0	0	0	0	4	119
12:45	3	127	3	149	0	0	0	0	0	0	0	0	0	0	3	138
1:00	4	128	1	113	0	0	0	0	0	0	0	0	0	0	3	121
1:15	1	102	2	114	0	0	0	0	0	0	0	0	0	0	2	108
1:30	2	124	2	128	0	0	0	0	0	0	0	0	0	0	2	126
1:45	3	116	4	139	0	0	0	0	0	0	0	0	0	0	4	128
2:00	6	146	2	122	0	0	0	0	0	0	0	0	0	0	4	134
2:15	2	108	8	106	0	0	0	0	0	0	0	0	0	0	5	107
2:30	7	129	9	137	0	0	0	0	0	0	0	0	0	0	8	133
2:45	2	118	5	119	0	0	0	0	0	0	0	0	0	0	4	119
3:00	0	137	4	141	0	0	0	0	0	0	0	0	0	0	2	139
3:15	5	130	2	126	0	0	0	0	0	0	0	0	0	0	4	128
3:30	4	165	5	176	0	0	0	0	0	0	0	0	0	0	5	171
3:45	4	149	5	134	0	0	0	0	0	0	0	0	0	0	5	142
4:00	10	167	7	185	0	0	0	0	0	0	0	0	0	0	9	176
4:15	8	139	13	144	0	0	0	0	0	0	0	0	0	0	11	142
4:30	17	140	17	123	0	0	0	0	0	0	0	0	0	0	17	132
4:45	22	131	24	123	0	0	0	0	0	0	0	0	0	0	23	127
5:00	36	152	29	157	0	0	0	0	0	0	0	0	0	0	33	155
5:15	50	146	47	146	0	0	0	0	0	0	0	0	0	0	49	146
5:30	49	117	53	109	0	0	0	0	0	0	0	0	0	0	51	113
5:45	66	124	72	91	0	0	0	0	0	0	0	0	0	0	69	108
6:00	77	110	72	105	0	0	0	0	0	0	0	0	0	0	75	108
6:15	89	103	82	92	0	0	0	0	0	0	0	0	0	0	86	98
6:30	115	77	111	90	0	0	0	0	0	0	0	0	0	0	113	84
6:45	146	109	122	71	0	0	0	0	0	0	0	0	0	0	134	90
7:00	143	78	134	88	0	0	0	0	0	0	0	0	0	0	139	83
7:15	155	56	135	70	0	0	0	0	0	0	0	0	0	0	145	63
7:30	150	52	161	74	0	0	0	0	0	0	0	0	0	0	156	63
7:45	166	62	164	60	0	0	0	0	0	0	0	0	0	0	165	61
8:00	153	63	150	69	0	0	0	0	0	0	0	0	0	0	152	66
8:15	159	40	132	54	0	0	0	0	0	0	0	0	0	0	146	47
8:30	139	43	142	45	0	0	0	0	0	0	0	0	0	0	141	44
8:45	130	36	121	40	0	0	0	0	0	0	0	0	0	0	126	38
9:00	118	43	116	38	0	0	0	0	0	0	0	0	0	0	117	41
9:15	129	45	115	46	0	0	0	0	0	0	0	0	0	0	122	46
9:30	120	23	126	31	0	0	0	0	0	0	0	0	0	0	123	27
9:45	95	30	105	30	0	0	0	0	0	0	0	0	0	0	100	30
10:00	106	33	101	31	0	0	0	0	0	0	0	0	0	0	104	32
10:15	124	18	109	28	0	0	0	0	0	0	0	0	0	0	117	23
10:30	116	23	105	35	0	0	0	0	0	0	0	0	0	0	111	29
10:45	109	19	118	22	0	0	0	0	0	0	0	0	0	0	114	21
11:00	121	19	102	28	0	0	0	0	0	0	0	0	0	0	112	24
11:15	109	13	119	27	0	0	0	0	0	0	0	0	0	0	114	20
11:30	125	6	137	17	0	0	0	0	0	0	0	0	0	0	131	12
11:45	127	6	136	10	0	0	0	0	0	0	0	0	0	0	132	8
Total	**3338**	**4258**	**3243**	**4354**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3291**	**4306**
Day Total	**7596**		**7597**		**0**		**0**		**0**		**0**		**0**		**7597**	
Peak HR	**7:30 AM**	**3:30 PM**	**7:15 AM**	**3:30 PM**											**7:30 AM**	**3:30 PM**
Volume	**628**	**620**	**610**	**639**											**618**	**630**

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	72	109	0	181	42	15	0	57	102	87	0	189	427
7:15 AM	77	98	0	175	47	16	0	63	91	97	0	188	426
7:30 AM	92	111	0	203	47	26	0	73	77	114	0	191	467
7:45 AM	111	101	0	212	55	21	0	76	70	125	0	195	483
Total	352	419	0	771	191	78	0	269	340	423	0	763	1803
8:00 AM	105	94	0	199	54	23	0	77	66	90	0	156	432
8:15 AM	87	72	0	159	57	31	0	88	62	108	0	170	417
8:30 AM	92	87	0	179	48	36	0	84	43	89	0	132	395
8:45 AM	89	55	0	144	40	31	0	71	49	97	0	146	361
Total	373	308	0	681	199	121	0	320	220	384	0	604	1605
Grand Total	725	727	0	1452	390	199	0	589	560	807	0	1367	3408
Approach %	49.9	50.1	0.0		66.2	33.8	0.0		41.0	59.0	0.0		
Total %	21.3	21.3	0.0	42.6	11.4	5.8	0.0	17.3	16.4	23.7	0.0	40.1	
Exiting Leg Total				1197				1287				924	3408
Cars	696	660	0	1356	329	183	0	512	552	769	0	1321	3189
% Cars	96.0	90.8	0.0	93.4	84.4	92.0	0.0	86.9	98.6	95.3	0.0	96.6	93.6
Exiting Leg Total				1098				1212				879	3189
Heavy Vehicles	29	67	0	96	61	16	0	77	8	38	0	46	219
% Heavy Vehicles	4.0	9.2	0.0	6.6	15.6	8.0	0.0	13.1	1.4	4.7	0.0	3.4	6.4
Exiting Leg Total				99				75				45	219

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:15 AM	77	98	0	175	47	16	0	63	91	97	0	188	426
7:30 AM	92	111	0	203	47	26	0	73	77	114	0	191	467
7:45 AM	111	101	0	212	55	21	0	76	70	125	0	195	483
8:00 AM	105	94	0	199	54	23	0	77	66	90	0	156	432
Total Volume	385	404	0	789	203	86	0	289	304	426	0	730	1808
% Approach Total	48.8	51.2	0.0		70.2	29.8	0.0		41.6	58.4	0.0		
PHF	0.867	0.910	0.000	0.930	0.923	0.827	0.000	0.938	0.835	0.852	0.000	0.936	0.936
Cars	371	370	0	741	180	77	0	257	300	406	0	706	1704
Cars %	96.4	91.6	0.0	93.9	88.7	89.5	0.0	88.9	98.7	95.3	0.0	96.7	94.2
Heavy Vehicles	14	34	0	48	23	9	0	32	4	20	0	24	104
Heavy Vehicles %	3.6	8.4	0.0	6.1	11.3	10.5	0.0	11.1	1.3	4.7	0.0	3.3	5.8
Cars Enter Leg	371	370	0	741	180	77	0	257	300	406	0	706	1704
Heavy Enter Leg	14	34	0	48	23	9	0	32	4	20	0	24	104
Total Entering Leg	385	404	0	789	203	86	0	289	304	426	0	730	1808
Cars Exiting Leg				586				670				448	1704
Heavy Exiting Leg				43				38				23	104
Total Exiting Leg				629				708				471	1808

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Cars**

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	67	102	0	169	34	13	0	47	102	85	0	187	403
7:15 AM	75	86	0	161	40	12	0	52	90	92	0	182	395
7:30 AM	89	101	0	190	43	26	0	69	77	107	0	184	443
7:45 AM	105	94	0	199	53	20	0	73	68	122	0	190	462
Total	336	383	0	719	170	71	0	241	337	406	0	743	1703
8:00 AM	102	89	0	191	44	19	0	63	65	85	0	150	404
8:15 AM	84	65	0	149	50	29	0	79	60	103	0	163	391
8:30 AM	87	77	0	164	35	35	0	70	42	86	0	128	362
8:45 AM	87	46	0	133	30	29	0	59	48	89	0	137	329
Total	360	277	0	637	159	112	0	271	215	363	0	578	1486
Grand Total	696	660	0	1356	329	183	0	512	552	769	0	1321	3189
Approach %	51.3	48.7	0.0		64.3	35.7	0.0		41.8	58.2	0.0		
Total %	21.8	20.7	0.0	42.5	10.3	5.7	0.0	16.1	17.3	24.1	0.0	41.4	
Exiting Leg Total				1098				1212				879	3189

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:15 AM	75	86	0	161	40	12	0	52	90	92	0	182	395
7:30 AM	89	101	0	190	43	26	0	69	77	107	0	184	443
7:45 AM	105	94	0	199	53	20	0	73	68	122	0	190	462
8:00 AM	102	89	0	191	44	19	0	63	65	85	0	150	404
Total Volume	371	370	0	741	180	77	0	257	300	406	0	706	1704
% Approach Total	50.1	49.9	0.0		70.0	30.0	0.0		42.5	57.5	0.0		
PHF	0.883	0.916	0.000	0.931	0.849	0.740	0.000	0.880	0.833	0.832	0.000	0.929	0.922
Entering Leg	371	370	0	741	180	77	0	257	300	406	0	706	1704
Exiting Leg				586				670				448	1704
Total				1327				927				1154	3408

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	5	7	0	12	8	2	0	10	0	2	0	2	24
7:15 AM	2	12	0	14	7	4	0	11	1	5	0	6	31
7:30 AM	3	10	0	13	4	0	0	4	0	7	0	7	24
7:45 AM	6	7	0	13	2	1	0	3	2	3	0	5	21
Total	16	36	0	52	21	7	0	28	3	17	0	20	100
8:00 AM	3	5	0	8	10	4	0	14	1	5	0	6	28
8:15 AM	3	7	0	10	7	2	0	9	2	5	0	7	26
8:30 AM	5	10	0	15	13	1	0	14	1	3	0	4	33
8:45 AM	2	9	0	11	10	2	0	12	1	8	0	9	32
Total	13	31	0	44	40	9	0	49	5	21	0	26	119
Grand Total	29	67	0	96	61	16	0	77	8	38	0	46	219
Approach %	30.2	69.8	0.0		79.2	20.8	0.0		17.4	82.6	0.0		
Total %	13.2	30.6	0.0	43.8	27.9	7.3	0.0	35.2	3.7	17.4	0.0	21.0	
Exiting Leg Total				99				75				45	219
Buses	2	1	0	3	1	0	0	1	0	2	0	2	6
% Buses	6.9	1.5	0.0	3.1	1.6	0.0	0.0	1.3	0.0	5.3	0.0	4.3	2.7
Exiting Leg Total				3				1				2	6
Single-Unit Trucks	22	54	0	76	39	9	0	48	6	30	0	36	160
% Single-Unit	75.9	80.6	0.0	79.2	63.9	56.3	0.0	62.3	75.0	78.9	0.0	78.3	73.1
Exiting Leg Total				69				60				31	160
Articulated Trucks	5	12	0	17	21	7	0	28	2	6	0	8	53
% Articulated	17.2	17.9	0.0	17.7	34.4	43.8	0.0	36.4	25.0	15.8	0.0	17.4	24.2
Exiting Leg Total				27				14				12	53

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	3	5	0	8	10	4	0	14	1	5	0	6	28
8:15 AM	3	7	0	10	7	2	0	9	2	5	0	7	26
8:30 AM	5	10	0	15	13	1	0	14	1	3	0	4	33
8:45 AM	2	9	0	11	10	2	0	12	1	8	0	9	32
Total Volume	13	31	0	44	40	9	0	49	5	21	0	26	119
% Approach Total	29.5	70.5	0.0		81.6	18.4	0.0		19.2	80.8	0.0		
PHF	0.650	0.775	0.000	0.733	0.769	0.563	0.000	0.875	0.625	0.656	0.000	0.722	0.902
Buses	0	1	0	1	0	0	0	0	0	1	0	1	2
Buses %	0.0	3.2	0.0	2.3	0.0	0.0	0.0	0.0	0.0	4.8	0.0	3.8	1.7
Single-Unit Trucks	11	26	0	37	26	4	0	30	5	16	0	21	88
Single-Unit %	84.6	83.9	0.0	84.1	65.0	44.4	0.0	61.2	100.0	76.2	0.0	80.8	73.9
Articulated Trucks	2	4	0	6	14	5	0	19	0	4	0	4	29
Articulated %	15.4	12.9	0.0	13.6	35.0	55.6	0.0	38.8	0.0	19.0	0.0	15.4	24.4
Buses	0	1	0	1	0	0	0	0	0	1	0	1	2
Single-Unit Trucks	11	26	0	37	26	4	0	30	5	16	0	21	88
Articulated Trucks	2	4	0	6	14	5	0	19	0	4	0	4	29
Total Entering Leg	13	31	0	44	40	9	0	49	5	21	0	26	119
Buses				1				1				0	2
Single-Unit Trucks				42				31				15	88
Articulated Trucks				18				4				7	29
Total Exiting Leg				61				36				22	119

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	1	0	0	1	0	1	0	1	2
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	1	0	0	1	0	1	0	1	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
8:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	2	1	0	3	1	0	0	1	0	2	0	2	6
Approach %	66.7	33.3	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	33.3	16.7	0.0	50.0	16.7	0.0	0.0	16.7	0.0	33.3	0.0	33.3	
Exiting Leg Total				3				1				2	6

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	1	0	0	1	0	1	0	1	2
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	0	2	1	0	0	1	0	1	0	1	4
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.500
Entering Leg	2	0	0	2	1	0	0	1	0	1	0	1	4
Exiting Leg				2				0				2	4
Total				4				1				3	8

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Single-Unit Trucks**

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	4	6	0	10	4	1	0	5	0	2	0	2	17
7:15 AM	1	9	0	10	6	3	0	9	1	3	0	4	23
7:30 AM	1	8	0	9	2	0	0	2	0	6	0	6	17
7:45 AM	5	5	0	10	1	1	0	2	0	3	0	3	15
Total	11	28	0	39	13	5	0	18	1	14	0	15	72
8:00 AM	3	5	0	8	6	2	0	8	1	3	0	4	20
8:15 AM	2	5	0	7	3	0	0	3	2	4	0	6	16
8:30 AM	4	8	0	12	9	0	0	9	1	2	0	3	24
8:45 AM	2	8	0	10	8	2	0	10	1	7	0	8	28
Total	11	26	0	37	26	4	0	30	5	16	0	21	88
Grand Total	22	54	0	76	39	9	0	48	6	30	0	36	160
Approach %	28.9	71.1	0.0		81.3	18.8	0.0		16.7	83.3	0.0		
Total %	13.8	33.8	0.0	47.5	24.4	5.6	0.0	30.0	3.8	18.8	0.0	22.5	
Exiting Leg Total				69				60				31	160

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	3	5	0	8	6	2	0	8	1	3	0	4	20
8:15 AM	2	5	0	7	3	0	0	3	2	4	0	6	16
8:30 AM	4	8	0	12	9	0	0	9	1	2	0	3	24
8:45 AM	2	8	0	10	8	2	0	10	1	7	0	8	28
Total Volume	11	26	0	37	26	4	0	30	5	16	0	21	88
% Approach Total	29.7	70.3	0.0		86.7	13.3	0.0		23.8	76.2	0.0		
PHF	0.688	0.813	0.000	0.771	0.722	0.500	0.000	0.750	0.625	0.571	0.000	0.656	0.786
Entering Leg	11	26	0	37	26	4	0	30	5	16	0	21	88
Exiting Leg				42				31				15	88
Total				79				61				36	176

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Articulated Trucks

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	0	1	0	1	4	1	0	5	0	0	0	0	6
7:15 AM	1	3	0	4	0	1	0	1	0	1	0	1	6
7:30 AM	1	2	0	3	2	0	0	2	0	1	0	1	6
7:45 AM	1	2	0	3	1	0	0	1	2	0	0	2	6
Total	3	8	0	11	7	2	0	9	2	2	0	4	24
8:00 AM	0	0	0	0	4	2	0	6	0	2	0	2	8
8:15 AM	1	2	0	3	4	2	0	6	0	0	0	0	9
8:30 AM	1	1	0	2	4	1	0	5	0	1	0	1	8
8:45 AM	0	1	0	1	2	0	0	2	0	1	0	1	4
Total	2	4	0	6	14	5	0	19	0	4	0	4	29
Grand Total	5	12	0	17	21	7	0	28	2	6	0	8	53
Approach %	29.4	70.6	0.0		75.0	25.0	0.0		25.0	75.0	0.0		
Total %	9.4	22.6	0.0	32.1	39.6	13.2	0.0	52.8	3.8	11.3	0.0	15.1	
Exiting Leg Total				27				14				12	53

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:45 AM	1	2	0	3	1	0	0	1	2	0	0	2	6
8:00 AM	0	0	0	0	4	2	0	6	0	2	0	2	8
8:15 AM	1	2	0	3	4	2	0	6	0	0	0	0	9
8:30 AM	1	1	0	2	4	1	0	5	0	1	0	1	8
Total Volume	3	5	0	8	13	5	0	18	2	3	0	5	31
% Approach Total	37.5	62.5	0.0		72.2	27.8	0.0		40.0	60.0	0.0		
PHF	0.750	0.625	0.000	0.667	0.813	0.625	0.000	0.750	0.250	0.375	0.000	0.625	0.861
Entering Leg	3	5	0	8	13	5	0	18	2	3	0	5	31
Exiting Leg				16				7				8	31
Total				24				25				13	62

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Bicycles (on Roadway and Crosswalks)

	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	140	65	0	205	83	18	0	101	64	154	0	218	524
4:15 PM	140	61	0	201	86	22	0	108	60	137	0	197	506
4:30 PM	141	57	0	198	80	20	0	100	64	147	0	211	509
4:45 PM	143	51	0	194	76	32	0	108	70	140	0	210	512
Total	564	234	0	798	325	92	0	417	258	578	0	836	2051
5:00 PM	157	46	0	203	77	33	0	110	56	108	0	164	477
5:15 PM	115	59	0	174	65	19	0	84	66	164	0	230	488
5:30 PM	116	37	0	153	83	21	0	104	40	127	0	167	424
5:45 PM	104	40	0	144	77	20	0	97	53	133	0	186	427
Total	492	182	0	674	302	93	0	395	215	532	0	747	1816
Grand Total	1056	416	0	1472	627	185	0	812	473	1110	0	1583	3867
Approach %	71.7	28.3	0.0		77.2	22.8	0.0		29.9	70.1	0.0		
Total %	27.3	10.8	0.0	38.1	16.2	4.8	0.0	21.0	12.2	28.7	0.0	40.9	
Exiting Leg Total				1737				889				1241	3867
Cars	1050	411	0	1461	609	184	0	793	469	1105	0	1574	3828
% Cars	99.4	98.8	0.0	99.3	97.1	99.5	0.0	97.7	99.2	99.5	0.0	99.4	99.0
Exiting Leg Total				1714				880				1234	3828
Heavy Vehicles	6	5	0	11	18	1	0	19	4	5	0	9	39
% Heavy Vehicles	0.6	1.2	0.0	0.7	2.9	0.5	0.0	2.3	0.8	0.5	0.0	0.6	1.0
Exiting Leg Total				23				9				7	39

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	140	65	0	205	83	18	0	101	64	154	0	218	524
4:15 PM	140	61	0	201	86	22	0	108	60	137	0	197	506
4:30 PM	141	57	0	198	80	20	0	100	64	147	0	211	509
4:45 PM	143	51	0	194	76	32	0	108	70	140	0	210	512
Total Volume	564	234	0	798	325	92	0	417	258	578	0	836	2051
% Approach Total	70.7	29.3	0.0		77.9	22.1	0.0		30.9	69.1	0.0		
PHF	0.986	0.900	0.000	0.973	0.945	0.719	0.000	0.965	0.921	0.938	0.000	0.959	0.979
Cars	560	229	0	789	317	92	0	409	255	573	0	828	2026
Cars %	99.3	97.9	0.0	98.9	97.5	100.0	0.0	98.1	98.8	99.1	0.0	99.0	98.8
Heavy Vehicles	4	5	0	9	8	0	0	8	3	5	0	8	25
Heavy Vehicles %	0.7	2.1	0.0	1.1	2.5	0.0	0.0	1.9	1.2	0.9	0.0	1.0	1.2
Cars Enter Leg	560	229	0	789	317	92	0	409	255	573	0	828	2026
Heavy Enter Leg	4	5	0	9	8	0	0	8	3	5	0	8	25
Total Entering Leg	564	234	0	798	325	92	0	417	258	578	0	836	2051
Cars Exiting Leg				890				484				652	2026
Heavy Exiting Leg				13				8				4	25
Total Exiting Leg				903				492				656	2051

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	139	62	0	201	80	18	0	98	61	153	0	214	513
4:15 PM	139	60	0	199	84	22	0	106	60	135	0	195	500
4:30 PM	140	57	0	197	78	20	0	98	64	146	0	210	505
4:45 PM	142	50	0	192	75	32	0	107	70	139	0	209	508
Total	560	229	0	789	317	92	0	409	255	573	0	828	2026
5:00 PM	155	46	0	201	75	33	0	108	55	108	0	163	472
5:15 PM	115	59	0	174	63	19	0	82	66	164	0	230	486
5:30 PM	116	37	0	153	81	20	0	101	40	127	0	167	421
5:45 PM	104	40	0	144	73	20	0	93	53	133	0	186	423
Total	490	182	0	672	292	92	0	384	214	532	0	746	1802
Grand Total	1050	411	0	1461	609	184	0	793	469	1105	0	1574	3828
Approach %	71.9	28.1	0.0		76.8	23.2	0.0		29.8	70.2	0.0		
Total %	27.4	10.7	0.0	38.2	15.9	4.8	0.0	20.7	12.3	28.9	0.0	41.1	
Exiting Leg Total				1714				880				1234	3828

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	139	62	0	201	80	18	0	98	61	153	0	214	513
4:15 PM	139	60	0	199	84	22	0	106	60	135	0	195	500
4:30 PM	140	57	0	197	78	20	0	98	64	146	0	210	505
4:45 PM	142	50	0	192	75	32	0	107	70	139	0	209	508
Total Volume	560	229	0	789	317	92	0	409	255	573	0	828	2026
% Approach Total	71.0	29.0	0.0		77.5	22.5	0.0		30.8	69.2	0.0		
PHF	0.986	0.923	0.000	0.981	0.943	0.719	0.000	0.956	0.911	0.936	0.000	0.967	0.987
Entering Leg	560	229	0	789	317	92	0	409	255	573	0	828	2026
Exiting Leg				890				484				652	2026
Total				1679				893				1480	4052

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	3	0	4	3	0	0	3	3	1	0	4	11
4:15 PM	1	1	0	2	2	0	0	2	0	2	0	2	6
4:30 PM	1	0	0	1	2	0	0	2	0	1	0	1	4
4:45 PM	1	1	0	2	1	0	0	1	0	1	0	1	4
Total	4	5	0	9	8	0	0	8	3	5	0	8	25
5:00 PM	2	0	0	2	2	0	0	2	1	0	0	1	5
5:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	2	1	0	3	0	0	0	0	3
5:45 PM	0	0	0	0	4	0	0	4	0	0	0	0	4
Total	2	0	0	2	10	1	0	11	1	0	0	1	14
Grand Total	6	5	0	11	18	1	0	19	4	5	0	9	39
Approach %	54.5	45.5	0.0		94.7	5.3	0.0		44.4	55.6	0.0		
Total %	15.4	12.8	0.0	28.2	46.2	2.6	0.0	48.7	10.3	12.8	0.0	23.1	
Exiting Leg Total				23				9				7	39
Buses	0	2	0	2	0	0	0	0	1	1	0	2	4
% Buses	0.0	40.0	0.0	18.2	0.0	0.0	0.0	0.0	25.0	20.0	0.0	22.2	10.3
Exiting Leg Total				1				3				0	4
Single-Unit Trucks	6	3	0	9	8	1	0	9	3	2	0	5	23
% Single-Unit	100.0	60.0	0.0	81.8	44.4	100.0	0.0	47.4	75.0	40.0	0.0	55.6	59.0
Exiting Leg Total				10				6				7	23
Articulated Trucks	0	0	0	0	10	0	0	10	0	2	0	2	12
% Articulated	0.0	0.0	0.0	0.0	55.6	0.0	0.0	52.6	0.0	40.0	0.0	22.2	30.8
Exiting Leg Total				12				0				0	12

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	3	0	4	3	0	0	3	3	1	0	4	11
4:15 PM	1	1	0	2	2	0	0	2	0	2	0	2	6
4:30 PM	1	0	0	1	2	0	0	2	0	1	0	1	4
4:45 PM	1	1	0	2	1	0	0	1	0	1	0	1	4
Total Volume	4	5	0	9	8	0	0	8	3	5	0	8	25
% Approach Total	44.4	55.6	0.0		100.0	0.0	0.0		37.5	62.5	0.0		
PHF	1.000	0.417	0.000	0.563	0.667	0.000	0.000	0.667	0.250	0.625	0.000	0.500	0.568
Buses	0	2	0	2	0	0	0	0	1	1	0	2	4
Buses %	0.0	40.0	0.0	22.2	0.0	0.0	0.0	0.0	33.3	20.0	0.0	25.0	16.0
Single-Unit Trucks	4	3	0	7	4	0	0	4	2	2	0	4	15
Single-Unit %	100.0	60.0	0.0	77.8	50.0	0.0	0.0	50.0	66.7	40.0	0.0	50.0	60.0
Articulated Trucks	0	0	0	0	4	0	0	4	0	2	0	2	6
Articulated %	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0	40.0	0.0	25.0	24.0
Buses	0	2	0	2	0	0	0	0	1	1	0	2	4
Single-Unit Trucks	4	3	0	7	4	0	0	4	2	2	0	4	15
Articulated Trucks	0	0	0	0	4	0	0	4	0	2	0	2	6
Total Entering Leg	4	5	0	9	8	0	0	8	3	5	0	8	25
Buses				1				3				0	4
Single-Unit Trucks				6				5				4	15
Articulated Trucks				6				0				0	6
Total Exiting Leg				13				8				4	25

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Buses

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	1	0	1	0	0	0	0	1	0	0	1	2
4:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	1	1	0	2	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	0	2	0	0	0	0	1	1	0	2	4
Approach %	0.0	100.0	0.0		0.0	0.0	0.0		50.0	50.0	0.0		
Total %	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0	50.0	
Exiting Leg Total				1				3				0	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	1	0	1	0	0	0	0	1	0	0	1	2
4:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	1	1	0	2	4
% Approach Total	0.0	100.0	0.0		0.0	0.0	0.0		50.0	50.0	0.0		
PHF	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.500	0.500
Entering Leg	0	2	0	2	0	0	0	0	1	1	0	2	4
Exiting Leg				1				3				0	4
Total				3				3				2	8

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Single-Unit Trucks**

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	2	0	3	1	0	0	1	2	0	0	2	6
4:15 PM	1	0	0	1	2	0	0	2	0	1	0	1	4
4:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	1	1	0	2	1	0	0	1	0	1	0	1	4
Total	4	3	0	7	4	0	0	4	2	2	0	4	15
5:00 PM	2	0	0	2	0	0	0	0	1	0	0	1	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	2	1	0	3	0	0	0	0	3
5:45 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
Total	2	0	0	2	4	1	0	5	1	0	0	1	8
Grand Total	6	3	0	9	8	1	0	9	3	2	0	5	23
Approach %	66.7	33.3	0.0		88.9	11.1	0.0		60.0	40.0	0.0		
Total %	26.1	13.0	0.0	39.1	34.8	4.3	0.0	39.1	13.0	8.7	0.0	21.7	
Exiting Leg Total				10				6				7	23

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	2	0	3	1	0	0	1	2	0	0	2	6
4:15 PM	1	0	0	1	2	0	0	2	0	1	0	1	4
4:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	1	1	0	2	1	0	0	1	0	1	0	1	4
Total Volume	4	3	0	7	4	0	0	4	2	2	0	4	15
% Approach Total	57.1	42.9	0.0		100.0	0.0	0.0		50.0	50.0	0.0		
PHF	1.000	0.375	0.000	0.583	0.500	0.000	0.000	0.500	0.250	0.500	0.000	0.500	0.625
Entering Leg	4	3	0	7	4	0	0	4	2	2	0	4	15
Exiting Leg				6				5				4	15
Total				13				9				8	30

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Articulated Trucks**

	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	0	0	0	2	0	0	2	0	1	0	1	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	2	0	0	2	0	1	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	0	0	4	0	2	0	2	6
5:00 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
5:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
Total	0	0	0	0	6	0	0	6	0	0	0	0	6
Grand Total	0	0	0	0	10	0	0	10	0	2	0	2	12
Approach %	0.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	0.0	0.0	0.0	0.0	83.3	0.0	0.0	83.3	0.0	16.7	0.0	16.7	
Exiting Leg Total				12				0				0	12

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:30 PM	Route 62 from East				I-93 SB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:30 PM	0	0	0	0	2	0	0	2	0	1	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
5:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
Total Volume	0	0	0	0	6	0	0	6	0	1	0	1	7
% Approach Total	0.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.750	0.000	0.250	0.000	0.250	0.583
Entering Leg	0	0	0	0	6	0	0	6	0	1	0	1	7
Exiting Leg				7				0				0	7
Total				7				6				1	14

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Bicycles (on Roadway and Crosswalks)**

	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Approach %	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
Total %	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	
Exiting Leg Total						1						0						1	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total Volume	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
% Approach Total	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500
Entering Leg	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2
Exiting Leg						1						0						1	2
Total						2						0						2	4

PDI File #: **240374 A**
Location: **S: I-93 SB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East						I-93 SB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	160	49	0	209	33	24	0	57	34	90	0	124	390
7:15 AM	165	52	0	217	42	15	0	57	34	109	0	143	417
7:30 AM	179	47	0	226	28	22	0	50	31	121	0	152	428
7:45 AM	188	67	0	255	53	30	0	83	38	134	0	172	510
Total	692	215	0	907	156	91	0	247	137	454	0	591	1745
8:00 AM	169	60	0	229	49	22	1	72	38	111	0	149	450
8:15 AM	136	52	0	188	39	28	1	68	29	137	0	166	422
8:30 AM	149	46	0	195	38	25	0	63	25	108	0	133	391
8:45 AM	114	51	0	165	45	32	0	77	36	99	0	135	377
Total	568	209	0	777	171	107	2	280	128	455	0	583	1640
Grand Total	1260	424	0	1684	327	198	2	527	265	909	0	1174	3385
Approach %	74.8	25.2	0.0		62.0	37.6	0.4		22.6	77.4	0.0		
Total %	37.2	12.5	0.0	49.7	9.7	5.8	0.1	15.6	7.8	26.9	0.0	34.7	
Exiting Leg Total				1236				691				1458	3385
Cars	1170	388	0	1558	267	192	2	461	242	834	0	1076	3095
% Cars	92.9	91.5	0.0	92.5	81.7	97.0	100.0	87.5	91.3	91.7	0.0	91.7	91.4
Exiting Leg Total				1101				632				1362	3095
Heavy Vehicles	90	36	0	126	60	6	0	66	23	75	0	98	290
% Heavy Vehicles	7.1	8.5	0.0	7.5	18.3	3.0	0.0	12.5	8.7	8.3	0.0	8.3	8.6
Exiting Leg Total				135				59				96	290

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:30 AM	179	47	0	226	28	22	0	50	31	121	0	152	428
7:45 AM	188	67	0	255	53	30	0	83	38	134	0	172	510
8:00 AM	169	60	0	229	49	22	1	72	38	111	0	149	450
8:15 AM	136	52	0	188	39	28	1	68	29	137	0	166	422
Total Volume	672	226	0	898	169	102	2	273	136	503	0	639	1810
% Approach Total	74.8	25.2	0.0		61.9	37.4	0.7		21.3	78.7	0.0		
PHF	0.894	0.843	0.000	0.880	0.797	0.850	0.500	0.822	0.895	0.918	0.000	0.929	0.887
Cars	632	204	0	836	147	97	2	246	121	470	0	591	1673
Cars %	94.0	90.3	0.0	93.1	87.0	95.1	100.0	90.1	89.0	93.4	0.0	92.5	92.4
Heavy Vehicles	40	22	0	62	22	5	0	27	15	33	0	48	137
Heavy Vehicles %	6.0	9.7	0.0	6.9	13.0	4.9	0.0	9.9	11.0	6.6	0.0	7.5	7.6
Cars Enter Leg	632	204	0	836	147	97	2	246	121	470	0	591	1673
Heavy Enter Leg	40	22	0	62	22	5	0	27	15	33	0	48	137
Total Entering Leg	672	226	0	898	169	102	2	273	136	503	0	639	1810
Cars Exiting Leg				617				327				729	1673
Heavy Exiting Leg				55				37				45	137
Total Exiting Leg				672				364				774	1810

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Cars**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	148	46	0	194	22	23	0	45	33	81	0	114	353
7:15 AM	151	51	0	202	31	15	0	46	32	100	0	132	380
7:30 AM	166	39	0	205	21	21	0	42	26	115	0	141	388
7:45 AM	179	60	0	239	47	27	0	74	35	130	0	165	478
Total	644	196	0	840	121	86	0	207	126	426	0	552	1599
8:00 AM	162	57	0	219	46	21	1	68	33	103	0	136	423
8:15 AM	125	48	0	173	33	28	1	62	27	122	0	149	384
8:30 AM	136	44	0	180	30	25	0	55	23	96	0	119	354
8:45 AM	103	43	0	146	37	32	0	69	33	87	0	120	335
Total	526	192	0	718	146	106	2	254	116	408	0	524	1496
Grand Total	1170	388	0	1558	267	192	2	461	242	834	0	1076	3095
Approach %	75.1	24.9	0.0		57.9	41.6	0.4		22.5	77.5	0.0		
Total %	37.8	12.5	0.0	50.3	8.6	6.2	0.1	14.9	7.8	26.9	0.0	34.8	
Exiting Leg Total				1101				632				1362	3095

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:30 AM	166	39	0	205	21	21	0	42	26	115	0	141	388
7:45 AM	179	60	0	239	47	27	0	74	35	130	0	165	478
8:00 AM	162	57	0	219	46	21	1	68	33	103	0	136	423
8:15 AM	125	48	0	173	33	28	1	62	27	122	0	149	384
Total Volume	632	204	0	836	147	97	2	246	121	470	0	591	1673
% Approach Total	75.6	24.4	0.0		59.8	39.4	0.8		20.5	79.5	0.0		
PHF	0.883	0.850	0.000	0.874	0.782	0.866	0.500	0.831	0.864	0.904	0.000	0.895	0.875
Entering Leg	632	204	0	836	147	97	2	246	121	470	0	591	1673
Exiting Leg				617				327				729	1673
Total				1453				573				1320	3346

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	12	3	0	15	11	1	0	12	1	9	0	10	37
7:15 AM	14	1	0	15	11	0	0	11	2	9	0	11	37
7:30 AM	13	8	0	21	7	1	0	8	5	6	0	11	40
7:45 AM	9	7	0	16	6	3	0	9	3	4	0	7	32
Total	48	19	0	67	35	5	0	40	11	28	0	39	146
8:00 AM	7	3	0	10	3	1	0	4	5	8	0	13	27
8:15 AM	11	4	0	15	6	0	0	6	2	15	0	17	38
8:30 AM	13	2	0	15	8	0	0	8	2	12	0	14	37
8:45 AM	11	8	0	19	8	0	0	8	3	12	0	15	42
Total	42	17	0	59	25	1	0	26	12	47	0	59	144
Grand Total	90	36	0	126	60	6	0	66	23	75	0	98	290
Approach %	71.4	28.6	0.0		90.9	9.1	0.0		23.5	76.5	0.0		
Total %	31.0	12.4	0.0	43.4	20.7	2.1	0.0	22.8	7.9	25.9	0.0	33.8	
Exiting Leg Total				135				59				96	290
Buses	3	0	0	3	3	0	0	3	0	4	0	4	10
% Buses	3.3	0.0	0.0	2.4	5.0	0.0	0.0	4.5	0.0	5.3	0.0	4.1	3.4
Exiting Leg Total				7				0				3	10
Single-Unit Trucks	70	20	0	90	43	5	0	48	16	53	0	69	207
% Single-Unit	77.8	55.6	0.0	71.4	71.7	83.3	0.0	72.7	69.6	70.7	0.0	70.4	71.4
Exiting Leg Total				96				36				75	207
Articulated Trucks	17	16	0	33	14	1	0	15	7	18	0	25	73
% Articulated	18.9	44.4	0.0	26.2	23.3	16.7	0.0	22.7	30.4	24.0	0.0	25.5	25.2
Exiting Leg Total				32				23				18	73

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	12	3	0	15	11	1	0	12	1	9	0	10	37
7:15 AM	14	1	0	15	11	0	0	11	2	9	0	11	37
7:30 AM	13	8	0	21	7	1	0	8	5	6	0	11	40
7:45 AM	9	7	0	16	6	3	0	9	3	4	0	7	32
Total Volume	48	19	0	67	35	5	0	40	11	28	0	39	146
% Approach Total	71.6	28.4	0.0		87.5	12.5	0.0		28.2	71.8	0.0		
PHF	0.857	0.594	0.000	0.798	0.795	0.417	0.000	0.833	0.550	0.778	0.000	0.886	0.913
Buses	2	0	0	2	1	0	0	1	0	2	0	2	5
Buses %	4.2	0.0	0.0	3.0	2.9	0.0	0.0	2.5	0.0	7.1	0.0	5.1	3.4
Single-Unit Trucks	35	11	0	46	29	4	0	33	11	18	0	29	108
Single-Unit %	72.9	57.9	0.0	68.7	82.9	80.0	0.0	82.5	100.0	64.3	0.0	74.4	74.0
Articulated Trucks	11	8	0	19	5	1	0	6	0	8	0	8	33
Articulated %	22.9	42.1	0.0	28.4	14.3	20.0	0.0	15.0	0.0	28.6	0.0	20.5	22.6
Buses	2	0	0	2	1	0	0	1	0	2	0	2	5
Single-Unit Trucks	35	11	0	46	29	4	0	33	11	18	0	29	108
Articulated Trucks	11	8	0	19	5	1	0	6	0	8	0	8	33
Total Entering Leg	48	19	0	67	35	5	0	40	11	28	0	39	146
Buses				3				0				2	5
Single-Unit Trucks				47				22				39	108
Articulated Trucks				13				8				12	33
Total Exiting Leg				63				30				53	146

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	2	0	0	2	1	0	0	1	0	2	0	2	5
8:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
8:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	1	0	0	1	2	0	0	2	0	2	0	2	5
Grand Total	3	0	0	3	3	0	0	3	0	4	0	4	10
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	30.0	0.0	0.0	30.0	30.0	0.0	0.0	30.0	0.0	40.0	0.0	40.0	
Exiting Leg Total				7				0				3	10

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
7:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	2	0	0	2	1	0	0	1	0	2	0	2	5
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.625
Entering Leg	2	0	0	2	1	0	0	1	0	2	0	2	5
Exiting Leg				3				0				2	5
Total				5				1				4	10

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Single-Unit Trucks**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	10	2	0	12	9	1	0	10	1	5	0	6	28
7:15 AM	10	0	0	10	10	0	0	10	2	6	0	8	28
7:30 AM	8	4	0	12	6	1	0	7	5	4	0	9	28
7:45 AM	7	5	0	12	4	2	0	6	3	3	0	6	24
Total	35	11	0	46	29	4	0	33	11	18	0	29	108
8:00 AM	7	1	0	8	2	1	0	3	1	7	0	8	19
8:15 AM	8	2	0	10	2	0	0	2	1	10	0	11	23
8:30 AM	10	0	0	10	5	0	0	5	1	8	0	9	24
8:45 AM	10	6	0	16	5	0	0	5	2	10	0	12	33
Total	35	9	0	44	14	1	0	15	5	35	0	40	99
Grand Total	70	20	0	90	43	5	0	48	16	53	0	69	207
Approach %	77.8	22.2	0.0		89.6	10.4	0.0		23.2	76.8	0.0		
Total %	33.8	9.7	0.0	43.5	20.8	2.4	0.0	23.2	7.7	25.6	0.0	33.3	
Exiting Leg Total				96				36				75	207

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	10	2	0	12	9	1	0	10	1	5	0	6	28
7:15 AM	10	0	0	10	10	0	0	10	2	6	0	8	28
7:30 AM	8	4	0	12	6	1	0	7	5	4	0	9	28
7:45 AM	7	5	0	12	4	2	0	6	3	3	0	6	24
Total Volume	35	11	0	46	29	4	0	33	11	18	0	29	108
% Approach Total	76.1	23.9	0.0		87.9	12.1	0.0		37.9	62.1	0.0		
PHF	0.875	0.550	0.000	0.958	0.725	0.500	0.000	0.825	0.550	0.750	0.000	0.806	0.964
Entering Leg	35	11	0	46	29	4	0	33	11	18	0	29	108
Exiting Leg				47				22				39	108
Total				93				55				68	216

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Articulated Trucks**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
7:00 AM	1	1	0	2	2	0	0	2	0	4	0	4	8
7:15 AM	4	1	0	5	1	0	0	1	0	1	0	1	7
7:30 AM	4	4	0	8	1	0	0	1	0	2	0	2	11
7:45 AM	2	2	0	4	1	1	0	2	0	1	0	1	7
Total	11	8	0	19	5	1	0	6	0	8	0	8	33
8:00 AM	0	2	0	2	0	0	0	0	4	1	0	5	7
8:15 AM	3	2	0	5	4	0	0	4	1	3	0	4	13
8:30 AM	2	2	0	4	3	0	0	3	1	4	0	5	12
8:45 AM	1	2	0	3	2	0	0	2	1	2	0	3	8
Total	6	8	0	14	9	0	0	9	7	10	0	17	40
Grand Total	17	16	0	33	14	1	0	15	7	18	0	25	73
Approach %	51.5	48.5	0.0		93.3	6.7	0.0		28.0	72.0	0.0		
Total %	23.3	21.9	0.0	45.2	19.2	1.4	0.0	20.5	9.6	24.7	0.0	34.2	
Exiting Leg Total				32				23				18	73

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
8:00 AM	0	2	0	2	0	0	0	0	4	1	0	5	7
8:15 AM	3	2	0	5	4	0	0	4	1	3	0	4	13
8:30 AM	2	2	0	4	3	0	0	3	1	4	0	5	12
8:45 AM	1	2	0	3	2	0	0	2	1	2	0	3	8
Total Volume	6	8	0	14	9	0	0	9	7	10	0	17	40
% Approach Total	42.9	57.1	0.0		100.0	0.0	0.0		41.2	58.8	0.0		
PHF	0.500	1.000	0.000	0.700	0.563	0.000	0.000	0.563	0.438	0.625	0.000	0.850	0.769
Entering Leg	6	8	0	14	9	0	0	9	7	10	0	17	40
Exiting Leg				19				15				6	40
Total				33				24				23	80

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars and Heavy Vehicles (Combined)

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	163	54	0	217	56	38	0	94	55	175	0	230	541
4:15 PM	160	49	0	209	71	44	0	115	38	185	0	223	547
4:30 PM	139	22	0	161	89	51	0	140	28	187	0	215	516
4:45 PM	148	39	0	187	65	44	0	109	35	177	0	212	508
Total	610	164	0	774	281	177	0	458	156	724	0	880	2112
5:00 PM	168	47	0	215	96	41	0	137	23	162	0	185	537
5:15 PM	147	38	0	185	70	33	0	103	35	195	0	230	518
5:30 PM	119	40	0	159	80	34	0	114	31	175	0	206	479
5:45 PM	105	30	0	135	72	38	0	110	39	161	0	200	445
Total	539	155	0	694	318	146	0	464	128	693	0	821	1979
Grand Total	1149	319	0	1468	599	323	0	922	284	1417	0	1701	4091
Approach %	78.3	21.7	0.0		65.0	35.0	0.0		16.7	83.3	0.0		
Total %	28.1	7.8	0.0	35.9	14.6	7.9	0.0	22.5	6.9	34.6	0.0	41.6	
Exiting Leg Total				2016				603				1472	4091
Cars	1142	305	0	1447	582	319	0	901	280	1394	0	1674	4022
% Cars	99.4	95.6	0.0	98.6	97.2	98.8	0.0	97.7	98.6	98.4	0.0	98.4	98.3
Exiting Leg Total				1976				585				1461	4022
Heavy Vehicles	7	14	0	21	17	4	0	21	4	23	0	27	69
% Heavy Vehicles	0.6	4.4	0.0	1.4	2.8	1.2	0.0	2.3	1.4	1.6	0.0	1.6	1.7
Exiting Leg Total				40				18				11	69

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	163	54	0	217	56	38	0	94	55	175	0	230	541
4:15 PM	160	49	0	209	71	44	0	115	38	185	0	223	547
4:30 PM	139	22	0	161	89	51	0	140	28	187	0	215	516
4:45 PM	148	39	0	187	65	44	0	109	35	177	0	212	508
Total Volume	610	164	0	774	281	177	0	458	156	724	0	880	2112
% Approach Total	78.8	21.2	0.0		61.4	38.6	0.0		17.7	82.3	0.0		
PHF	0.936	0.759	0.000	0.892	0.789	0.868	0.000	0.818	0.709	0.968	0.000	0.957	0.965
Cars	605	155	0	760	267	174	0	441	153	712	0	865	2066
Cars %	99.2	94.5	0.0	98.2	95.0	98.3	0.0	96.3	98.1	98.3	0.0	98.3	97.8
Heavy Vehicles	5	9	0	14	14	3	0	17	3	12	0	15	46
Heavy Vehicles %	0.8	5.5	0.0	1.8	5.0	1.7	0.0	3.7	1.9	1.7	0.0	1.7	2.2
Cars Enter Leg	605	155	0	760	267	174	0	441	153	712	0	865	2066
Heavy Enter Leg	5	9	0	14	14	3	0	17	3	12	0	15	46
Total Entering Leg	610	164	0	774	281	177	0	458	156	724	0	880	2112
Cars Exiting Leg				979				308				779	2066
Heavy Exiting Leg				26				12				8	46
Total Exiting Leg				1005				320				787	2112

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Cars

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	161	49	0	210	51	37	0	88	54	173	0	227	525
4:15 PM	159	47	0	206	66	44	0	110	37	181	0	218	534
4:30 PM	138	21	0	159	88	51	0	139	28	182	0	210	508
4:45 PM	147	38	0	185	62	42	0	104	34	176	0	210	499
Total	605	155	0	760	267	174	0	441	153	712	0	865	2066
5:00 PM	166	46	0	212	95	40	0	135	22	158	0	180	527
5:15 PM	147	36	0	183	69	33	0	102	35	193	0	228	513
5:30 PM	119	39	0	158	80	34	0	114	31	174	0	205	477
5:45 PM	105	29	0	134	71	38	0	109	39	157	0	196	439
Total	537	150	0	687	315	145	0	460	127	682	0	809	1956
Grand Total	1142	305	0	1447	582	319	0	901	280	1394	0	1674	4022
Approach %	78.9	21.1	0.0		64.6	35.4	0.0		16.7	83.3	0.0		
Total %	28.4	7.6	0.0	36.0	14.5	7.9	0.0	22.4	7.0	34.7	0.0	41.6	
Exiting Leg Total				1976				585				1461	4022

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:15 PM	159	47	0	206	66	44	0	110	37	181	0	218	534
4:30 PM	138	21	0	159	88	51	0	139	28	182	0	210	508
4:45 PM	147	38	0	185	62	42	0	104	34	176	0	210	499
5:00 PM	166	46	0	212	95	40	0	135	22	158	0	180	527
Total Volume	610	152	0	762	311	177	0	488	121	697	0	818	2068
% Approach Total	80.1	19.9	0.0		63.7	36.3	0.0		14.8	85.2	0.0		
PHF	0.919	0.809	0.000	0.899	0.818	0.868	0.000	0.878	0.818	0.957	0.000	0.938	0.968
Entering Leg	610	152	0	762	311	177	0	488	121	697	0	818	2068
Exiting Leg				1008				273				787	2068
Total				1770				761				1605	4136

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	2	5	0	7	5	1	0	6	1	2	0	3	16
4:15 PM	1	2	0	3	5	0	0	5	1	4	0	5	13
4:30 PM	1	1	0	2	1	0	0	1	0	5	0	5	8
4:45 PM	1	1	0	2	3	2	0	5	1	1	0	2	9
Total	5	9	0	14	14	3	0	17	3	12	0	15	46
5:00 PM	2	1	0	3	1	1	0	2	1	4	0	5	10
5:15 PM	0	2	0	2	1	0	0	1	0	2	0	2	5
5:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
5:45 PM	0	1	0	1	1	0	0	1	0	4	0	4	6
Total	2	5	0	7	3	1	0	4	1	11	0	12	23
Grand Total	7	14	0	21	17	4	0	21	4	23	0	27	69
Approach %	33.3	66.7	0.0		81.0	19.0	0.0		14.8	85.2	0.0		
Total %	10.1	20.3	0.0	30.4	24.6	5.8	0.0	30.4	5.8	33.3	0.0	39.1	
Exiting Leg Total				40				18				11	69
Buses	2	0	0	2	1	0	0	1	0	2	0	2	5
% Buses	28.6	0.0	0.0	9.5	5.9	0.0	0.0	4.8	0.0	8.7	0.0	7.4	7.2
Exiting Leg Total				3				0				2	5
Single-Unit Trucks	5	9	0	14	14	4	0	18	1	12	0	13	45
% Single-Unit	71.4	64.3	0.0	66.7	82.4	100.0	0.0	85.7	25.0	52.2	0.0	48.1	65.2
Exiting Leg Total				26				10				9	45
Articulated Trucks	0	5	0	5	2	0	0	2	3	9	0	12	19
% Articulated	0.0	35.7	0.0	23.8	11.8	0.0	0.0	9.5	75.0	39.1	0.0	44.4	27.5
Exiting Leg Total				11				8				0	19

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	2	5	0	7	5	1	0	6	1	2	0	3	16
4:15 PM	1	2	0	3	5	0	0	5	1	4	0	5	13
4:30 PM	1	1	0	2	1	0	0	1	0	5	0	5	8
4:45 PM	1	1	0	2	3	2	0	5	1	1	0	2	9
Total Volume	5	9	0	14	14	3	0	17	3	12	0	15	46
% Approach Total	35.7	64.3	0.0		82.4	17.6	0.0		20.0	80.0	0.0		
PHF	0.625	0.450	0.000	0.500	0.700	0.375	0.000	0.708	0.750	0.600	0.000	0.750	0.719
Buses	2	0	0	2	1	0	0	1	0	2	0	2	5
Buses %	40.0	0.0	0.0	14.3	7.1	0.0	0.0	5.9	0.0	16.7	0.0	13.3	10.9
Single-Unit Trucks	3	5	0	8	12	3	0	15	1	6	0	7	30
Single-Unit %	60.0	55.6	0.0	57.1	85.7	100.0	0.0	88.2	33.3	50.0	0.0	46.7	65.2
Articulated Trucks	0	4	0	4	1	0	0	1	2	4	0	6	11
Articulated %	0.0	44.4	0.0	28.6	7.1	0.0	0.0	5.9	66.7	33.3	0.0	40.0	23.9
Buses	2	0	0	2	1	0	0	1	0	2	0	2	5
Single-Unit Trucks	3	5	0	8	12	3	0	15	1	6	0	7	30
Articulated Trucks	0	4	0	4	1	0	0	1	2	4	0	6	11
Total Entering Leg	5	9	0	14	14	3	0	17	3	12	0	15	46
Buses				3				0				2	5
Single-Unit Trucks				18				6				6	30
Articulated Trucks				5				6				0	11
Total Exiting Leg				26				12				8	46

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Buses

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
4:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	1	0	0	1	0	2	0	2	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	0	0	2	1	0	0	1	0	2	0	2	5
Approach %	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
Total %	40.0	0.0	0.0	40.0	20.0	0.0	0.0	20.0	0.0	40.0	0.0	40.0	
Exiting Leg Total				3				0				2	5

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
4:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	2	0	0	2	1	0	0	1	0	2	0	2	5
% Approach Total	100.0	0.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.500	0.000	0.500	0.625
Entering Leg	2	0	0	2	1	0	0	1	0	2	0	2	5
Exiting Leg				3				0				2	5
Total				5				1				4	10

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Single-Unit Trucks**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	4	0	5	4	1	0	5	0	0	0	0	10
4:15 PM	0	0	0	0	5	0	0	5	1	3	0	4	9
4:30 PM	1	0	0	1	1	0	0	1	0	2	0	2	4
4:45 PM	1	1	0	2	2	2	0	4	0	1	0	1	7
Total	3	5	0	8	12	3	0	15	1	6	0	7	30
5:00 PM	2	1	0	3	0	1	0	1	0	3	0	3	7
5:15 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
5:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	2
5:45 PM	0	0	0	0	1	0	0	1	0	2	0	2	3
Total	2	4	0	6	2	1	0	3	0	6	0	6	15
Grand Total	5	9	0	14	14	4	0	18	1	12	0	13	45
Approach %	35.7	64.3	0.0		77.8	22.2	0.0		7.7	92.3	0.0		
Total %	11.1	20.0	0.0	31.1	31.1	8.9	0.0	40.0	2.2	26.7	0.0	28.9	
Exiting Leg Total				26				10				9	45

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	1	4	0	5	4	1	0	5	0	0	0	0	10
4:15 PM	0	0	0	0	5	0	0	5	1	3	0	4	9
4:30 PM	1	0	0	1	1	0	0	1	0	2	0	2	4
4:45 PM	1	1	0	2	2	2	0	4	0	1	0	1	7
Total Volume	3	5	0	8	12	3	0	15	1	6	0	7	30
% Approach Total	37.5	62.5	0.0		80.0	20.0	0.0		14.3	85.7	0.0		
PHF	0.750	0.313	0.000	0.400	0.600	0.375	0.000	0.750	0.250	0.500	0.000	0.438	0.750
Entering Leg	3	5	0	8	12	3	0	15	1	6	0	7	30
Exiting Leg				18				6				6	30
Total				26				21				13	60

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Articulated Trucks**

	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	1	0	1	0	0	0	0	1	2	0	3	4
4:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	2
4:30 PM	0	1	0	1	0	0	0	0	0	2	0	2	3
4:45 PM	0	0	0	0	1	0	0	1	1	0	0	1	2
Total	0	4	0	4	1	0	0	1	2	4	0	6	11
5:00 PM	0	0	0	0	1	0	0	1	1	1	0	2	3
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	1	0	1	1	0	0	1	1	5	0	6	8
Grand Total	0	5	0	5	2	0	0	2	3	9	0	12	19
Approach %	0.0	100.0	0.0		100.0	0.0	0.0		25.0	75.0	0.0		
Total %	0.0	26.3	0.0	26.3	10.5	0.0	0.0	10.5	15.8	47.4	0.0	63.2	
Exiting Leg Total				11				8				0	19

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East				I-93 NB Ramps from South				Route 62 from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Total
4:00 PM	0	1	0	1	0	0	0	0	1	2	0	3	4
4:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	2
4:30 PM	0	1	0	1	0	0	0	0	0	2	0	2	3
4:45 PM	0	0	0	0	1	0	0	1	1	0	0	1	2
Total Volume	0	4	0	4	1	0	0	1	2	4	0	6	11
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		33.3	66.7	0.0		
PHF	0.000	0.500	0.000	0.500	0.250	0.000	0.000	0.250	0.500	0.500	0.000	0.500	0.688
Entering Leg	0	4	0	4	1	0	0	1	2	4	0	6	11
Exiting Leg				5				6				0	11
Total				9				7				6	22

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240374 B**
Location: **S: I-93 NB Ramps**
Location: **E: Route 62 W: Route 62**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total						0						0						0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Route 62 from East						I-93 NB Ramps from South						Route 62 from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0						0	0

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Cars and Heavy Vehicles (Combined)

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	65	19	6	0	90	9	125	2	0	136	3	7	20	0	30	6	95	19	0	120	376
7:15 AM	72	20	8	0	100	6	121	2	0	129	3	1	15	0	19	10	119	26	0	155	403
7:30 AM	74	11	8	0	93	5	141	7	0	153	4	8	13	0	25	7	110	32	0	149	420
7:45 AM	87	9	14	0	110	14	141	4	0	159	5	11	22	0	38	11	141	43	0	195	502
Total	298	59	36	0	393	34	528	15	0	577	15	27	70	0	112	34	465	120	0	619	1701
8:00 AM	53	16	5	0	74	11	152	1	0	164	7	9	21	0	37	11	109	42	0	162	437
8:15 AM	43	21	13	0	77	9	129	6	0	144	4	6	17	0	27	14	139	28	0	181	429
8:30 AM	37	15	10	0	62	8	135	5	0	148	5	17	18	0	40	9	116	31	0	156	406
8:45 AM	40	12	6	0	58	7	110	4	0	121	7	7	13	0	27	8	115	33	0	156	362
Total	173	64	34	0	271	35	526	16	0	577	23	39	69	0	131	42	479	134	0	655	1634
Grand Total	471	123	70	0	664	69	1054	31	0	1154	38	66	139	0	243	76	944	254	0	1274	3335
Approach %	70.9	18.5	10.5	0.0		6.0	91.3	2.7	0.0		15.6	27.2	57.2	0.0		6.0	74.1	19.9	0.0		
Total %	14.1	3.7	2.1	0.0	19.9	2.1	31.6	0.9	0.0	34.6	1.1	2.0	4.2	0.0	7.3	2.3	28.3	7.6	0.0	38.2	
Exiting Leg Total					389					1052					230					1664	3335
Cars	457	119	64	0	640	67	942	31	0	1040	38	64	133	0	235	72	818	246	0	1136	3051
% Cars	97.0	96.7	91.4	0.0	96.4	97.1	89.4	100.0	0.0	90.1	100.0	97.0	95.7	0.0	96.7	94.7	86.7	96.9	0.0	89.2	91.5
Exiting Leg Total					377					920					222					1532	3051
Heavy Vehicles	14	4	6	0	24	2	112	0	0	114	0	2	6	0	8	4	126	8	0	138	284
% Heavy Vehicles	3.0	3.3	8.6	0.0	3.6	2.9	10.6	0.0	0.0	9.9	0.0	3.0	4.3	0.0	3.3	5.3	13.3	3.1	0.0	10.8	8.5
Exiting Leg Total					12					132					8					132	284

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	74	11	8	0	93	5	141	7	0	153	4	8	13	0	25	7	110	32	0	149	420
7:45 AM	87	9	14	0	110	14	141	4	0	159	5	11	22	0	38	11	141	43	0	195	502
8:00 AM	53	16	5	0	74	11	152	1	0	164	7	9	21	0	37	11	109	42	0	162	437
8:15 AM	43	21	13	0	77	9	129	6	0	144	4	6	17	0	27	14	139	28	0	181	429
Total Volume	257	57	40	0	354	39	563	18	0	620	20	34	73	0	127	43	499	145	0	687	1788
% Approach Total	72.6	16.1	11.3	0.0		6.3	90.8	2.9	0.0		15.7	26.8	57.5	0.0		6.3	72.6	21.1	0.0		
PHF	0.739	0.679	0.714	0.000	0.805	0.696	0.926	0.643	0.000	0.945	0.714	0.773	0.830	0.000	0.836	0.768	0.885	0.843	0.000	0.881	0.890
Cars	252	55	36	0	343	37	504	18	0	559	20	33	70	0	123	41	448	142	0	631	1656
Cars %	98.1	96.5	90.0	0.0	96.9	94.9	89.5	100.0	0.0	90.2	100.0	97.1	95.9	0.0	96.9	95.3	89.8	97.9	0.0	91.8	92.6
Heavy Vehicles	5	2	4	0	11	2	59	0	0	61	0	1	3	0	4	2	51	3	0	56	132
Heavy Vehicles %	1.9	3.5	10.0	0.0	3.1	5.1	10.5	0.0	0.0	9.8	0.0	2.9	4.1	0.0	3.1	4.7	10.2	2.1	0.0	8.2	7.4
Cars Enter Leg	252	55	36	0	343	37	504	18	0	559	20	33	70	0	123	41	448	142	0	631	1656
Heavy Enter Leg	5	2	4	0	11	2	59	0	0	61	0	1	3	0	4	2	51	3	0	56	132
Total Entering Leg	257	57	40	0	354	39	563	18	0	620	20	34	73	0	127	43	499	145	0	687	1788
Cars Exiting Leg					212					504					114					826	1656
Heavy Exiting Leg					6					55					4					67	132
Total Exiting Leg					218					559					118					893	1788

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Cars**

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	61	17	5	0	83	9	117	2	0	128	3	7	18	0	28	6	77	19	0	102	341
7:15 AM	71	20	7	0	98	6	107	2	0	115	3	1	15	0	19	9	99	25	0	133	365
7:30 AM	73	11	7	0	91	5	123	7	0	135	4	8	12	0	24	7	95	32	0	134	384
7:45 AM	83	8	13	0	104	13	128	4	0	145	5	10	22	0	37	9	133	42	0	184	470
Total	288	56	32	0	376	33	475	15	0	523	15	26	67	0	108	31	404	118	0	553	1560
8:00 AM	53	16	4	0	73	11	139	1	0	151	7	9	20	0	36	11	98	41	0	150	410
8:15 AM	43	20	12	0	75	8	114	6	0	128	4	6	16	0	26	14	122	27	0	163	392
8:30 AM	35	15	10	0	60	8	120	5	0	133	5	16	18	0	39	8	100	29	0	137	369
8:45 AM	38	12	6	0	56	7	94	4	0	105	7	7	12	0	26	8	94	31	0	133	320
Total	169	63	32	0	264	34	467	16	0	517	23	38	66	0	127	41	414	128	0	583	1491
Grand Total	457	119	64	0	640	67	942	31	0	1040	38	64	133	0	235	72	818	246	0	1136	3051
Approach %	71.4	18.6	10.0	0.0		6.4	90.6	3.0	0.0		16.2	27.2	56.6	0.0		6.3	72.0	21.7	0.0		
Total %	15.0	3.9	2.1	0.0	21.0	2.2	30.9	1.0	0.0	34.1	1.2	2.1	4.4	0.0	7.7	2.4	26.8	8.1	0.0	37.2	
Exiting Leg Total					377					920					222					1532	3051

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	73	11	7	0	91	5	123	7	0	135	4	8	12	0	24	7	95	32	0	134	384
7:45 AM	83	8	13	0	104	13	128	4	0	145	5	10	22	0	37	9	133	42	0	184	470
8:00 AM	53	16	4	0	73	11	139	1	0	151	7	9	20	0	36	11	98	41	0	150	410
8:15 AM	43	20	12	0	75	8	114	6	0	128	4	6	16	0	26	14	122	27	0	163	392
Total Volume	252	55	36	0	343	37	504	18	0	559	20	33	70	0	123	41	448	142	0	631	1656
% Approach Total	73.5	16.0	10.5	0.0		6.6	90.2	3.2	0.0		16.3	26.8	56.9	0.0		6.5	71.0	22.5	0.0		
PHF	0.759	0.688	0.692	0.000	0.825	0.712	0.906	0.643	0.000	0.925	0.714	0.825	0.795	0.000	0.831	0.732	0.842	0.845	0.000	0.857	0.881
Entering Leg	252	55	36	0	343	37	504	18	0	559	20	33	70	0	123	41	448	142	0	631	1656
Exiting Leg					212					504					114					826	1656
Total					555					1063					237					1457	3312

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	2	1	0	7	0	8	0	0	8	0	0	2	0	2	0	18	0	0	18	35
7:15 AM	1	0	1	0	2	0	14	0	0	14	0	0	0	0	0	1	20	1	0	22	38
7:30 AM	1	0	1	0	2	0	18	0	0	18	0	0	1	0	1	0	15	0	0	15	36
7:45 AM	4	1	1	0	6	1	13	0	0	14	0	1	0	0	1	2	8	1	0	11	32
Total	10	3	4	0	17	1	53	0	0	54	0	1	3	0	4	3	61	2	0	66	141
8:00 AM	0	0	1	0	1	0	13	0	0	13	0	0	1	0	1	0	11	1	0	12	27
8:15 AM	0	1	1	0	2	1	15	0	0	16	0	0	1	0	1	0	17	1	0	18	37
8:30 AM	2	0	0	0	2	0	15	0	0	15	0	1	0	0	1	1	16	2	0	19	37
8:45 AM	2	0	0	0	2	0	16	0	0	16	0	0	1	0	1	0	21	2	0	23	42
Total	4	1	2	0	7	1	59	0	0	60	0	1	3	0	4	1	65	6	0	72	143
Grand Total	14	4	6	0	24	2	112	0	0	114	0	2	6	0	8	4	126	8	0	138	284
Approach %	58.3	16.7	25.0	0.0		1.8	98.2	0.0	0.0		0.0	25.0	75.0	0.0		2.9	91.3	5.8	0.0		
Total %	4.9	1.4	2.1	0.0	8.5	0.7	39.4	0.0	0.0	40.1	0.0	0.7	2.1	0.0	2.8	1.4	44.4	2.8	0.0	48.6	
Exiting Leg Total					12					132					8					132	284
Buses	0	0	1	0	1	0	2	0	0	2	0	0	3	0	3	0	3	0	0	3	9
% Buses	0.0	0.0	16.7	0.0	4.2	0.0	1.8	0.0	0.0	1.8	0.0	0.0	50.0	0.0	37.5	0.0	2.4	0.0	0.0	2.2	3.2
Exiting Leg Total					0					4					0					5	9
Single-Unit Trucks	13	3	5	0	21	2	78	0	0	80	0	2	3	0	5	4	95	7	0	106	212
% Single-Unit	92.9	75.0	83.3	0.0	87.5	100.0	69.6	0.0	0.0	70.2	0.0	100.0	50.0	0.0	62.5	100.0	75.4	87.5	0.0	76.8	74.6
Exiting Leg Total					11					100					7					94	212
Articulated Trucks	1	1	0	0	2	0	32	0	0	32	0	0	0	0	0	0	28	1	0	29	63
% Articulated	7.1	25.0	0.0	0.0	8.3	0.0	28.6	0.0	0.0	28.1	0.0	0.0	0.0	0.0	0.0	0.0	22.2	12.5	0.0	21.0	22.2
Exiting Leg Total					1					28					1					33	63

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	1	0	1	0	13	0	0	13	0	0	1	0	1	0	11	1	0	12	27
8:15 AM	0	1	1	0	2	1	15	0	0	16	0	0	1	0	1	0	17	1	0	18	37
8:30 AM	2	0	0	0	2	0	15	0	0	15	0	1	0	0	1	1	16	2	0	19	37
8:45 AM	2	0	0	0	2	0	16	0	0	16	0	0	1	0	1	0	21	2	0	23	42
Total Volume	4	1	2	0	7	1	59	0	0	60	0	1	3	0	4	1	65	6	0	72	143
% Approach Total	57.1	14.3	28.6	0.0		1.7	98.3	0.0	0.0		0.0	25.0	75.0	0.0		1.4	90.3	8.3	0.0		
PHF	0.500	0.250	0.500	0.000	0.875	0.250	0.922	0.000	0.000	0.938	0.000	0.250	0.750	0.000	1.000	0.250	0.774	0.750	0.000	0.783	0.851
Buses	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	5
Buses %	0.0	0.0	50.0	0.0	14.3	0.0	1.7	0.0	0.0	1.7	0.0	0.0	33.3	0.0	25.0	0.0	3.1	0.0	0.0	2.8	3.5
Single-Unit Trucks	4	0	1	0	5	1	43	0	0	44	0	1	2	0	3	1	48	5	0	54	106
Single-Unit %	100.0	0.0	50.0	0.0	71.4	100.0	72.9	0.0	0.0	73.3	0.0	100.0	66.7	0.0	75.0	100.0	73.8	83.3	0.0	75.0	74.1
Articulated Trucks	0	1	0	0	1	0	15	0	0	15	0	0	0	0	0	0	15	1	0	16	32
Articulated %	0.0	100.0	0.0	0.0	14.3	0.0	25.4	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	16.7	0.0	22.2	22.4
Buses	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	5
Single-Unit Trucks	4	0	1	0	5	1	43	0	0	44	0	1	2	0	3	1	48	5	0	54	106
Articulated Trucks	0	1	0	0	1	0	15	0	0	15	0	0	0	0	0	0	15	1	0	16	32
Total Entering Leg	4	1	2	0	7	1	59	0	0	60	0	1	3	0	4	1	65	6	0	72	143
Buses					0					3					0					2	5
Single-Unit Trucks					7					49					1					49	106
Articulated Trucks					1					15					1					15	32
Total Exiting Leg					8					67					2					66	143

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Buses

	Woburn Street from North					Salem Street (Route 62) from East					Woburn Street from South					Salem Street (Route 62) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	5
Grand Total	0	0	1	0	1	0	2	0	0	2	0	0	3	0	3	0	3	0	0	3	9
Approach %	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	11.1	0.0	11.1	0.0	22.2	0.0	0.0	22.2	0.0	0.0	33.3	0.0	33.3	0.0	33.3	0.0	0.0	33.3	
Exiting Leg Total					0					4					0					5	9

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Woburn Street from North					Salem Street (Route 62) from East					Woburn Street from South					Salem Street (Route 62) from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	5
% Approach Total	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	0.625
Entering Leg	0	0	1	0	1	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	5
Exiting Leg					0					3					0					2	5
Total					1					4					1					4	10

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Single-Unit Trucks

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	2	1	0	7	0	6	0	0	6	0	0	1	0	1	0	12	0	0	12	26
7:15 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	1	17	1	0	19	29
7:30 AM	1	0	1	0	2	0	11	0	0	11	0	0	0	0	0	0	11	0	0	11	24
7:45 AM	4	1	1	0	6	1	9	0	0	10	0	1	0	0	1	2	7	1	0	10	27
Total	9	3	4	0	16	1	35	0	0	36	0	1	1	0	2	3	47	2	0	52	106
8:00 AM	0	0	1	0	1	0	11	0	0	11	0	0	0	0	0	0	9	1	0	10	22
8:15 AM	0	0	0	0	0	1	9	0	0	10	0	0	1	0	1	0	11	1	0	12	23
8:30 AM	2	0	0	0	2	0	9	0	0	9	0	1	0	0	1	1	12	1	0	14	26
8:45 AM	2	0	0	0	2	0	14	0	0	14	0	0	1	0	1	0	16	2	0	18	35
Total	4	0	1	0	5	1	43	0	0	44	0	1	2	0	3	1	48	5	0	54	106
Grand Total	13	3	5	0	21	2	78	0	0	80	0	2	3	0	5	4	95	7	0	106	212
Approach %	61.9	14.3	23.8	0.0		2.5	97.5	0.0	0.0		0.0	40.0	60.0	0.0		3.8	89.6	6.6	0.0		
Total %	6.1	1.4	2.4	0.0	9.9	0.9	36.8	0.0	0.0	37.7	0.0	0.9	1.4	0.0	2.4	1.9	44.8	3.3	0.0	50.0	
Exiting Leg Total					11					100					7					94	212

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	4	2	1	0	7	0	6	0	0	6	0	0	1	0	1	0	12	0	0	12	26
7:15 AM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	1	17	1	0	19	29
7:30 AM	1	0	1	0	2	0	11	0	0	11	0	0	0	0	0	0	11	0	0	11	24
7:45 AM	4	1	1	0	6	1	9	0	0	10	0	1	0	0	1	2	7	1	0	10	27
Total Volume	9	3	4	0	16	1	35	0	0	36	0	1	1	0	2	3	47	2	0	52	106
% Approach Total	56.3	18.8	25.0	0.0		2.8	97.2	0.0	0.0		0.0	50.0	50.0	0.0		5.8	90.4	3.8	0.0		
PHF	0.563	0.375	1.000	0.000	0.571	0.250	0.795	0.000	0.000	0.818	0.000	0.250	0.250	0.000	0.500	0.375	0.691	0.500	0.000	0.684	0.914
Entering Leg	9	3	4	0	16	1	35	0	0	36	0	1	1	0	2	3	47	2	0	52	106
Exiting Leg					4					51					6					45	106
Total					20					87					8					97	212

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Articulated Trucks**

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	8
7:15 AM	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	7
7:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	11
7:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
Total	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	0	13	0	0	13	31
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
8:15 AM	0	1	0	0	1	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	12
8:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	1	0	5	10
8:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
Total	0	1	0	0	1	0	15	0	0	15	0	0	0	0	0	0	15	1	0	16	32
Grand Total	1	1	0	0	2	0	32	0	0	32	0	0	0	0	0	0	28	1	0	29	63
Approach %	50.0	50.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	96.6	3.4	0.0		
Total %	1.6	1.6	0.0	0.0	3.2	0.0	50.8	0.0	0.0	50.8	0.0	0.0	0.0	0.0	0.0	0.0	44.4	1.6	0.0	46.0	
Exiting Leg Total					1					28					1					33	63

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	11
7:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
8:15 AM	0	1	0	0	1	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	12
Total Volume	0	1	0	0	1	0	19	0	0	19	0	0	0	0	0	0	12	0	0	12	32
% Approach Total	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.679	0.000	0.000	0.679	0.000	0.000	0.000	0.000	0.000	0.000	0.600	0.000	0.000	0.600	0.667
Entering Leg	0	1	0	0	1	0	19	0	0	19	0	0	0	0	0	0	12	0	0	12	32
Exiting Leg					0					12					1					19	32
Total					1					31					1					31	64

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	Woburn Street							Salem Street (Route 62)							Woburn Street							Salem Street (Route 62)							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Woburn Street							Salem Street (Route 62)							Woburn Street							Salem Street (Route 62)							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Woburn Street from North							Salem Street (Route 62) from East							Woburn Street from South							Salem Street (Route 62) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total							0							0							0							0	0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Woburn Street from North							Salem Street (Route 62) from East							Woburn Street from South							Salem Street (Route 62) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg							0							0							0							0	0
Total							0							0							0							0	0

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class:

Cars and Heavy Vehicles (Combined)

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	29	6	5	0	40	9	187	4	0	200	6	22	15	0	43	19	188	37	0	244	527
4:15 PM	35	9	12	0	56	8	150	5	0	163	12	26	17	0	55	13	187	59	0	259	533
4:30 PM	39	14	7	0	60	6	123	4	0	133	8	22	15	0	45	19	192	52	0	263	501
4:45 PM	36	13	12	0	61	6	133	1	0	140	14	22	19	0	55	25	201	34	0	260	516
Total	139	42	36	0	217	29	593	14	0	636	40	92	66	0	198	76	768	182	0	1026	2077
5:00 PM	31	15	7	0	53	6	157	3	0	166	8	30	17	0	55	21	185	36	0	242	516
5:15 PM	21	20	10	0	51	6	139	3	0	148	8	19	14	0	41	18	185	54	0	257	497
5:30 PM	25	21	8	0	54	7	119	1	0	127	5	15	13	0	33	11	186	48	0	245	459
5:45 PM	21	12	8	0	41	2	98	3	0	103	5	23	15	0	43	18	172	44	0	234	421
Total	98	68	33	0	199	21	513	10	0	544	26	87	59	0	172	68	728	182	0	978	1893
Grand Total	237	110	69	0	416	50	1106	24	0	1180	66	179	125	0	370	144	1496	364	0	2004	3970
Approach %	57.0	26.4	16.6	0.0		4.2	93.7	2.0	0.0		17.8	48.4	33.8	0.0		7.2	74.7	18.2	0.0		
Total %	6.0	2.8	1.7	0.0	10.5	1.3	27.9	0.6	0.0	29.7	1.7	4.5	3.1	0.0	9.3	3.6	37.7	9.2	0.0	50.5	
Exiting Leg Total					593					1631					278					1468	3970
Cars	237	107	67	0	411	47	1085	24	0	1156	64	177	124	0	365	144	1460	357	0	1961	3893
% Cars	100.0	97.3	97.1	0.0	98.8	94.0	98.1	100.0	0.0	98.0	97.0	98.9	99.2	0.0	98.6	100.0	97.6	98.1	0.0	97.9	98.1
Exiting Leg Total					581					1591					275					1446	3893
Heavy Vehicles	0	3	2	0	5	3	21	0	0	24	2	2	1	0	5	0	36	7	0	43	77
% Heavy Vehicles	0.0	2.7	2.9	0.0	1.2	6.0	1.9	0.0	0.0	2.0	3.0	1.1	0.8	0.0	1.4	0.0	2.4	1.9	0.0	2.1	1.9
Exiting Leg Total					12					40					3					22	77

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	29	6	5	0	40	9	187	4	0	200	6	22	15	0	43	19	188	37	0	244	527
4:15 PM	35	9	12	0	56	8	150	5	0	163	12	26	17	0	55	13	187	59	0	259	533
4:30 PM	39	14	7	0	60	6	123	4	0	133	8	22	15	0	45	19	192	52	0	263	501
4:45 PM	36	13	12	0	61	6	133	1	0	140	14	22	19	0	55	25	201	34	0	260	516
Total Volume	139	42	36	0	217	29	593	14	0	636	40	92	66	0	198	76	768	182	0	1026	2077
% Approach Total	64.1	19.4	16.6	0.0		4.6	93.2	2.2	0.0		20.2	46.5	33.3	0.0		7.4	74.9	17.7	0.0		
PHF	0.891	0.750	0.750	0.000	0.889	0.806	0.793	0.700	0.000	0.795	0.714	0.885	0.868	0.000	0.900	0.760	0.955	0.771	0.000	0.975	0.974
Cars	139	41	34	0	214	27	579	14	0	620	40	91	65	0	196	76	748	176	0	1000	2030
Cars %	100.0	97.6	94.4	0.0	98.6	93.1	97.6	100.0	0.0	97.5	100.0	98.9	98.5	0.0	99.0	100.0	97.4	96.7	0.0	97.5	97.7
Heavy Vehicles	0	1	2	0	3	2	14	0	0	16	0	1	1	0	2	0	20	6	0	26	47
Heavy Vehicles %	0.0	2.4	5.6	0.0	1.4	6.9	2.4	0.0	0.0	2.5	0.0	1.1	1.5	0.0	1.0	0.0	2.6	3.3	0.0	2.5	2.3
Cars Enter Leg	139	41	34	0	214	27	579	14	0	620	40	91	65	0	196	76	748	176	0	1000	2030
Heavy Enter Leg	0	1	2	0	3	2	14	0	0	16	0	1	1	0	2	0	20	6	0	26	47
Total Entering Leg	139	42	36	0	217	29	593	14	0	636	40	92	66	0	198	76	768	182	0	1026	2077
Cars Exiting Leg					294					822					131					783	2030
Heavy Exiting Leg					9					22					1					15	47
Total Exiting Leg					303					844					132					798	2077

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Cars**

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	29	6	5	0	40	8	181	4	0	193	6	22	14	0	42	19	181	35	0	235	510
4:15 PM	35	8	12	0	55	8	147	5	0	160	12	25	17	0	54	13	182	55	0	250	519
4:30 PM	39	14	6	0	59	5	121	4	0	130	8	22	15	0	45	19	187	52	0	258	492
4:45 PM	36	13	11	0	60	6	130	1	0	137	14	22	19	0	55	25	198	34	0	257	509
Total	139	41	34	0	214	27	579	14	0	620	40	91	65	0	196	76	748	176	0	1000	2030
5:00 PM	31	14	7	0	52	5	153	3	0	161	7	30	17	0	54	21	180	36	0	237	504
5:15 PM	21	20	10	0	51	6	137	3	0	146	7	19	14	0	40	18	182	53	0	253	490
5:30 PM	25	20	8	0	53	7	119	1	0	127	5	14	13	0	32	11	183	48	0	242	454
5:45 PM	21	12	8	0	41	2	97	3	0	102	5	23	15	0	43	18	167	44	0	229	415
Total	98	66	33	0	197	20	506	10	0	536	24	86	59	0	169	68	712	181	0	961	1863
Grand Total	237	107	67	0	411	47	1085	24	0	1156	64	177	124	0	365	144	1460	357	0	1961	3893
Approach %	57.7	26.0	16.3	0.0		4.1	93.9	2.1	0.0		17.5	48.5	34.0	0.0		7.3	74.5	18.2	0.0		
Total %	6.1	2.7	1.7	0.0	10.6	1.2	27.9	0.6	0.0	29.7	1.6	4.5	3.2	0.0	9.4	3.7	37.5	9.2	0.0	50.4	
Exiting Leg Total					581					1591					275					1446	3893

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	29	6	5	0	40	8	181	4	0	193	6	22	14	0	42	19	181	35	0	235	510
4:15 PM	35	8	12	0	55	8	147	5	0	160	12	25	17	0	54	13	182	55	0	250	519
4:30 PM	39	14	6	0	59	5	121	4	0	130	8	22	15	0	45	19	187	52	0	258	492
4:45 PM	36	13	11	0	60	6	130	1	0	137	14	22	19	0	55	25	198	34	0	257	509
Total Volume	139	41	34	0	214	27	579	14	0	620	40	91	65	0	196	76	748	176	0	1000	2030
% Approach Total	65.0	19.2	15.9	0.0		4.4	93.4	2.3	0.0		20.4	46.4	33.2	0.0		7.6	74.8	17.6	0.0		
PHF	0.891	0.732	0.708	0.000	0.892	0.844	0.800	0.700	0.000	0.803	0.714	0.910	0.855	0.000	0.891	0.760	0.944	0.800	0.000	0.969	0.978
Entering Leg	139	41	34	0	214	27	579	14	0	620	40	91	65	0	196	76	748	176	0	1000	2030
Exiting Leg					294					822					131					783	2030
Total					508					1442					327					1783	4060

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	6	0	0	7	0	0	1	0	1	0	7	2	0	9	17
4:15 PM	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	0	5	4	0	9	14
4:30 PM	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	0	5	0	0	5	9
4:45 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	7
Total	0	1	2	0	3	2	14	0	0	16	0	1	1	0	2	0	20	6	0	26	47
5:00 PM	0	1	0	0	1	1	4	0	0	5	1	0	0	0	1	0	5	0	0	5	12
5:15 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	3	1	0	4	7
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	5
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6
Total	0	2	0	0	2	1	7	0	0	8	2	1	0	0	3	0	16	1	0	17	30
Grand Total	0	3	2	0	5	3	21	0	0	24	2	2	1	0	5	0	36	7	0	43	77
Approach %	0.0	60.0	40.0	0.0		12.5	87.5	0.0	0.0		40.0	40.0	20.0	0.0		0.0	83.7	16.3	0.0		
Total %	0.0	3.9	2.6	0.0	6.5	3.9	27.3	0.0	0.0	31.2	2.6	2.6	1.3	0.0	6.5	0.0	46.8	9.1	0.0	55.8	
Exiting Leg Total					12					40					3					22	77
Buses	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	6
% Buses	0.0	33.3	0.0	0.0	20.0	0.0	14.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	4.7	7.8
Exiting Leg Total					0					2					1					3	6
Single-Unit Trucks	0	2	2	0	4	3	13	0	0	16	1	2	1	0	4	0	24	7	0	31	55
% Single-Unit	0.0	66.7	100.0	0.0	80.0	100.0	61.9	0.0	0.0	66.7	50.0	100.0	100.0	0.0	80.0	0.0	66.7	100.0	0.0	72.1	71.4
Exiting Leg Total					12					27					2					14	55
Articulated Trucks	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	10	0	0	10	16
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	23.8	0.0	0.0	20.8	50.0	0.0	0.0	0.0	20.0	0.0	27.8	0.0	0.0	23.3	20.8
Exiting Leg Total					0					11					0					5	16

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	6	0	0	7	0	0	1	0	1	0	7	2	0	9	17
4:15 PM	0	1	0	0	1	0	3	0	0	3	0	1	0	0	1	0	5	4	0	9	14
4:30 PM	0	0	1	0	1	1	2	0	0	3	0	0	0	0	0	0	5	0	0	5	9
4:45 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	7
Total Volume	0	1	2	0	3	2	14	0	0	16	0	1	1	0	2	0	20	6	0	26	47
% Approach Total	0.0	33.3	66.7	0.0		12.5	87.5	0.0	0.0		0.0	50.0	50.0	0.0		0.0	76.9	23.1	0.0		
PHF	0.000	0.250	0.500	0.000	0.750	0.500	0.583	0.000	0.000	0.571	0.000	0.250	0.250	0.000	0.500	0.000	0.714	0.375	0.000	0.722	0.691
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	7.7	8.5
Single-Unit Trucks	0	1	2	0	3	2	8	0	0	10	0	1	1	0	2	0	14	6	0	20	35
Single-Unit %	0.0	100.0	100.0	0.0	100.0	100.0	57.1	0.0	0.0	62.5	0.0	100.0	100.0	0.0	100.0	0.0	70.0	100.0	0.0	76.9	74.5
Articulated Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	15.4	17.0
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Single-Unit Trucks	0	1	2	0	3	2	8	0	0	10	0	1	1	0	2	0	14	6	0	20	35
Articulated Trucks	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
Total Entering Leg	0	1	2	0	3	2	14	0	0	16	0	1	1	0	2	0	20	6	0	26	47
Buses					0					2					0					2	4
Single-Unit Trucks					9					16					1					9	35
Articulated Trucks					0					4					0					4	8
Total Exiting Leg					9					22					1					15	47

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Buses**

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	6
Approach %	0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	16.7	0.0	0.0	16.7	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	
Exiting Leg Total					0					2					1					3	6

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Exiting Leg					0					2					0					2	4
Total					0					4					0					4	8

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Single-Unit Trucks

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	4	0	0	5	0	0	1	0	1	0	5	2	0	7	13
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	4	4	0	8	10
4:30 PM	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	5
4:45 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	7
Total	0	1	2	0	3	2	8	0	0	10	0	1	1	0	2	0	14	6	0	20	35
5:00 PM	0	1	0	0	1	1	4	0	0	5	0	0	0	0	0	0	3	0	0	3	9
5:15 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	1	0	2	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	1	0	0	1	1	5	0	0	6	1	1	0	0	2	0	10	1	0	11	20
Grand Total	0	2	2	0	4	3	13	0	0	16	1	2	1	0	4	0	24	7	0	31	55
Approach %	0.0	50.0	50.0	0.0		18.8	81.3	0.0	0.0		25.0	50.0	25.0	0.0		0.0	77.4	22.6	0.0		
Total %	0.0	3.6	3.6	0.0	7.3	5.5	23.6	0.0	0.0	29.1	1.8	3.6	1.8	0.0	7.3	0.0	43.6	12.7	0.0	56.4	
Exiting Leg Total					12					27					2					14	55

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	1	4	0	0	5	0	0	1	0	1	0	5	2	0	7	13
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	4	4	0	8	10
4:30 PM	0	0	1	0	1	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	5
4:45 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	7
Total Volume	0	1	2	0	3	2	8	0	0	10	0	1	1	0	2	0	14	6	0	20	35
% Approach Total	0.0	33.3	66.7	0.0		20.0	80.0	0.0	0.0		0.0	50.0	50.0	0.0		0.0	70.0	30.0	0.0		
PHF	0.000	0.250	0.500	0.000	0.750	0.500	0.500	0.000	0.000	0.500	0.000	0.250	0.250	0.000	0.500	0.000	0.700	0.375	0.000	0.625	0.673
Entering Leg	0	1	2	0	3	2	8	0	0	10	0	1	1	0	2	0	14	6	0	20	35
Exiting Leg					9					16					1					9	35
Total					12					26					3					29	70

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Class: **Articulated Trucks**

	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
Total	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	6	0	0	6	8
Grand Total	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	10	0	0	10	16
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	31.3	0.0	0.0	31.3	6.3	0.0	0.0	0.0	6.3	0.0	62.5	0.0	0.0	62.5	
Exiting Leg Total					0					11					0					5	16

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street					Salem Street (Route 62)					Woburn Street					Salem Street (Route 62)					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.667
Entering Leg	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	8
Exiting Leg					0					4					0					4	8
Total					0					8					0					8	16

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	Woburn Street from North							Salem Street (Route 62) from East							Woburn Street from South							Salem Street (Route 62) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		50.0	0.0	0.0	0.0	50.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0	100.0	
Exiting Leg Total							0							0							1							1	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street from North							Salem Street (Route 62) from East							Woburn Street from South							Salem Street (Route 62) from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		50.0	0.0	0.0	0.0	50.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.500	0.500
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
Exiting Leg							0							0							1							1	2
Total							0							0							1							3	4

PDI File #: **240374 C**
Location: **N: Woburn Street S: Woburn Street**
Location: **E: Salem Street (Route 62) W: Salem Street (Route 62)**
City, State: **Wilmington, MA**
Client: **VHB/ V. Kalikiri**
Site Code: **TBA**
Count Date: **Thursday, December 19, 2024**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

PRECISION DATA INDUSTRIES, LLC
157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

Pedestrians

	Woburn Street							Salem Street (Route 62)							Woburn Street							Salem Street (Route 62)							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2
Approach %	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	100		0	0	0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	50	50	
Exiting Leg Total							0							0							1							1	2

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Woburn Street							Salem Street (Route 62)							Woburn Street							Salem Street (Route 62)							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2
Exiting Leg							0							0							1							1	2
Total							0							0							2							2	4

Wilmington Warehouse 16050.01
Route 62 at Woburn Street
Lane calcs based on NCHRP 707

X_R Right Turn V/C Ratio
X_R V_R / (S_R x g/C)

V_R Right-turn flow rate for the proposed shared ATL
S_T Adjusted through saturation flow rate, usually 1800 vph per lane
S_R Adjusted right-turn saturation flow rate in the proposed shared ATL, usually defaults to 0.85 S_T

V_{ATL} Flow rate for ATL
V_{ATL} 29.24 - 90.291 * X_R + 17.3 * V_T / 100

AM PEAK HOUR

WB RT Volume at Woburn St	45	vph
WB Thru Volume at Woburn St	760	vph
g	56	
C	124	
S_R	1530	vph per lane
X_R	0.065	
V_{ATL}	155	vph per lane
Add back in right-turn vol	200	vph
Vol modeled in 1 lane with no-right turns	605	

PM PEAK HOUR

WB RT Volume at Woburn St	35	vph
WB Thru Volume at Woburn St	785	vph
g	56	
C	124	
S_R	1530	vph per lane
X_R	0.051	
V_{ATL}	160	vph per lane
Add back in right-turn vol	195	vph
Vol modeled in 1 lane with no-right turns	625	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	460	290	395	415	105	225
Future Volume (vph)	460	290	395	415	105	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	150
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1735	0	0	1750	1687	1455
Flt Permitted				0.976	0.950	
Satd. Flow (perm)	1735	0	0	1750	1687	1455
Link Speed (mph)	35			35	30	
Link Distance (ft)	508			1298	544	
Travel Time (s)	9.9			25.3	12.4	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.89	0.89
Heavy Vehicles (%)	5%	2%	8%	4%	7%	11%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	824	0	0	890	118	253
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	103.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	460	290	395	415	105	225
Future Vol, veh/h	460	290	395	415	105	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	89	89
Heavy Vehicles, %	5	2	8	4	7	11
Mvmt Flow	505	319	434	456	118	253

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	505	0	1989	665
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	1324	-
Critical Hdwy	-	-	4.18	-	6.47	6.31
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	-	-	2.272	-	3.563	3.399
Pot Cap-1 Maneuver	-	-	1029	-	~ 65	445
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	242	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1029	-	~ 28	445
Mov Cap-2 Maneuver	-	-	-	-	~ 28	-
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	~ 105	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.4	$ 566.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	28	445	-	-	1029	-
HCM Lane V/C Ratio	4.213	0.568	-	-	0.422	-
HCM Control Delay (s)	$ 1732.1	23.2	-	-	11	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	14.3	3.5	-	-	2.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	545	140	235	705	105	180
Future Volume (vph)	545	140	235	705	105	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	200
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1713	0	0	1754	1719	1429
Flt Permitted				0.988	0.950	
Satd. Flow (perm)	1713	0	0	1754	1719	1429
Link Speed (mph)	35			35	30	
Link Distance (ft)	1298			786	599	
Travel Time (s)	25.3			15.3	13.6	
Peak Hour Factor	0.93	0.93	0.88	0.88	0.82	0.82
Heavy Vehicles (%)	7%	11%	10%	6%	5%	13%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	737	0	0	1068	128	220
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	98.9

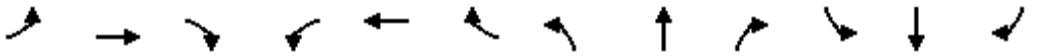
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	545	140	235	705	105	180
Future Vol, veh/h	545	140	235	705	105	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	88	88	82	82
Heavy Vehicles, %	7	11	10	6	5	13
Mvmt Flow	586	151	267	801	128	220

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	586	0	1997	662
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	1335	-
Critical Hdwy	-	-	4.2	-	6.45	6.33
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.29	-	3.545	3.417
Pot Cap-1 Maneuver	-	-	951	-	~ 65	443
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	242	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	951	-	~ 32	443
Mov Cap-2 Maneuver	-	-	-	-	~ 32	-
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	~ 120	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	$ 604.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	32	443	-	-	951	-
HCM Lane V/C Ratio	4.002	0.496	-	-	0.281	-
HCM Control Delay (s)	$ 1604.4	20.8	-	-	10.3	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	15.2	2.7	-	-	1.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



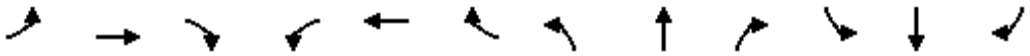
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Future Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1713	0	0	1671	1487	0	1987	0	0	1706	0
Flt Permitted	0.158				0.971			0.315			0.949	
Satd. Flow (perm)	285	1713	0	0	1626	1487	0	644	0	0	1627	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10				87		8			120	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.84	0.84	0.84	0.80	0.80	0.80
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	648	0	0	642	42	0	155	0	0	463	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	19.0%	75.0%		56.0%	56.0%	56.0%	25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	53.0	53.0			36.5	36.5		19.5			19.5	
Actuated g/C Ratio	0.63	0.63			0.44	0.44		0.23			0.23	
v/c Ratio	0.46	0.60			0.91	0.06		1.00			0.99	
Control Delay	9.7	10.9			39.4	0.5		109.6			66.0	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	9.7	10.9			39.4	0.5		109.6			66.0	
LOS	A	B			D	A		F			E	
Approach Delay		10.7			37.1			109.6			66.0	
Approach LOS		B			D			F			E	
Queue Length 50th (ft)	31	171			301	0		~81			~190	
Queue Length 95th (ft)	52	242			474	2		#225			#386	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	424	1441			1014	960		155			470	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.40	0.45			0.63	0.04		1.00			0.99	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 83.7			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 38.5		Intersection LOS: D	
Intersection Capacity Utilization 101.2%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)

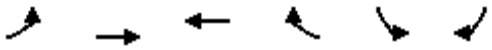




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Future Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.98			0.90	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1711	1713			1672	1487		1988			1706	
Flt Permitted	0.16	1.00			0.97	1.00		0.32			0.95	
Satd. Flow (perm)	284	1713			1627	1487		644			1627	
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.95	0.84	0.84	0.84	0.80	0.80	0.80
Adj. Flow (vph)	170	597	51	21	621	42	89	42	24	50	75	338
RTOR Reduction (vph)	0	4	0	0	0	24	0	6	0	0	92	0
Lane Group Flow (vph)	170	644	0	0	642	18	0	149	0	0	371	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	53.0	53.0			36.6	36.6		19.5			19.5	
Effective Green, g (s)	53.0	53.0			36.6	36.6		19.5			19.5	
Actuated g/C Ratio	0.63	0.63			0.44	0.44		0.23			0.23	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	375	1087			713	651		150			379	
v/s Ratio Prot	0.06	c0.38				0.01						
v/s Ratio Perm	0.23				c0.39			c0.23			0.23	
v/c Ratio	0.45	0.59			0.90	0.03		0.99			0.98	
Uniform Delay, d1	11.4	8.9			21.8	13.3		31.9			31.8	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.9	0.9			14.5	0.0		70.9			40.1	
Delay (s)	12.3	9.8			36.2	13.4		102.9			71.9	
Level of Service	B	A			D	B		F			E	
Approach Delay (s)		10.3			34.8			102.9			71.9	
Approach LOS		B			C			F			E	

Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	83.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	585	650	0	0	0
Future Volume (vph)	0	585	650	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		35	35		30	
Link Distance (ft)		1635	620		344	
Travel Time (s)		31.9	12.1		7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	636	707	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.5%		ICU Level of Service A	
Analysis Period (min) 15			

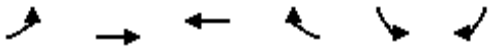
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	585	650	0	0	0
Future Vol, veh/h	0	585	650	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	636	707	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	707	0	-	0	1343	707
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	891	-	-	-	168	435
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	891	-	-	-	168	435
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	891	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	585	650	0	0	0
Future Volume (vph)	0	585	650	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		35	35		30	
Link Distance (ft)		2605	1635		295	
Travel Time (s)		50.7	31.9		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	636	707	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	585	650	0	0	0
Future Vol, veh/h	0	585	650	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	636	707	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	707	0	-	0	1343	707
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	891	-	-	-	168	435
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	891	-	-	-	168	435
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	891	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	605	270	245	595	95	340
Future Volume (vph)	605	270	245	595	95	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	150
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1802	0	0	1850	1805	1583
Flt Permitted				0.986	0.950	
Satd. Flow (perm)	1802	0	0	1850	1805	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	508			1298	544	
Travel Time (s)	11.5			29.5	12.4	
Peak Hour Factor	0.96	0.96	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	911	0	0	866	98	351
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	108.4%	ICU Level of Service	G
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	39.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	605	270	245	595	95	340
Future Vol, veh/h	605	270	245	595	95	340
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	97	97	97	97
Heavy Vehicles, %	1	1	2	1	0	2
Mvmt Flow	630	281	253	613	98	351

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	630	0	1890	771
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	1119	-
Critical Hdwy	-	-	4.12	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	952	-	~ 78	400
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	315	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	952	-	~ 47	400
Mov Cap-2 Maneuver	-	-	-	-	~ 47	-
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	188	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	190.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	47	400	-	-	952	-
HCM Lane V/C Ratio	2.084	0.876	-	-	0.265	-
HCM Control Delay (s)	$ 687.8	51.9	-	-	10.1	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	10	8.8	-	-	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	780	165	175	655	185	295
Future Volume (vph)	780	165	175	655	185	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	200
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1818	0	0	1847	1770	1538
Flt Permitted				0.990	0.950	
Satd. Flow (perm)	1818	0	0	1847	1770	1538
Link Speed (mph)	30			30	30	
Link Distance (ft)	1298			786	599	
Travel Time (s)	29.5			17.9	13.6	
Peak Hour Factor	0.96	0.96	0.89	0.89	0.82	0.82
Heavy Vehicles (%)	2%	2%	5%	1%	2%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	985	0	0	933	226	360
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	115.5%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	242.5

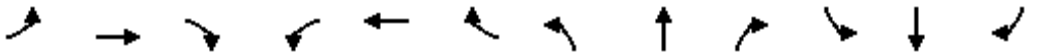
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	780	165	175	655	185	295
Future Vol, veh/h	780	165	175	655	185	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	89	89	82	82
Heavy Vehicles, %	2	2	5	1	2	5
Mvmt Flow	813	172	197	736	226	360

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	813	0	2029	899
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	1130	-
Critical Hdwy	-	-	4.15	-	6.42	6.25
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.245	-	3.518	3.345
Pot Cap-1 Maneuver	-	-	801	-	~ 63	~ 333
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	308	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	801	-	~ 37	~ 333
Mov Cap-2 Maneuver	-	-	-	-	~ 37	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	~ 180	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	$ 1033.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	37	333	-	-	801	-
HCM Lane V/C Ratio	6.098	1.08	-	-	0.245	-
HCM Control Delay (s)	$ 2507.2	108.6	-	-	10.9	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	26.7	13.4	-	-	1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



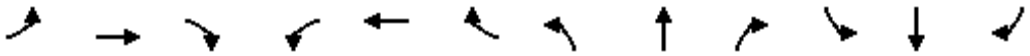
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Future Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1824	0	0	1800	1459	0	2038	0	0	1751	0
Flt Permitted	0.097				0.971			0.649			0.881	
Satd. Flow (perm)	173	1824	0	0	1749	1459	0	1346	0	0	1555	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				87		11			86	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.98	0.98	0.98	0.80	0.80	0.80	0.90	0.90	0.90	0.89	0.89	0.89
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	194	903	0	0	800	38	0	228	0	0	247	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	19.0%	75.0%		56.0%	56.0%	56.0%	25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	62.0	62.0			45.1	45.1		18.2			18.2	
Actuated g/C Ratio	0.68	0.68			0.49	0.49		0.20			0.20	
v/c Ratio	0.62	0.73			0.93	0.05		0.83			0.65	
Control Delay	22.5	13.3			40.4	0.1		60.8			32.4	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	22.5	13.3			40.4	0.1		60.8			32.4	
LOS	C	B			D	A		E			C	
Approach Delay		14.9			38.6			60.8			32.4	
Approach LOS		B			D			E			C	
Queue Length 50th (ft)	46	294			425	0		133			93	
Queue Length 95th (ft)	119	435			509	0		#272			180	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	355	1425			994	867		293			397	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.55	0.63			0.80	0.04		0.78			0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 91.4			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 115.7%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)

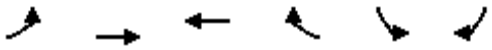




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Future Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.97			0.91	
Flt Protected	0.95	1.00			1.00	1.00		0.98			0.99	
Satd. Flow (prot)	1694	1824			1799	1459		2039			1751	
Flt Permitted	0.10	1.00			0.97	1.00		0.65			0.88	
Satd. Flow (perm)	173	1824			1750	1459		1346			1555	
Peak-hour factor, PHF	0.98	0.98	0.98	0.80	0.80	0.80	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	194	821	82	19	781	38	78	106	44	39	45	163
RTOR Reduction (vph)	0	4	0	0	0	19	0	9	0	0	69	0
Lane Group Flow (vph)	194	899	0	0	800	19	0	219	0	0	178	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	62.0	62.0			45.2	45.2		18.2			18.2	
Effective Green, g (s)	62.0	62.0			45.2	45.2		18.2			18.2	
Actuated g/C Ratio	0.68	0.68			0.50	0.50		0.20			0.20	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	314	1240			867	723		268			310	
v/s Ratio Prot	0.08	c0.49				0.01						
v/s Ratio Perm	0.34				c0.46			c0.16			0.11	
v/c Ratio	0.62	0.73			0.92	0.03		0.82			0.57	
Uniform Delay, d1	17.8	9.2			21.4	11.8		34.9			33.0	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.6	2.1			15.1	0.0		17.3			2.6	
Delay (s)	21.4	11.4			36.5	11.8		52.2			35.6	
Level of Service	C	B			D	B		D			D	
Approach Delay (s)		13.1			35.3			52.2			35.6	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	880	670	0	0	0
Future Volume (vph)	0	880	670	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		1635	620		344	
Travel Time (s)		37.2	14.1		7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	957	728	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

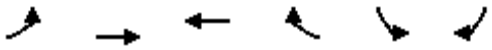
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	880	670	0	0	0
Future Vol, veh/h	0	880	670	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	957	728	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	728	0	-	0	1685	728
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	957	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	876	-	-	-	103	423
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	373	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	103	423
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	373	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	876	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	880	670	0	0	0
Future Volume (vph)	0	880	670	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		2605	1635		295	
Travel Time (s)		59.2	37.2		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	957	728	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	880	670	0	0	0
Future Vol, veh/h	0	880	670	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	957	728	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	728	0	-	0	1685	728
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	957	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	876	-	-	-	103	423
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	373	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	103	423
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	373	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	876	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	315	445	455	115	245
Future Volume (vph)	510	315	445	455	115	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	150
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1734	0	0	1750	1687	1455
Flt Permitted				0.976	0.950	
Satd. Flow (perm)	1734	0	0	1750	1687	1455
Link Speed (mph)	35			35	30	
Link Distance (ft)	508			1298	544	
Travel Time (s)	9.9			25.3	12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	2%	8%	4%	7%	11%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	896	0	0	979	125	266
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	111.0%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	200.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	510	315	445	455	115	245
Future Vol, veh/h	510	315	445	455	115	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	2	8	4	7	11
Mvmt Flow	554	342	484	495	125	266

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	554	0	2188	725
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	1463	-
Critical Hdwy	-	-	4.18	-	6.47	6.31
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	-	-	2.272	-	3.563	3.399
Pot Cap-1 Maneuver	-	-	987	-	~ 48	410
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	207	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	987	-	~ 16	410
Mov Cap-2 Maneuver	-	-	-	-	~ 16	-
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	~ 67	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6	$ 1148.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	16	410	-	-	987	-
HCM Lane V/C Ratio	7.813	0.65	-	-	0.49	-
HCM Control Delay (s)	$ 3535	28.7	-	-	12.1	0
HCM Lane LOS	F	D	-	-	B	A
HCM 95th %tile Q(veh)	16.5	4.5	-	-	2.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	600	155	260	785	115	245
Future Volume (vph)	600	155	260	785	115	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	200
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1713	0	0	1754	1719	1429
Flt Permitted				0.988	0.950	
Satd. Flow (perm)	1713	0	0	1754	1719	1429
Link Speed (mph)	35			35	30	
Link Distance (ft)	1298			786	599	
Travel Time (s)	25.3			15.3	13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	11%	10%	6%	5%	13%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	820	0	0	1136	125	266
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	113.1%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	142.9

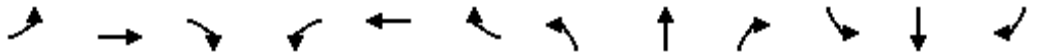
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	600	155	260	785	115	245
Future Vol, veh/h	600	155	260	785	115	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	11	10	6	5	13
Mvmt Flow	652	168	283	853	125	266

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	652	0	2155	736
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	1419	-
Critical Hdwy	-	-	4.2	-	6.45	6.33
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.29	-	3.545	3.417
Pot Cap-1 Maneuver	-	-	898	-	~ 52	401
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	220	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	898	-	~ 21	401
Mov Cap-2 Maneuver	-	-	-	-	~ 21	-
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	~ 88	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	$ 849.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	21	401	-	-	898	-
HCM Lane V/C Ratio	5.952	0.664	-	-	0.315	-
HCM Control Delay (s)	$ 2594.9	30	-	-	10.8	0
HCM Lane LOS	F	D	-	-	B	A
HCM 95th %tile Q(veh)	15.9	4.6	-	-	1.4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Future Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1713	0	0	1672	1487	0	1987	0	0	1705	0
Flt Permitted	0.126				0.964			0.278			0.941	
Satd. Flow (perm)	227	1713	0	0	1615	1487	0	568	0	0	1614	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10				87		9			117	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	690	0	0	755	49	0	157	0	0	435	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	19.0%	75.0%		56.0%	56.0%	56.0%	25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	63.3	63.3			46.2	46.2		19.2			19.2	
Actuated g/C Ratio	0.68	0.68			0.49	0.49		0.21			0.21	
v/c Ratio	0.52	0.59			0.95	0.06		1.28			1.03	
Control Delay	13.1	10.3			45.2	0.9		206.0			80.7	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	13.1	10.3			45.2	0.9		206.0			80.7	
LOS	B	B			D	A		F			F	
Approach Delay		10.9			42.5			206.0			80.7	
Approach LOS		B			D			F			F	
Queue Length 50th (ft)	33	189			415	0		~127			~244	
Queue Length 95th (ft)	80	280			#682	6		#259			#441	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	377	1296			888	857		123			423	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.47	0.53			0.85	0.06		1.28			1.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 93.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.28			
Intersection Signal Delay: 49.0		Intersection LOS: D	
Intersection Capacity Utilization 110.4%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

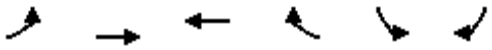
Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Future Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.98			0.90	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1711	1713			1672	1487		1986			1706	
Flt Permitted	0.13	1.00			0.96	1.00		0.28			0.94	
Satd. Flow (perm)	227	1713			1615	1487		568			1615	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	636	54	27	728	49	87	43	27	49	71	315
RTOR Reduction (vph)	0	3	0	0	0	25	0	7	0	0	93	0
Lane Group Flow (vph)	179	687	0	0	755	24	0	150	0	0	342	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	63.3	63.3			46.2	46.2		19.2			19.2	
Effective Green, g (s)	63.3	63.3			46.2	46.2		19.2			19.2	
Actuated g/C Ratio	0.68	0.68			0.49	0.49		0.21			0.21	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	345	1159			798	734		116			331	
v/s Ratio Prot	0.07	c0.40				0.02						
v/s Ratio Perm	0.28				c0.47			c0.26			0.21	
v/c Ratio	0.52	0.59			0.95	0.03		1.29			1.03	
Uniform Delay, d1	13.9	8.1			22.5	12.2		37.1			37.1	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.3	0.8			19.7	0.0		181.1			58.3	
Delay (s)	15.2	9.0			42.2	12.2		218.3			95.5	
Level of Service	B	A			D	B		F			F	
Approach Delay (s)		10.3			40.4			218.3			95.5	
Approach LOS		B			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	51.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	93.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	655	740	0	0	0
Future Volume (vph)	0	655	740	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		35	35		30	
Link Distance (ft)		1635	620		344	
Travel Time (s)		31.9	12.1		7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	712	804	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.3%		ICU Level of Service A	
Analysis Period (min) 15			

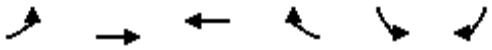
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	655	740	0	0	0
Future Vol, veh/h	0	655	740	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	712	804	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	804	0	-	0	1516	804
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	712	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	820	-	-	-	131	383
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	820	-	-	-	131	383
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	486	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	820	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	655	740	0	0	0
Future Volume (vph)	0	655	740	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		35	35		30	
Link Distance (ft)		2605	1635		295	
Travel Time (s)		50.7	31.9		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	712	804	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	655	740	0	0	0
Future Vol, veh/h	0	655	740	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	712	804	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	804	0	-	0	1516	804
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	712	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	820	-	-	-	131	383
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	820	-	-	-	131	383
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	486	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	820	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	660	295	280	650	110	370
Future Volume (vph)	660	295	280	650	110	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	150
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1802	0	0	1847	1805	1583
Flt Permitted				0.985	0.950	
Satd. Flow (perm)	1802	0	0	1847	1805	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	508			1298	544	
Travel Time (s)	11.5			29.5	12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1038	0	0	1011	120	402
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	118.5%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	131.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	660	295	280	650	110	370
Future Vol, veh/h	660	295	280	650	110	370
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	1	0	2
Mvmt Flow	717	321	304	707	120	402

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	717	0	2193	878
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	1315	-
Critical Hdwy	-	-	4.12	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	884	-	~ 50	~ 347
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	254	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	884	-	~ 22	~ 347
Mov Cap-2 Maneuver	-	-	-	-	~ 22	-
Stage 1	-	-	-	-	410	-
Stage 2	-	-	-	-	~ 110	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	$ 640.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	22	347	-	-	884	-
HCM Lane V/C Ratio	5.435	1.159	-	-	0.344	-
HCM Control Delay (s)	$ 2347.9	132.9	-	-	11.2	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	15.2	16.2	-	-	1.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	850	180	195	725	205	340
Future Volume (vph)	850	180	195	725	205	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	200
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1818	0	0	1847	1770	1538
Flt Permitted				0.990	0.950	
Satd. Flow (perm)	1818	0	0	1847	1770	1538
Link Speed (mph)	30			30	30	
Link Distance (ft)	1298			786	599	
Travel Time (s)	29.5			17.9	13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	5%	1%	2%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1120	0	0	1000	223	370
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	126.0%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	376

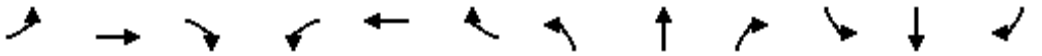
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	850	180	195	725	205	340
Future Vol, veh/h	850	180	195	725	205	340
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	5	1	2	5
Mvmt Flow	924	196	212	788	223	370

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	924	0	2234	1022
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1212	-
Critical Hdwy	-	-	4.15	-	6.42	6.25
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.245	-	3.518	3.345
Pot Cap-1 Maneuver	-	-	727	-	~ 47	~ 283
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	282	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	727	-	~ 23	~ 283
Mov Cap-2 Maneuver	-	-	-	-	~ 23	-
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	~ 136	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.5	$ 1717.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	23	283	-	-	727	-
HCM Lane V/C Ratio	9.688	1.306	-	-	0.292	-
HCM Control Delay (s)	$ 4238.5	197.1	-	-	12	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	28	18.4	-	-	1.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Future Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1825	0	0	1800	1459	0	2034	0	0	1756	0
Flt Permitted	0.105				0.898			0.636			0.872	
Satd. Flow (perm)	187	1825	0	0	1618	1459	0	1316	0	0	1543	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				87		11			77	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	1070	0	0	783	38	0	240	0	0	265	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	19.0%	75.0%		56.0%	56.0%	56.0%	25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	61.8	61.8			45.3	45.3		19.2			19.2	
Actuated g/C Ratio	0.67	0.67			0.49	0.49		0.21			0.21	
v/c Ratio	0.71	0.87			0.99	0.05		0.85			0.69	
Control Delay	27.8	21.1			53.0	0.1		63.5			36.4	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	27.8	21.1			53.0	0.1		63.5			36.4	
LOS	C	C			D	A		E			D	
Approach Delay		22.3			50.5			63.5			36.4	
Approach LOS		C			D			E			D	
Queue Length 50th (ft)	59	427			429	0		141			111	
Queue Length 95th (ft)	140	663			#721	1		#296			#231	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

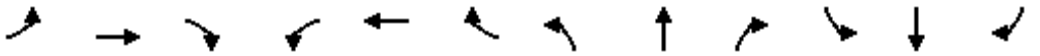
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	356	1405			907	856		283			382	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.63	0.76			0.86	0.04		0.85			0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 92.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 36.4		Intersection LOS: D	
Intersection Capacity Utilization 126.5%		ICU Level of Service H	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woburn St & Salem St (Rt 62)

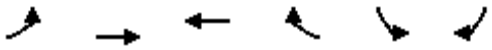




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Future Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.97			0.91	
Flt Protected	0.95	1.00			1.00	1.00		0.98			0.99	
Satd. Flow (prot)	1694	1825			1799	1459		2036			1757	
Flt Permitted	0.11	1.00			0.90	1.00		0.64			0.87	
Satd. Flow (perm)	188	1825			1618	1459		1316			1544	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	978	92	22	761	38	82	109	49	43	54	168
RTOR Reduction (vph)	0	4	0	0	0	19	0	9	0	0	61	0
Lane Group Flow (vph)	223	1066	0	0	783	19	0	231	0	0	204	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	61.8	61.8			45.3	45.3		19.2			19.2	
Effective Green, g (s)	61.8	61.8			45.3	45.3		19.2			19.2	
Actuated g/C Ratio	0.67	0.67			0.49	0.49		0.21			0.21	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	314	1225			796	718		274			322	
v/s Ratio Prot	0.09	c0.58				0.01						
v/s Ratio Perm	0.39				c0.48			c0.18			0.13	
v/c Ratio	0.71	0.87			0.98	0.03		0.84			0.63	
Uniform Delay, d1	19.2	11.9			23.0	12.0		35.0			33.2	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	7.4	7.0			27.7	0.0		20.5			4.0	
Delay (s)	26.6	18.9			50.7	12.0		55.5			37.2	
Level of Service	C	B			D	B		E			D	
Approach Delay (s)		20.2			48.9			55.5			37.2	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	126.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	985	755	0	0	0
Future Volume (vph)	0	985	755	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		1635	620		344	
Travel Time (s)		37.2	14.1		7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1071	821	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

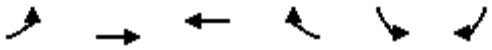
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	985	755	0	0	0
Future Vol, veh/h	0	985	755	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1071	821	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	821	0	-	0	1892	821
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	1071	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	808	-	-	-	77	374
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	329	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	808	-	-	-	77	374
Mov Cap-2 Maneuver	-	-	-	-	77	-
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	329	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	808	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	985	755	0	0	0
Future Volume (vph)	0	985	755	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		2605	1635		295	
Travel Time (s)		59.2	37.2		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1071	821	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	985	755	0	0	0
Future Vol, veh/h	0	985	755	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1071	821	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	821	0	-	0	1892	821
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	1071	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	808	-	-	-	77	374
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	329	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	808	-	-	-	77	374
Mov Cap-2 Maneuver	-	-	-	-	77	-
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	329	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	808	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	525	315	490	470	115	280
Future Volume (vph)	525	315	490	470	115	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	150
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1736	0	0	1747	1687	1455
Flt Permitted				0.975	0.950	
Satd. Flow (perm)	1736	0	0	1747	1687	1455
Link Speed (mph)	35			35	30	
Link Distance (ft)	508			1298	544	
Travel Time (s)	9.9			25.3	12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	2%	8%	4%	7%	11%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	913	0	0	1044	125	304
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	115.1%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	353.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	525	315	490	470	115	280
Future Vol, veh/h	525	315	490	470	115	280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	2	8	4	7	11
Mvmt Flow	571	342	533	511	125	304

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	571	0	2319	742
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	1577	-
Critical Hdwy	-	-	4.18	-	6.47	6.31
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	-	-	2.272	-	3.563	3.399
Pot Cap-1 Maneuver	-	-	972	-	~ 40	401
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	182	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	972	-	~ 9	401
Mov Cap-2 Maneuver	-	-	-	-	~ 9	-
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	~ 43	-

Approach	EB	WB	NB
HCM Control Delay, s	0	6.7	$ 1950.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	9	401	-	-	972	-
HCM Lane V/C Ratio	13.889	0.759	-	-	0.548	-
HCM Control Delay (s)	$ 6608	37.3	-	-	13.1	0
HCM Lane LOS	F	E	-	-	B	A
HCM 95th %tile Q(veh)	17.2	6.2	-	-	3.4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	650	155	290	845	115	250
Future Volume (vph)	650	155	290	845	115	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	200
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1717	0	0	1752	1719	1429
Flt Permitted				0.987	0.950	
Satd. Flow (perm)	1717	0	0	1752	1719	1429
Link Speed (mph)	35			35	30	
Link Distance (ft)	1298			786	599	
Travel Time (s)	25.3			15.3	13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	11%	10%	6%	5%	13%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	875	0	0	1233	125	272
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	120.5%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	300.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	650	155	290	845	115	250
Future Vol, veh/h	650	155	290	845	115	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	11	10	6	5	13
Mvmt Flow	707	168	315	918	125	272

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	707	0	2339	791
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	1548	-
Critical Hdwy	-	-	4.2	-	6.45	6.33
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.29	-	3.545	3.417
Pot Cap-1 Maneuver	-	-	856	-	~ 39	373
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	190	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	856	-	~ 10	373
Mov Cap-2 Maneuver	-	-	-	-	~ 10	-
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	~ 47	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	$ 1885.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	10	373	-	-	856	-
HCM Lane V/C Ratio	12.5	0.729	-	-	0.368	-
HCM Control Delay (s)	$ 5905.5	36.6	-	-	11.6	0
HCM Lane LOS	F	E	-	-	B	A
HCM 95th %tile Q(veh)	17.1	5.6	-	-	1.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1715	0	0	1671	1487	0	1987	0	0	1705	0
Flt Permitted	0.084				0.963			0.264			0.938	
Satd. Flow (perm)	151	1715	0	0	1613	1487	0	539	0	0	1609	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				87		9			117	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	788	0	0	853	49	0	157	0	0	435	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	19.0%	75.0%		56.0%	56.0%	56.0%	25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	68.3	68.3			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.69	0.69			0.52	0.52		0.19			0.19	
v/c Ratio	0.60	0.66			1.02	0.06		1.41			1.07	
Control Delay	23.1	11.6			61.5	0.9		262.6			95.4	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	23.1	11.6			61.5	0.9		262.6			95.4	
LOS	C	B			E	A		F			F	
Approach Delay		13.8			58.3			262.6			95.4	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	46	240			~583	0		~131			~246	
Queue Length 95th (ft)	116	359			#821	6		#263			#442	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

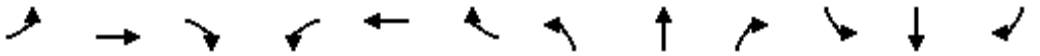
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	327	1224			837	813		111			405	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.55	0.64			1.02	0.06		1.41			1.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 98.3			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.41			
Intersection Signal Delay: 60.4		Intersection LOS: E	
Intersection Capacity Utilization 119.9%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woburn St & Salem St (Rt 62)

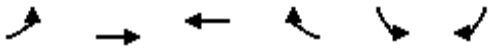




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.98			0.90	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1711	1715			1672	1487		1986			1706	
Flt Permitted	0.08	1.00			0.96	1.00		0.26			0.94	
Satd. Flow (perm)	151	1715			1613	1487		539			1610	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	734	54	27	826	49	87	43	27	49	71	315
RTOR Reduction (vph)	0	3	0	0	0	24	0	7	0	0	94	0
Lane Group Flow (vph)	179	785	0	0	853	25	0	150	0	0	341	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	68.3	68.3			51.1	51.1		19.0			19.0	
Effective Green, g (s)	68.3	68.3			51.1	51.1		19.0			19.0	
Actuated g/C Ratio	0.69	0.69			0.52	0.52		0.19			0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	298	1191			838	772		104			311	
v/s Ratio Prot	0.07	c0.46				0.02						
v/s Ratio Perm	0.34				c0.53			c0.28			0.21	
v/c Ratio	0.60	0.66			1.02	0.03		1.44			1.10	
Uniform Delay, d1	20.9	8.4			23.6	11.5		39.6			39.6	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.4	1.3			35.7	0.0		243.9			79.0	
Delay (s)	24.3	9.8			59.3	11.5		283.5			118.6	
Level of Service	C	A			E	B		F			F	
Approach Delay (s)		12.5			56.7			283.5			118.6	
Approach LOS		B			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	64.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	98.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	95	650	735	15	15	95
Future Volume (vph)	95	650	735	15	15	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1863	1857	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1857	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		1635	620		344	
Travel Time (s)		31.9	12.1		7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	707	815	0	16	103
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			

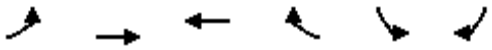
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	95	650	735	15	15	95
Future Vol, veh/h	95	650	735	15	15	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	707	799	16	16	103

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	815	0	-	0	1720	807
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	913	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	812	-	-	-	98	381
Stage 1	-	-	-	-	439	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	812	-	-	-	86	381
Mov Cap-2 Maneuver	-	-	-	-	86	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	23.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	812	-	-	-	86	381
HCM Lane V/C Ratio	0.127	-	-	-	0.19	0.271
HCM Control Delay (s)	10.1	-	-	-	56.4	17.9
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	0.7	1.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	745	830	0	0	0
Future Volume (vph)	0	745	830	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		35	35		30	
Link Distance (ft)		2605	1635		295	
Travel Time (s)		50.7	31.9		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	810	902	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	745	830	0	0	0
Future Vol, veh/h	0	745	830	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	810	902	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	902	0	-	0	1712	902
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	810	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	754	-	-	-	100	336
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	438	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	754	-	-	-	100	336
Mov Cap-2 Maneuver	-	-	-	-	100	-
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	438	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	754	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	675	295	320	665	110	400
Future Volume (vph)	675	295	320	665	110	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	150
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1804	0	0	1845	1805	1583
Flt Permitted				0.984	0.950	
Satd. Flow (perm)	1804	0	0	1845	1805	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	508			1298	544	
Travel Time (s)	11.5			29.5	12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1055	0	0	1071	120	435
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	122.3%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	205.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	675	295	320	665	110	400
Future Vol, veh/h	675	295	320	665	110	400
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	1	0	2
Mvmt Flow	734	321	348	723	120	435

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	734	0	2314	895
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	1419	-
Critical Hdwy	-	-	4.12	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	871	-	~ 42	~ 339
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	226	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	871	-	~ 14	~ 339
Mov Cap-2 Maneuver	-	-	-	-	~ 14	-
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	~ 75	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	$ 987.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	14	339	-	-	871	-
HCM Lane V/C Ratio	8.54	1.283	-	-	0.399	-
HCM Control Delay (s)	$ 3925.1	180	-	-	11.9	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	16	20.1	-	-	1.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	895	180	225	780	205	380
Future Volume (vph)	895	180	225	780	205	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	200
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Satd. Flow (prot)	1820	0	0	1844	1770	1538
Flt Permitted				0.989	0.950	
Satd. Flow (perm)	1820	0	0	1844	1770	1538
Link Speed (mph)	30			30	30	
Link Distance (ft)	1298			786	599	
Travel Time (s)	29.5			17.9	13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	5%	1%	2%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1169	0	0	1093	223	413
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	132.9%	ICU Level of Service	H
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	699.4

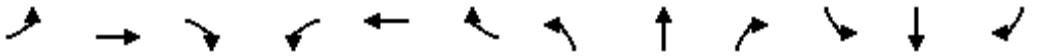
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	895	180	225	780	205	380
Future Vol, veh/h	895	180	225	780	205	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	-	-	0	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	5	1	2	5
Mvmt Flow	973	196	245	848	223	413

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	973	0	2409	1071
Stage 1	-	-	-	-	1071	-
Stage 2	-	-	-	-	1338	-
Critical Hdwy	-	-	4.15	-	6.42	6.25
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.245	-	3.518	3.345
Pot Cap-1 Maneuver	-	-	697	-	~ 36	~ 265
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	245	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	697	-	~ 12	~ 265
Mov Cap-2 Maneuver	-	-	-	-	~ 12	-
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	~ 82	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	$ 3181.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	12	265	-	-	697	-
HCM Lane V/C Ratio	18.569	1.559	-	-	0.351	-
HCM Control Delay (s)	$ 8516.3	$ 303.4	-	-	12.9	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	29.2	24.8	-	-	1.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1827	0	0	1800	1459	0	2034	0	0	1756	0
Flt Permitted	0.071				0.777			0.602			0.856	
Satd. Flow (perm)	127	1827	0	0	1400	1459	0	1246	0	0	1515	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10				87		11			77	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	1163	0	0	875	38	0	240	0	0	265	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	19.0%	75.0%		56.0%	56.0%	56.0%	25.0%	25.0%		25.0%	25.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	68.6	68.6			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
v/c Ratio	0.77	0.91			1.21	0.05		0.97			0.75	
Control Delay	40.6	25.2			131.6	0.1		89.1			41.3	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	40.6	25.2			131.6	0.1		89.1			41.3	
LOS	D	C			F	A		F			D	
Approach Delay		27.7			126.1			89.1			41.3	
Approach LOS		C			F			F			D	
Queue Length 50th (ft)	86	528			~691	0		147			115	
Queue Length 95th (ft)	#190	#946			#925	1		#305			#235	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	311	1300			724	796		248			354	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.72	0.89			1.21	0.05		0.97			0.75	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 98.6			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.21			
Intersection Signal Delay: 66.3		Intersection LOS: E	
Intersection Capacity Utilization 135.5%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

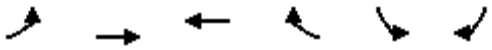
Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.97			0.91	
Flt Protected	0.95	1.00			1.00	1.00		0.98			0.99	
Satd. Flow (prot)	1694	1827			1799	1459		2036			1757	
Flt Permitted	0.07	1.00			0.78	1.00		0.60			0.86	
Satd. Flow (perm)	127	1827			1401	1459		1247			1515	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	1071	92	22	853	38	82	109	49	43	54	168
RTOR Reduction (vph)	0	3	0	0	0	18	0	9	0	0	62	0
Lane Group Flow (vph)	223	1160	0	0	875	20	0	231	0	0	203	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	68.6	68.6			51.0	51.0		19.0			19.0	
Effective Green, g (s)	68.6	68.6			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	288	1271			724	754		240			291	
v/s Ratio Prot	0.10	c0.63				0.01						
v/s Ratio Perm	0.44				c0.62			c0.19			0.13	
v/c Ratio	0.77	0.91			1.21	0.03		0.96			0.70	
Uniform Delay, d1	28.2	12.5			23.8	11.6		39.5			37.1	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	12.2	10.1			106.5	0.0		47.5			7.1	
Delay (s)	40.4	22.6			130.3	11.7		86.9			44.2	
Level of Service	D	C			F	B		F			D	
Approach Delay (s)		25.5			125.4			86.9			44.2	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	65.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	98.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	135.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	980	750	15	15	90
Future Volume (vph)	90	980	750	15	15	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Satd. Flow (prot)	1770	1863	1857	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1857	0	1770	1583
Link Speed (mph)		30	30		30	
Link Distance (ft)		1635	620		344	
Travel Time (s)		37.2	14.1		7.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	98	1065	831	0	16	98
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.6%		ICU Level of Service B	
Analysis Period (min) 15			

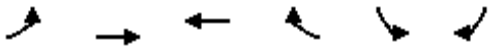
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	980	750	15	15	90
Future Vol, veh/h	90	980	750	15	15	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	1065	815	16	16	98

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	831	0	-	0	2084	823
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	1261	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	801	-	-	-	58	373
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	267	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	801	-	-	-	51	373
Mov Cap-2 Maneuver	-	-	-	-	51	-
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	267	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	30.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	801	-	-	-	51	373
HCM Lane V/C Ratio	0.122	-	-	-	0.32	0.262
HCM Control Delay (s)	10.1	-	-	-	105.8	18
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.1	1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1070	840	0	0	0
Future Volume (vph)	0	1070	840	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				25	
Satd. Flow (prot)	1863	1863	1863	0	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	1863	1863	0	1863	1863
Link Speed (mph)		30	30		30	
Link Distance (ft)		2605	1635		295	
Travel Time (s)		59.2	37.2		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1163	913	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.6%		ICU Level of Service B	
Analysis Period (min) 15			

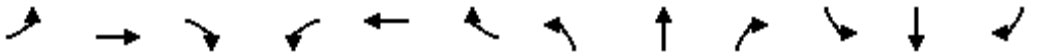
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1070	840	0	0	0
Future Vol, veh/h	0	1070	840	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	175	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1163	913	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	913	0	-	0	2076	913
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	1163	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	746	-	-	-	59	331
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	297	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	746	-	-	-	59	331
Mov Cap-2 Maneuver	-	-	-	-	59	-
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	297	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	746	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0	0
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1715	0	0	1672	0	0	1987	0	0	1705	0
Flt Permitted	0.277				0.956			0.389			0.947	
Satd. Flow (perm)	499	1715	0	0	1602	0	0	794	0	0	1625	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8						11			143	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	788	0	0	685	0	0	157	0	0	435	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		11.0	11.0		11.0	11.0	
Total Split (s)	10.0	60.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	11.1%	66.7%		55.6%	55.6%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	48.0	48.0			37.7			19.6			19.6	
Actuated g/C Ratio	0.61	0.61			0.48			0.25			0.25	
v/c Ratio	0.47	0.75			0.90			0.77			0.85	
Control Delay	11.7	17.4			36.0			53.1			37.0	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	11.7	17.4			36.0			53.1			37.0	
LOS	B	B			D			D			D	
Approach Delay		16.4			36.0			53.1			37.0	
Approach LOS		B			D			D			D	
Queue Length 50th (ft)	39	285			319			74			155	
Queue Length 95th (ft)	69	448			#550			#173			#316	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400											

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	382	1239			946			257			610	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.47	0.64			0.72			0.61			0.71	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 79.1			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 28.9		Intersection LOS: C	
Intersection Capacity Utilization 111.7%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0			6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			1.00			0.98			0.90	
Flt Protected	0.95	1.00			1.00			0.97			0.99	
Satd. Flow (prot)	1711	1715			1672			1986			1706	
Flt Permitted	0.28	1.00			0.96			0.39			0.95	
Satd. Flow (perm)	498	1715			1602			793			1626	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	734	54	27	658	0	87	43	27	49	71	315
RTOR Reduction (vph)	0	3	0	0	0	0	0	8	0	0	107	0
Lane Group Flow (vph)	179	785	0	0	685	0	0	149	0	0	328	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	48.0	48.0			37.8			19.6			19.6	
Effective Green, g (s)	48.0	48.0			37.8			19.6			19.6	
Actuated g/C Ratio	0.61	0.61			0.48			0.25			0.25	
Clearance Time (s)	5.0	5.0			5.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	384	1047			770			197			405	
v/s Ratio Prot	0.03	c0.46										
v/s Ratio Perm	0.25				c0.43			0.19			c0.20	
v/c Ratio	0.47	0.75			0.89			0.76			0.81	
Uniform Delay, d1	9.6	11.0			18.5			27.3			27.7	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.9	3.0			12.2			15.1			11.3	
Delay (s)	10.5	14.0			30.7			42.4			39.1	
Level of Service	B	B			C			D			D	
Approach Delay (s)		13.3			30.7			42.4			39.1	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1827	0	0	1798	0	0	2034	0	0	1756	0
Flt Permitted	0.309				0.713			0.614			0.863	
Satd. Flow (perm)	551	1827	0	0	1285	0	0	1271	0	0	1528	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10						12			79	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	1163	0	0	701	0	0	240	0	0	265	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		11.0	11.0		11.0	11.0	
Total Split (s)	12.0	73.0		61.0	61.0		27.0	27.0		27.0	27.0	
Total Split (%)	12.0%	73.0%		61.0%	61.0%		27.0%	27.0%		27.0%	27.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	68.0	68.0			56.0			19.9			19.9	
Actuated g/C Ratio	0.69	0.69			0.57			0.20			0.20	
v/c Ratio	0.49	0.92			0.96			0.91			0.72	
Control Delay	9.6	27.6			48.3			74.0			37.5	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	9.6	27.6			48.3			74.0			37.5	
LOS	A	C			D			E			D	
Approach Delay		24.7			48.3			74.0			37.5	
Approach LOS		C			D			E			D	
Queue Length 50th (ft)	46	572			407			142			110	
Queue Length 95th (ft)	75	#971			#675			#283			201	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400											

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	459	1259			727			279			387	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.49	0.92			0.96			0.86			0.68	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 98.9			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 36.9		Intersection LOS: D	
Intersection Capacity Utilization 127.0%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

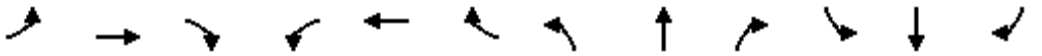
Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0			6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			1.00			0.97			0.91	
Flt Protected	0.95	1.00			1.00			0.98			0.99	
Satd. Flow (prot)	1694	1827			1799			2036			1757	
Flt Permitted	0.31	1.00			0.71			0.61			0.86	
Satd. Flow (perm)	551	1827			1285			1272			1528	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	1071	92	22	679	0	82	109	49	43	54	168
RTOR Reduction (vph)	0	3	0	0	0	0	0	10	0	0	63	0
Lane Group Flow (vph)	223	1160	0	0	701	0	0	230	0	0	202	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	68.0	68.0			56.0			19.9			19.9	
Effective Green, g (s)	68.0	68.0			56.0			19.9			19.9	
Actuated g/C Ratio	0.69	0.69			0.57			0.20			0.20	
Clearance Time (s)	5.0	5.0			5.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	459	1256			727			255			307	
v/s Ratio Prot	0.03	c0.63										
v/s Ratio Perm	0.30				0.55			c0.18			0.13	
v/c Ratio	0.49	0.92			0.96			0.90			0.66	
Uniform Delay, d1	8.2	13.2			20.5			38.6			36.4	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.8	11.3			24.7			32.0			5.0	
Delay (s)	9.0	24.6			45.2			70.6			41.4	
Level of Service	A	C			D			E			D	
Approach Delay (s)		22.1			45.2			70.6			41.4	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	98.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	127.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1715	0	0	1671	1487	0	1987	0	0	1705	0
Flt Permitted	0.080				0.963			0.264			0.938	
Satd. Flow (perm)	144	1715	0	0	1613	1487	0	539	0	0	1609	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				88		7			90	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	788	0	0	853	49	0	157	0	0	435	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.3%	60.5%		45.2%	45.2%	45.2%	20.2%	20.2%		20.2%	20.2%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	68.7	68.7			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
v/c Ratio	0.59	0.66			1.02	0.06		1.44			1.14	
Control Delay	23.7	11.6			63.0	0.9		272.7			120.4	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	23.7	11.6			63.0	0.9		272.7			120.4	
LOS	C	B			E	A		F			F	
Approach Delay		13.9			59.6			272.7			120.4	
Approach LOS		B			E			F			F	
Queue Length 50th (ft)	48	242			~589	0		~135			~279	
Queue Length 95th (ft)	119	361			#821	5		#266			#472	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	322	1218			833	811		109			382	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.56	0.65			1.02	0.06		1.44			1.14	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 98.7			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.44			
Intersection Signal Delay: 66.0		Intersection LOS: E	
Intersection Capacity Utilization 119.9%		ICU Level of Service H	
Analysis Period (min) 15			

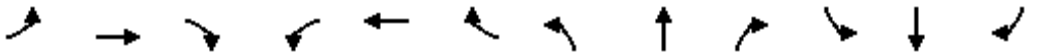
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

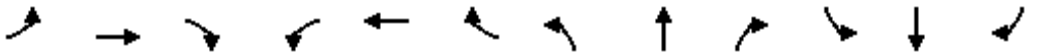
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	760	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.98			0.90	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1711	1715			1672	1487		1986			1706	
Flt Permitted	0.08	1.00			0.96	1.00		0.26			0.94	
Satd. Flow (perm)	145	1715			1613	1487		539			1609	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	734	54	27	826	49	87	43	27	49	71	315
RTOR Reduction (vph)	0	2	0	0	0	24	0	6	0	0	73	0
Lane Group Flow (vph)	179	786	0	0	853	25	0	151	0	0	362	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	68.7	68.7			51.0	51.0		19.0			19.0	
Effective Green, g (s)	68.7	68.7			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	302	1193			833	768		103			309	
v/s Ratio Prot	0.08	c0.46				0.02						
v/s Ratio Perm	0.34				c0.53			c0.28			0.23	
v/c Ratio	0.59	0.66			1.02	0.03		1.47			1.17	
Uniform Delay, d1	21.7	8.4			23.9	11.7		39.9			39.9	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.1	1.3			37.4	0.0		256.3			106.5	
Delay (s)	24.8	9.8			61.3	11.7		296.2			146.4	
Level of Service	C	A			E	B		F			F	
Approach Delay (s)		12.5			58.6			296.2			146.4	
Approach LOS		B			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	71.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	98.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	119.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1827	0	0	1800	1459	0	2034	0	0	1756	0
Flt Permitted	0.071				0.796			0.596			0.853	
Satd. Flow (perm)	127	1827	0	0	1434	1459	0	1233	0	0	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				88		9			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	1163	0	0	875	38	0	240	0	0	265	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.3%	60.5%		45.2%	45.2%	45.2%	20.2%	20.2%		20.2%	20.2%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	70.0	70.0			51.7	51.7		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
v/c Ratio	0.75	0.91			1.18	0.05		1.00			0.79	
Control Delay	38.3	24.7			120.5	0.1		97.9			48.5	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	38.3	24.7			120.5	0.1		97.9			48.5	
LOS	D	C			F	A		F			D	
Approach Delay		26.9			115.5			97.9			48.5	
Approach LOS		C			F			F			D	
Queue Length 50th (ft)	86	531			~679	0		149			127	
Queue Length 95th (ft)	#190	#947			#913	0		#309			#256	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	308	1280			741	797		241			334	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.72	0.91			1.18	0.05		1.00			0.79	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 100			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.18			
Intersection Signal Delay: 63.9		Intersection LOS: E	
Intersection Capacity Utilization 135.5%		ICU Level of Service H	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



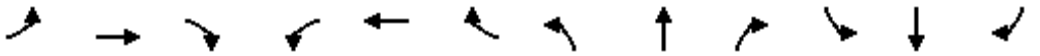
Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	785	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.97			0.91	
Flt Protected	0.95	1.00			1.00	1.00		0.98			0.99	
Satd. Flow (prot)	1694	1827			1799	1459		2036			1757	
Flt Permitted	0.07	1.00			0.80	1.00		0.60			0.85	
Satd. Flow (perm)	126	1827			1434	1459		1234			1510	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	1071	92	22	853	38	82	109	49	43	54	168
RTOR Reduction (vph)	0	2	0	0	0	18	0	7	0	0	48	0
Lane Group Flow (vph)	223	1161	0	0	875	20	0	233	0	0	217	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	70.0	70.0			51.7	51.7		19.0			19.0	
Effective Green, g (s)	70.0	70.0			51.7	51.7		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	296	1278			741	754		234			286	
v/s Ratio Prot	0.10	c0.64				0.01						
v/s Ratio Perm	0.43				c0.61			c0.19			0.14	
v/c Ratio	0.75	0.91			1.18	0.03		0.99			0.76	
Uniform Delay, d1	28.5	12.4			24.1	11.8		40.4			38.3	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	10.4	9.5			95.0	0.0		57.0			11.0	
Delay (s)	38.9	21.9			119.1	11.8		97.4			49.3	
Level of Service	D	C			F	B		F			D	
Approach Delay (s)		24.6			114.7			97.4			49.3	
Approach LOS		C			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	62.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	135.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Future Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1713	0	0	1671	1487	0	1987	0	0	1706	0
Flt Permitted	0.197				0.972			0.252			0.945	
Satd. Flow (perm)	355	1713	0	0	1628	1487	0	515	0	0	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				88		6			93	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.84	0.84	0.84	0.80	0.80	0.80
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	648	0	0	642	42	0	155	0	0	463	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.3%	60.5%		45.2%	45.2%	45.2%	20.2%	20.2%		20.2%	20.2%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	61.9	61.9			44.6	44.6		19.2			19.2	
Actuated g/C Ratio	0.67	0.67			0.48	0.48		0.21			0.21	
v/c Ratio	0.41	0.56			0.82	0.05		1.40			1.13	
Control Delay	8.2	9.9			30.1	0.3		254.6			114.1	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	8.2	9.9			30.1	0.3		254.6			114.1	
LOS	A	A			C	A		F			F	
Approach Delay		9.5			28.3			254.6			114.1	
Approach LOS		A			C			F			F	
Queue Length 50th (ft)	31	172			311	0		~126			~287	
Queue Length 95th (ft)	52	243			473	2		#244			#417	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	446	1314			909	869		111			410	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.38	0.49			0.71	0.05		1.40			1.13	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 92.2			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.40			
Intersection Signal Delay: 56.3		Intersection LOS: E	
Intersection Capacity Utilization 101.2%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



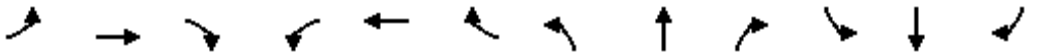
Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Future Volume (vph)	150	525	45	20	590	40	75	35	20	40	60	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.98			0.90	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1711	1713			1672	1487		1988			1706	
Flt Permitted	0.20	1.00			0.97	1.00		0.25			0.94	
Satd. Flow (perm)	356	1713			1627	1487		515			1620	
Peak-hour factor, PHF	0.88	0.88	0.88	0.95	0.95	0.95	0.84	0.84	0.84	0.80	0.80	0.80
Adj. Flow (vph)	170	597	51	21	621	42	89	42	24	50	75	338
RTOR Reduction (vph)	0	2	0	0	0	22	0	5	0	0	74	0
Lane Group Flow (vph)	170	646	0	0	642	20	0	150	0	0	389	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	61.9	61.9			44.6	44.6		19.2			19.2	
Effective Green, g (s)	61.9	61.9			44.6	44.6		19.2			19.2	
Actuated g/C Ratio	0.67	0.67			0.48	0.48		0.21			0.21	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	420	1151			787	720		107			337	
v/s Ratio Prot	0.05	c0.38				0.01						
v/s Ratio Perm	0.22				c0.39			c0.29			0.24	
v/c Ratio	0.40	0.56			0.82	0.03		1.40			1.16	
Uniform Delay, d1	10.4	8.0			20.2	12.4		36.4			36.4	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.6	0.6			6.5	0.0		228.4			98.2	
Delay (s)	11.0	8.6			26.8	12.4		264.9			134.7	
Level of Service	B	A			C	B		F			F	
Approach Delay (s)		9.1			25.9			264.9			134.7	
Approach LOS		A			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	60.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	92.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Future Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1824	0	0	1800	1459	0	2038	0	0	1751	0
Flt Permitted	0.115				0.971			0.624			0.871	
Satd. Flow (perm)	205	1824	0	0	1749	1459	0	1294	0	0	1538	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				88		8			67	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.98	0.98	0.98	0.80	0.80	0.80	0.90	0.90	0.90	0.89	0.89	0.89
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	194	903	0	0	800	38	0	228	0	0	247	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.3%	60.5%		45.2%	45.2%	45.2%	20.2%	20.2%		20.2%	20.2%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	69.1	69.1			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.51	0.51		0.19			0.19	
v/c Ratio	0.57	0.71			0.89	0.05		0.90			0.71	
Control Delay	17.0	12.8			35.8	0.1		74.9			39.7	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	17.0	12.8			35.8	0.1		74.9			39.7	
LOS	B	B			D	A		E			D	
Approach Delay		13.5			34.1			74.9			39.7	
Approach LOS		B			C			E			D	
Queue Length 50th (ft)	37	295			441	0		139			108	
Queue Length 95th (ft)	104	438			509	0		#282			#209	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	353	1290			900	794		254			349	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.55	0.70			0.89	0.05		0.90			0.71	

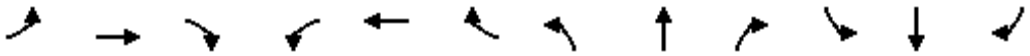
Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 99.1			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 29.2		Intersection LOS: C	
Intersection Capacity Utilization 115.7%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

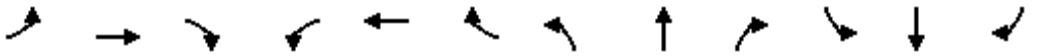
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Future Volume (vph)	190	805	80	15	625	30	70	95	40	35	40	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.97			0.91	
Flt Protected	0.95	1.00			1.00	1.00		0.98			0.99	
Satd. Flow (prot)	1694	1824			1799	1459		2039			1751	
Flt Permitted	0.11	1.00			0.97	1.00		0.62			0.87	
Satd. Flow (perm)	204	1824			1750	1459		1295			1538	
Peak-hour factor, PHF	0.98	0.98	0.98	0.80	0.80	0.80	0.90	0.90	0.90	0.89	0.89	0.89
Adj. Flow (vph)	194	821	82	19	781	38	78	106	44	39	45	163
RTOR Reduction (vph)	0	2	0	0	0	18	0	6	0	0	54	0
Lane Group Flow (vph)	194	901	0	0	800	20	0	222	0	0	193	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	69.1	69.1			51.1	51.1		19.0			19.0	
Effective Green, g (s)	69.1	69.1			51.1	51.1		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	337	1271			902	752		248			294	
v/s Ratio Prot	0.08	c0.49				0.01						
v/s Ratio Perm	0.32				c0.46			c0.17			0.13	
v/c Ratio	0.58	0.71			0.89	0.03		0.89			0.66	
Uniform Delay, d1	15.7	9.0			21.4	11.8		39.1			37.0	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	2.4	1.8			10.5	0.0		30.6			5.2	
Delay (s)	18.1	10.8			31.9	11.8		69.6			42.2	
Level of Service	B	B			C	B		E			D	
Approach Delay (s)		12.1			31.0			69.6			42.2	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	99.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Future Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1713	0	0	1672	1487	0	1987	0	0	1705	0
Flt Permitted	0.145				0.964			0.264			0.938	
Satd. Flow (perm)	261	1713	0	0	1615	1487	0	539	0	0	1609	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				88		7			90	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	690	0	0	755	49	0	157	0	0	435	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.3%	60.5%		45.2%	45.2%	45.2%	20.2%	20.2%		20.2%	20.2%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	68.9	68.9			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
v/c Ratio	0.48	0.58			0.91	0.06		1.44			1.14	
Control Delay	10.5	9.9			38.9	0.9		273.8			120.8	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	10.5	9.9			38.9	0.9		273.8			120.8	
LOS	B	A			D	A		F			F	
Approach Delay		10.0			36.6			273.8			120.8	
Approach LOS		B			D			F			F	
Queue Length 50th (ft)	33	191			424	0		~135			~279	
Queue Length 95th (ft)	65	281			#682	5		#266			#472	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	387	1214			833	809		109			381	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.46	0.57			0.91	0.06		1.44			1.14	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 98.9			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.44			
Intersection Signal Delay: 59.0		Intersection LOS: E	
Intersection Capacity Utilization 110.4%		ICU Level of Service H	
Analysis Period (min) 15			

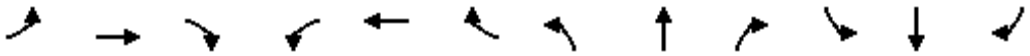
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

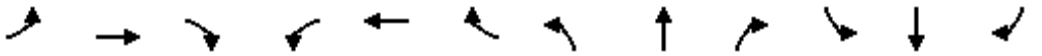
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Future Volume (vph)	165	585	50	25	670	45	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.98			0.90	
Flt Protected	0.95	1.00			1.00	1.00		0.97			0.99	
Satd. Flow (prot)	1711	1713			1672	1487		1986			1706	
Flt Permitted	0.14	1.00			0.96	1.00		0.26			0.94	
Satd. Flow (perm)	261	1713			1615	1487		539			1609	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	636	54	27	728	49	87	43	27	49	71	315
RTOR Reduction (vph)	0	2	0	0	0	24	0	6	0	0	73	0
Lane Group Flow (vph)	179	688	0	0	755	25	0	151	0	0	362	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	68.9	68.9			51.0	51.0		19.0			19.0	
Effective Green, g (s)	68.9	68.9			51.0	51.0		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	370	1193			832	766		103			309	
v/s Ratio Prot	0.06	c0.40				0.02						
v/s Ratio Perm	0.27				c0.47			c0.28			0.23	
v/c Ratio	0.48	0.58			0.91	0.03		1.47			1.17	
Uniform Delay, d1	13.3	7.6			21.8	11.8		40.0			40.0	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.0	0.7			13.5	0.0		256.3			106.5	
Delay (s)	14.3	8.3			35.3	11.8		296.2			146.4	
Level of Service	B	A			D	B		F			F	
Approach Delay (s)		9.5			33.8			296.2			146.4	
Approach LOS		A			C			F			F	

Intersection Summary			
HCM 2000 Control Delay	64.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	98.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Future Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1825	0	0	1800	1459	0	2034	0	0	1756	0
Flt Permitted	0.127				0.956			0.596			0.853	
Satd. Flow (perm)	226	1825	0	0	1722	1459	0	1233	0	0	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				88		9			59	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	1070	0	0	783	38	0	240	0	0	265	0
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0	10.0	11.0	11.0		11.0	11.0	
Total Split (s)	19.0	75.0		56.0	56.0	56.0	25.0	25.0		25.0	25.0	
Total Split (%)	15.3%	60.5%		45.2%	45.2%	45.2%	20.2%	20.2%		20.2%	20.2%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	None	None		None	None	None	None	None		None	None	
Act Effct Green (s)	70.0	70.0			51.7	51.7		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
v/c Ratio	0.63	0.84			0.88	0.05		1.00			0.79	
Control Delay	18.9	18.5			35.0	0.1		97.9			48.5	
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	
Total Delay	18.9	18.5			35.0	0.1		97.9			48.5	
LOS	B	B			D	A		F			D	
Approach Delay		18.6			33.4			97.9			48.5	
Approach LOS		B			C			F			D	
Queue Length 50th (ft)	43	429			429	0		149			127	
Queue Length 95th (ft)	121	665			#686	0		#309			#256	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400					100						

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	363	1279			890	797		241			334	
Starvation Cap Reductn	0	0			0	0		0			0	
Spillback Cap Reductn	0	0			0	0		0			0	
Storage Cap Reductn	0	0			0	0		0			0	
Reduced v/c Ratio	0.61	0.84			0.88	0.05		1.00			0.79	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 100			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 33.5		Intersection LOS: C	
Intersection Capacity Utilization 126.5%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



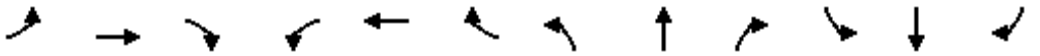
Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Future Volume (vph)	205	900	85	20	700	35	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Frt	1.00	0.99			1.00	0.85		0.97			0.91	
Flt Protected	0.95	1.00			1.00	1.00		0.98			0.99	
Satd. Flow (prot)	1694	1825			1799	1459		2036			1757	
Flt Permitted	0.13	1.00			0.96	1.00		0.60			0.85	
Satd. Flow (perm)	227	1825			1723	1459		1234			1510	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	978	92	22	761	38	82	109	49	43	54	168
RTOR Reduction (vph)	0	2	0	0	0	18	0	7	0	0	48	0
Lane Group Flow (vph)	223	1068	0	0	783	20	0	233	0	0	217	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA	Prot	Perm	NA		Perm	NA	
Protected Phases	5	2			6	6		8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	70.0	70.0			51.7	51.7		19.0			19.0	
Effective Green, g (s)	70.0	70.0			51.7	51.7		19.0			19.0	
Actuated g/C Ratio	0.70	0.70			0.52	0.52		0.19			0.19	
Clearance Time (s)	5.0	5.0			5.0	5.0		6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	354	1277			890	754		234			286	
v/s Ratio Prot	0.08	c0.59				0.01						
v/s Ratio Perm	0.36				c0.45			c0.19			0.14	
v/c Ratio	0.63	0.84			0.88	0.03		0.99			0.76	
Uniform Delay, d1	15.6	10.9			21.4	11.8		40.4			38.3	
Progression Factor	1.00	1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2	3.5	4.9			9.9	0.0		57.0			11.0	
Delay (s)	19.1	15.8			31.3	11.8		97.4			49.3	
Level of Service	B	B			C	B		F			D	
Approach Delay (s)		16.4			30.4			97.4			49.3	
Approach LOS		B			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	126.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



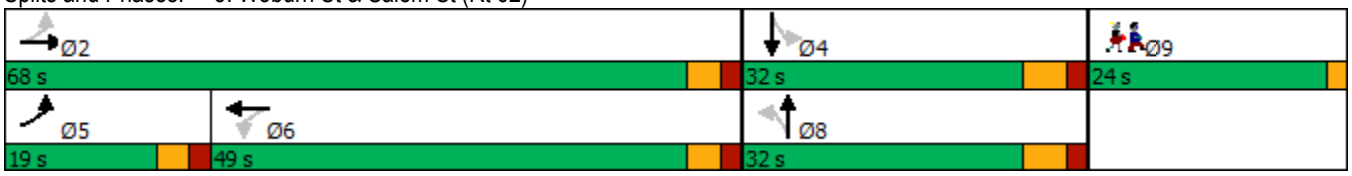
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1711	1715	0	0	1672	0	0	1987	0	0	1705	0
Flt Permitted	0.257				0.954			0.389			0.948	
Satd. Flow (perm)	463	1715	0	0	1599	0	0	794	0	0	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						8			96	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		15.3			50.7			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	788	0	0	685	0	0	157	0	0	435	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		11.0	11.0		11.0	11.0	
Total Split (s)	19.0	68.0		49.0	49.0		32.0	32.0		32.0	32.0	
Total Split (%)	15.3%	54.8%		39.5%	39.5%		25.8%	25.8%		25.8%	25.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	60.4	60.4			44.1			26.0			26.0	
Actuated g/C Ratio	0.62	0.62			0.45			0.27			0.27	
v/c Ratio	0.42	0.74			0.95			0.72			0.86	
Control Delay	10.9	18.2			49.8			51.9			45.2	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	10.9	18.2			49.8			51.9			45.2	
LOS	B	B			D			D			D	
Approach Delay		16.9			49.8			51.9			45.2	
Approach LOS		B			D			D			D	
Queue Length 50th (ft)	43	312			398			84			206	
Queue Length 95th (ft)	72	467			#649			#190			#389	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400											

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	466	1111			724			217			504	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.38	0.71			0.95			0.72			0.86	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 97.4			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 34.9		Intersection LOS: C	
Intersection Capacity Utilization 111.7%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



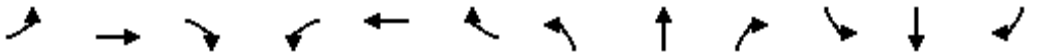
Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Future Volume (vph)	165	675	50	25	605	0	80	40	25	45	65	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0			6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			1.00			0.98			0.90	
Flt Protected	0.95	1.00			1.00			0.97			0.99	
Satd. Flow (prot)	1711	1715			1672			1986			1706	
Flt Permitted	0.26	1.00			0.95			0.39			0.95	
Satd. Flow (perm)	463	1715			1598			793			1626	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	734	54	27	658	0	87	43	27	49	71	315
RTOR Reduction (vph)	0	2	0	0	0	0	0	6	0	0	70	0
Lane Group Flow (vph)	179	786	0	0	685	0	0	151	0	0	365	0
Heavy Vehicles (%)	2%	10%	5%	0%	10%	5%	4%	3%	0%	10%	4%	2%
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	60.4	60.4			44.2			26.0			26.0	
Effective Green, g (s)	60.4	60.4			44.2			26.0			26.0	
Actuated g/C Ratio	0.62	0.62			0.45			0.27			0.27	
Clearance Time (s)	5.0	5.0			5.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	430	1063			725			211			434	
v/s Ratio Prot	0.05	c0.46										
v/s Ratio Perm	0.21				c0.43			0.19			c0.22	
v/c Ratio	0.42	0.74			0.94			0.72			0.84	
Uniform Delay, d1	11.6	13.0			25.4			32.4			33.7	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.7	2.7			20.9			11.0			13.6	
Delay (s)	12.2	15.7			46.3			43.3			47.4	
Level of Service	B	B			D			D			D	
Approach Delay (s)		15.1			46.3			43.3			47.4	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	97.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	111.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



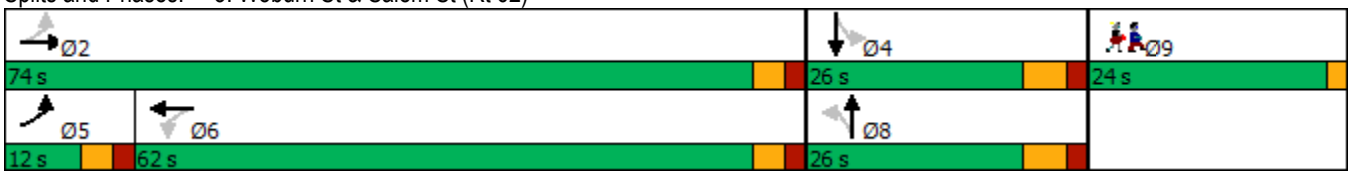
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	11	11	16	16	16	13	13	13
Storage Length (ft)	400		0	0		100	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	50			25			25			50		
Satd. Flow (prot)	1694	1827	0	0	1798	0	0	2034	0	0	1756	0
Flt Permitted	0.311				0.721			0.611			0.862	
Satd. Flow (perm)	555	1827	0	0	1299	0	0	1264	0	0	1526	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6						9			60	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		786			2605			401			544	
Travel Time (s)		17.9			59.2			9.1			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	1163	0	0	701	0	0	240	0	0	265	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	10.0		10.0	10.0		11.0	11.0		11.0	11.0	
Total Split (s)	12.0	74.0		62.0	62.0		26.0	26.0		26.0	26.0	
Total Split (%)	9.7%	59.7%		50.0%	50.0%		21.0%	21.0%		21.0%	21.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.0	5.0			5.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Recall Mode	None	None		None	None		None	None		None	None	
Act Effct Green (s)	69.0	69.0			57.0			20.0			20.0	
Actuated g/C Ratio	0.69	0.69			0.57			0.20			0.20	
v/c Ratio	0.48	0.92			0.95			0.92			0.75	
Control Delay	9.2	27.0			44.4			78.7			43.6	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	9.2	27.0			44.4			78.7			43.6	
LOS	A	C			D			E			D	
Approach Delay		24.1			44.4			78.7			43.6	
Approach LOS		C			D			E			D	
Queue Length 50th (ft)	45	553			392			146			125	
Queue Length 95th (ft)	72	#960			#661			#296			#243	
Internal Link Dist (ft)		706			2525			321			464	
Turn Bay Length (ft)	400											

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	19%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	462	1262			740			260			353	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.48	0.92			0.95			0.92			0.75	

Intersection Summary			
Area Type:	Other		
Cycle Length: 124			
Actuated Cycle Length: 100			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 36.6		Intersection LOS: D	
Intersection Capacity Utilization 127.0%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Woburn St & Salem St (Rt 62)



Lane Group	Ø9
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Future Volume (vph)	205	985	85	20	625	0	75	100	45	40	50	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	11	11	16	16	16	13	13	13
Total Lost time (s)	5.0	5.0			5.0			6.0			6.0	
Lane Util. Factor	1.00	1.00			1.00			1.00			1.00	
Frt	1.00	0.99			1.00			0.97			0.91	
Flt Protected	0.95	1.00			1.00			0.98			0.99	
Satd. Flow (prot)	1694	1827			1799			2036			1757	
Flt Permitted	0.31	1.00			0.72			0.61			0.86	
Satd. Flow (perm)	554	1827			1298			1265			1526	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	1071	92	22	679	0	82	109	49	43	54	168
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	48	0
Lane Group Flow (vph)	223	1161	0	0	701	0	0	233	0	0	217	0
Heavy Vehicles (%)	3%	3%	0%	0%	2%	7%	2%	1%	0%	6%	2%	0%
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	69.0	69.0			57.0			20.0			20.0	
Effective Green, g (s)	69.0	69.0			57.0			20.0			20.0	
Actuated g/C Ratio	0.69	0.69			0.57			0.20			0.20	
Clearance Time (s)	5.0	5.0			5.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	462	1260			739			253			305	
v/s Ratio Prot	0.03	c0.64										
v/s Ratio Perm	0.30				0.54			c0.18			0.14	
v/c Ratio	0.48	0.92			0.95			0.92			0.71	
Uniform Delay, d1	8.1	13.2			20.1			39.2			37.3	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.8	11.1			21.2			35.8			7.6	
Delay (s)	8.9	24.3			41.3			75.0			44.9	
Level of Service	A	C			D			E			D	
Approach Delay (s)		21.8			41.3			75.0			44.9	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	127.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

MEMORANDUM

TO: Ms. Andrea Lathrop
Acquisition & Property
Administrator
Princeton Properties
Princeton Corporate Centre
1115 Westford Street, 4th Floor
Lowell, MA 01851

FROM: Mr. Jeffrey S. Dirk, P.E., PTOE, FITE
Partner
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810
(978) 269-6830
jdirk@rdva.com
Professional Engineer in CT, MA, ME, NH, RI and VA

DATE: May 4, 2020

RE: 8520

SUBJECT: Transportation Impact Assessment
Proposed Multifamily Residential Development – Jefferson Road
Wilmington, Massachusetts

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed construction of a multifamily residential development that is to be located off Middlesex Avenue (Route 62) and Jefferson Road in Wilmington, Massachusetts (hereafter referred to as the "Project"). This assessment provides an existing conditions context for the Project in relation to the transportation infrastructure and evaluates the following specific areas: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and qualitatively evaluates the potential impact of the Project along Middlesex Avenue and at major intersections located along this roadway through which Project-related traffic will travel.

This assessment was prepared in consultation with the Town of Wilmington and was performed in general accordance with the MassDOT *Transportation Impact Assessment (TIA) Guidelines* and the standards of the Traffic Engineering and Transportation Professions. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineers (ITE)[1] and after applying appropriate adjustments to account for resident use of alternative modes of transportation, including commuter rail services available from North Wilmington Station which is immediately adjacent to the Project site, the Project is expected to generate approximately 490 vehicle trips on an average weekday (two-way, 24-hour volume), with 33 vehicle trips expected during the weekday morning peak-hour and 43 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with traffic volume increases outside of the immediate proximity of the Project site predicted to be less than one (1) added vehicle every 3-4 minutes during the peak hours. In fact, the Project represents an

[1] *Trip Generation*, 10th Edition; Institute of Transportation Engineers; Washington, DC; 2017.

increase in traffic of less than 5 percent along Middlesex Avenue, which is well within the normal fluctuation in traffic volumes that occurs between Monday and Friday over the course of a typical week;

3. No apparent safety deficiencies were noted with respect to the motor vehicle crash history along Middlesex Avenue in the vicinity of the Project site; and

4. Lines of sight at the Project site driveway intersections with Middlesex Avenue and Jefferson Road and at the Middlesex Avenue/Jefferson Road intersection were found to meet, exceed or could be made to meet or exceed the recommended minimum distances for safe operation based on the appropriate approach speeds.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

PROJECT DESCRIPTION

The Project will entail the construction of multifamily residential development that will be located off Jefferson Road and Middlesex Avenue in Wilmington, Massachusetts. As proposed, the Project will consist of the construction of 108 multifamily residential units to be located in two (2) buildings, with "Building A" to encompass 58 residential units and generally situated in the northeast corner of the Middlesex Avenue/Jefferson Road intersection and "Building B" to encompass 50 residential units and located at the north end of Jefferson Road. The Project site encompasses 25.29± acres of land that is generally bounded by areas of open and wooded space and low-lying wetland areas to the north; Middlesex Avenue, a commercial building (200 Jefferson Road), a gravel lot and a surface parking lot for North Wilmington Station on the Massachusetts Bay Transportation Authority (MBTA) Haverhill Line Commuter Rail system to the south; Lubbers Brook to the east; and Jefferson Road and the MBTA Commuter Rail tracks to the west. At present, the Project site is occupied by several commercial buildings with associated parking lots and appurtenances, Jefferson Road (a private way), and areas of open and wooded space. The existing commercial buildings and associated appurtenances located at 378-380 and 382 Middlesex Avenue will be removed to accommodate the Project; the commercial building located at 200 Jefferson Road will be retained.



©2020 Google Imagery.

Access to the Project site will be provided as follows: *Building A* – access to "Building A" will be provided by way of the existing driveway that serves 382 Middlesex Avenue and intersects the north side of Middlesex Avenue approximately 185 feet east of Jefferson Road and two (2) driveways that will intersect the east side of Jefferson Road approximately 40 feet and 325 feet north of Middlesex Avenue, respectively; *Building B* – access to "Building B" will be provided by way of a driveway that will intersect the north end of Jefferson Road.

On-site parking will be provided for each building consisting of both surface parking and garage parking configured as follows: *Building A* (58 units) – on-site parking will be provided for 96 vehicles, or a parking ratio of approximately 1.66 spaces per unit, including 55 surface parking spaces and 41 covered spaces beneath the residential building; *Building B* (50 units) - on-site parking will be provided for 80 vehicles, or a parking ratio of approximately 1.60 spaces per unit, including 56 surface parking spaces and 24 garage spaces. The proposed parking ratios (1.66/1.60 spaces per unit) are below the parking requirements for a residential use specified in Section 6.4, *Parking and Site Design Standards*, of the Wilmington Zoning Bylaw (2.0 spaces for each dwelling unit are required), but exceed the range of values documented by the Institute of Transportation Engineers (ITE) for comparable multifamily residential communities.[2]

EXISTING CONDITIONS CONTEXT

In order to establish the existing conditions context of the Project with respect to the transportation infrastructure, a review of existing conditions was completed in May 2020. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; traffic volumes (December 2018); and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of Middlesex Avenue and Jefferson Road in the vicinity of the Project site. The following summarizes existing conditions within the study area.

Roadways

Middlesex Avenue (Route 62)

Middlesex Avenue (Route 62) is a two-lane urban minor arterial that is under local jurisdiction in the vicinity of the Project site; north of High Street, Route 62 is under MassDOT jurisdiction between High Street and Woburn Street, and provides a full access interchange with I-93 (Exit 40). In the vicinity of the Project site, Middlesex Avenue provides two 13 to 14-foot wide travel lanes separated by a double-yellow centerline with 3 to 6-foot wide marked shoulders. A railroad crossing with gates and flashing signals is located approximately 200 feet south west of Jefferson Road. The posted speed limit along Middlesex Avenue in the vicinity of the Project site is 25 miles per hour (mph), with prevailing travel speeds measured in December 2018 found to be between 35 and 37 mph.[3] Land use in the vicinity of the Project site consists of commercial properties, North Wilmington Station on the Haverhill Line of the MBTA Commuter Rail system, and areas of open and wooded space.

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[2] *Parking Generation Manual*, 5th Edition; Institute of Transportation Engineers; Washington, D.C.; 2019. Observed parking demand ratios for an affordable housing community were found to range from 0.32 to 1.66 spaces per dwelling unit, with an average parking demand of 0.99 spaces per dwelling unit and an 85th percentile peak parking demand of 1.33 spaces per dwelling unit. For a traditional multifamily residential community located within ½ mile of a rail transit station, the average parking demand was reported to be 1.12 spaces per dwelling unit and the 85th percentile peak parking demand was identified to be 1.27 spaces per dwelling unit.

[3] The prevailing travel speed is also known as the 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below during the observation period.

Traffic volume data collected as a part of this assessment in December 2018 indicates that Middlesex Avenue in the vicinity of the Project site accommodates approximately 14,105 vehicles per day on an average weekday and 12,090 vehicles on a Saturday, with approximately 1,105 vehicles per hour (vph) during the weekday morning peak-hour (7:15 to 8:15 AM), 1,125 vph during the weekday evening peak-hour (5:00 to 6:00 PM) and 1,010 vph during the Saturday peak-hour (11:45 AM to 12:45 PM).

Jefferson Road

Jefferson Road is a private way that traverses a general north-south alignment and terminates in a parking lot approximately 720 feet north of Middlesex Avenue. Jefferson Road consists of a 40 foot layout within which a 20± foot wide paved roadway is provided that accommodates two-way travel with no pavement markings. A sidewalk is provided along the west side of the roadway between Middlesex Avenue and the entrance to the commuter rail parking lot (a distance of approximately 250 linear feet). Land use consists of the Project site, the parking lot for the North Wilmington Commuter Rail Station, commercial properties and areas of open and wooded space.

Jefferson Road intersects Middlesex Avenue from the north to from a four-legged intersection with the exit driveway to Elia's Country Store slightly off-set to the west and both the Jefferson Road and the Elia's Country Store driveway approaches under STOP-sign control. Marked crosswalks are provided for crossing Jefferson Road and the Middlesex Avenue northeast leg of the intersection.

Pedestrian and Bicycle Accommodations

Sidewalks are currently provided along both sides of Middlesex Avenue within the study area and along the west side of Jefferson Road between Middlesex Avenue and the entrance to the commuter rail parking lot (a distance of approximately 250 linear feet), with marked crosswalks provided for crossing Jefferson Avenue and Middlesex Avenue at both Jefferson Avenue (northeast leg) and at the commuter rail crossing (northeast of crossing). Formal bicycle facilities were not identified within the immediate study area; however, Middlesex Avenue generally provides sufficient width (combined travel lane and shoulder) to support bicycle travel in a shared travel-way configuration (i.e., motor vehicles and bicyclists sharing the roadway).[4]

Public Transportation

Regularly scheduled public transportation services are provided immediately adjacent to the Project site by way of North Wilmington Station on the Haverhill Line of the MBTA Commuter Rail system. Daily commuter rail service is provided between North Wilmington Station and North Station in Boston, with four (4) in-bound and four (4) out-bound trains provided during the weekday morning and evening peak commuter periods; flag stop service[5] is provided outside of the peak period service on a weekday and on Saturday and Sunday, with six (6) trains provided on Saturday and Sunday. In addition, the MBTA provides The RIDE paratransit services to eligible people who cannot use fixed-route transit all or some of the time due to a physical, cognitive or mental disability in compliance with the Americans with Disabilities Act (ADA), and the Wilmington Department of Elderly Services provides transportation services for Wilmington residents that are over age 60 for medical appointments and shopping within a 13-mile radius of the Town.

[4]A minimum combined travel lane and paved shoulder width of 14-feet is required to support bicycle travel in a shared traveled-way condition.

[5]Commuter rail trains will stop to pick-up a passenger that is visible on the platform to an approaching train; passengers that wish to disembark must inform the conductor prior to arrival at the station.

Motor Vehicle Crash Data

Motor vehicle crash information for Middlesex Avenue in the vicinity of the Project site and for the intersections of Middlesex Avenue at High Street, Middlesex Avenue at Jefferson Road and Middlesex Avenue at Federal Street was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2013 through 2017, inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, roadway and weather conditions, and day of occurrence, and presented in Table 1.

As can be seen in Table 1, the study intersections experienced an average of approximately five (5) or fewer reported motor vehicle crashes per year over the five-year review period, the majority of which were reported to have occurred on a weekday; during daylight; under clear weather conditions; and involved angle or rear-end type collisions that resulted in property damage only. The Middlesex Avenue/High Street intersection was reported to have experienced the largest number of reported crashes, with 24 crashes reported over the five-year review period. No fatal motor vehicle crashes were reported to have occurred at the study area intersections over the five-year review period.

A review of the MassDOT statewide High Crash Location List indicated that there are no locations along Middlesex Avenue in the vicinity of the Project site that are included on MassDOT's Highway Safety Improvement Program (HSIP) listing as high crash locations.

Table 1
MOTOR VEHICLE CRASH DATA SUMMARY[a]

	Middlesex Ave./ High St.	Middlesex Ave./ Jefferson Rd.	Middlesex Ave./ Federal St.
Traffic Control Type:[b]	TS	U	TS
Year:			
2013	6	2	2
2014	4	0	2
2015	3	0	2
2016	5	2	6
2017	6	0	2
Total	24	4	14
Average:	4.8	0.8	2.8
Type:			
Angle	7	0	7
Rear-End	17	4	3
Head-On	0	0	0
Sideswipe	0	0	2
Fixed Object	0	0	2
Pedestrian/Bicycle	0	0	0
Unknown/Other	0	0	0
Total	24	4	14
Conditions:			
Clear	15	1	9
Cloudy	6	2	3
Rain	3	1	1
Snow/Ice	0	0	1
Total	24	4	14
Lighting:			
Daylight	20	4	10
Dawn/Dusk	0	0	0
Dark (Road Lit)	4	0	4
Dark (Road Unlit)	0	0	0
Total	24	4	14
Day of Week:			
Monday through Friday	22	4	11
Saturday	2	0	1
Sunday	0	0	2
Total	24	4	14
Severity:			
Property Damage Only	18	4	11
Personal Injury	6	0	3
Fatality	0	0	0
Total	24	4	14

[a]Source: MassDOT Safety Management/Traffic Operations Unit records, 2013 through 2017.
[b]Traffic Control Type: U = unsignalized; TS = traffic signal.

PROJECT-GENERATED TRAFFIC

In order to determine the traffic characteristics of the Project, trip-generation methodologies established by the Institute of Transportation Engineers (ITE)[6] were used. The ITE provides trip-generation information for various types of land uses developed as a result of scientific studies that have been conducted over the past 50 plus years, the most recent update of which was published in 2012. This data includes trip estimates for a similar land use as that proposed (multifamily housing). ITE Land Use Code (LUC) 221, *Multifamily Housing (Mid-Rise)*, was used to establish the base traffic characteristics of the Project.

Transit Use

Given the availability of public transportation services to the Project site (MBTA Commuter Rail service), it is expected that a portion of the residents of the Project will use public transportation services, thereby reducing the volume of traffic that may be associated with the Project. In order to determine the proportion of residents of the Project that may use public transportation, walk or bicycle as their primary mode of transportation, travel mode data obtained from the 2013-2017 American Community Survey (ACS) for the Town of Wilmington and a survey of commuting modes for residents of a similar suburban multifamily residential community located within walking distance of a commuter rail station were reviewed. Based on the ACS data, the following commuting modes were identified for workers age 16 or older that reside within the Town:

- *Single-Occupant Vehicle:* 83.7%
- *Car/Vanpool:* 6.7%
- *Taxi/Motorcycle/Other:* 1.0%
- *Public Transportation:* 4.3%
- *Walk:* 0.7%
- *Bicycle:* 0.1%
- *Worked at Home:* 3.5%

According to the ACS, approximately 16 percent of workers that reside in the Town reported that they used an alternative mode of transportation to single-occupancy vehicles, with approximately 7 percent participating in a car or vanpool, 4 percent using public transportation, 1 percent walking/bicycling and 4 percent reporting that they work from home.

A commuting survey of 253 respondents residing in The Mastlight, a multifamily residential community located at 10-50 Patriot Parkway in Weymouth at Union Point that is within an approximate 8-minute walking distance of the South Weymouth Commuter Rail Station, indicates that approximately 18.6 percent of residents use public transportation (MBTA Commuter Rail), with approximately 4 percent working from home and 1 percent participating in a car/vanpool.

In order to account for the use of alternative modes of transportation to single-occupancy vehicles, the base ITE trip-generation calculations were first converted to person trips using a vehicle occupancy ratio of 1.04 persons per vehicle, which was obtained from the 2013-2017 ACS, and were then disseminated to the modes of transportation that are accessible to the residents of the Project: public transportation (transit), pedestrian/bicycle and automobile.

[6] *Trip Generation*, 10th Edition; Institute of Transportation Engineers; Washington, DC; 2017.

In order to provide conservative (high) traffic volume projections from which to assess the potential impact of the Project on the transportation infrastructure, it was assumed that 90 percent of the trips generated by the Project would consist of automobile trips, with 10 percent of trips assumed to be made using public transportation or other alternative to SOV travel, including working from home. The public transportation rate is higher than the 4 percent utilization documented in the ACS and reflects the proximity of the Project site to the North Wilmington Commuter Rail station. The public transportation utilization data from The Mastlight is direct evidence of the increased inducement of transit usage that can occur when multifamily residential developments are located proximate to transit stations.

Table 2 summarizes the anticipated trip characteristics of the Project using the aforementioned methodology.

Table 2
TRIP GENERATION SUMMARY

Time Period/Direction	Proposed Residential Community (ITE Vehicle Trips)[a]	Person Trips			
		Person Trips[b]	Automobile Trips (90%)	Transit Trips (10%)	Vehicle Trips[c]
Average Weekday Daily					
Entering	294	293	255	28	245
Exiting	294	283	255	28	245
Total	588	566	510	56	490
Weekday Morning Peak Hour					
Entering	10	10	9	1	9
Exiting	27	28	25	3	24
Total	37	38	34	4	33
Weekday Evening Peak Hour					
Entering	29	30	27	3	26
Exiting	19	20	18	2	17
Total	48	50	45	5	43

[a]Based on ITE LUC 221, *Multifamily Housing (Mid-Rise)*; 108 dwelling units.
[b]ITE vehicle trips x vehicle occupancy ratio (VOR) of 1.04.
[c]Automobile person trips divided by 1.04.

As can be seen in Table 2, after accounting for the use of alternative modes of transportation to SOVs, the Project is expected to generate approximately 490 vehicle trips on an average weekday (two-way, 24-hour volume, or 245 vehicles entering and 245 exiting), with 33 vehicle trips (9 vehicles entering and 24 exiting) expected during the weekday morning peak-hour and 43 vehicle trips (26 vehicles entering and 17 exiting) expected during the weekday evening peak-hour.

When dispersed to Middlesex Avenue and over the respective peak-hour, and with consideration of trips generated by the existing active uses that occupy the Project site and that will be removed, the traffic volume increases that are expected from the Project are anticipated to be less than one (1) additional vehicle every 3-4 minutes during the peak hours outside of the immediate proximity of the Project site,

an increase that would not result in an appreciable increase in motorist delays or vehicle queuing over existing conditions. In fact, the Project represents an increase in traffic of less than 5 percent along Middlesex Avenue, which is well within the normal fluctuation in traffic volumes that occurs between Monday and Friday over the course of a typical week.

SIGHT DISTANCE ASSESSMENT

Sight distance measurements were performed at the Project site driveway intersections with Middlesex Avenue and Jefferson Road, and for the Middlesex Avenue/Jefferson Road intersection, in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)[7] requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 3 presents the measured sight lines to and from the subject intersections.

Note that the driveway to "Building B" is located at the end of Jefferson Road, essentially forming an extension thereof, and, as such, clear line of sight is provided along the roadway to/from the driveway. As such, sight distance measurements for the access to "Building B" are not provided in Table 3.

[7] *A Policy on Geometric Design of Highway and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

Table 3
SIGHT DISTANCE MEASUREMENTS[a]

Intersection/Sight Distance Measurement	Feet		
	Recommended Minimum (SSD)	Desirable (ISD)[b]	Measured
Middlesex Avenue at the "Building A" Driveway			
Stopping Sight Distance:			
Middlesex Avenue approaching from the northeast	305	--	325
Middlesex Avenue approaching from the southwest	305	--	450
Intersection Sight Distance:			
Looking to the northeast from the "Building A" Driveway	305	385	305
Looking to the southwest from the "Building A" Driveway	305	445	450
Jefferson Road at the "Building A" North Driveway			
Stopping Sight Distance:			
Jefferson Road approaching from the north	155	--	250
Jefferson Road approaching from the south	155	--	350+[c]
Intersection Sight Distance:			
Looking to the north from the "Building A" Driveway	155	280	350+[d]
Looking to the south from the "Building A" Driveway	155	240	350+[c,d]
Jefferson Road at the "Building A" South Driveway			
Stopping Sight Distance:			
Jefferson Road approaching from the north	80	--	500+
Jefferson Road approaching from the south	80	--	60+[c]
Intersection Sight Distance:			
Looking to the north from the "Building A" Driveway	80	170	500+
Looking to the south from the "Building A" Driveway	80	145	60+[c]
Middlesex Avenue at Jefferson Road			
Stopping Sight Distance:			
Middlesex Avenue approaching from the northeast	305	--	500+
Middlesex Avenue approaching from the southwest	305	--	305
Intersection Sight Distance:			
Looking to the northeast from Jefferson Road	305	385	500+
Looking to the southwest from Jefferson Road	305	445	375

[a]Recommended minimum values obtained from: *A Policy on Geometric Design of Highways and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on an approach speed of 40 mph along Middlesex Avenue and a 25 mph approach speed along Jefferson Road approaching the north driveway to "Building A" and a 15 mph speed approaching the south driveway.

[b]Value shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

[c]Clear line of sight is provided to/from Middlesex Avenue.

[d]With selective trimming/removal of trees and vegetation located within the sight triangle areas of the Project site driveway.

As can be seen in Table 3, lines of sight at the Project site driveway intersections and at the Middlesex Avenue/Jefferson Road intersection meet, exceed or could be made to meet or exceed the recommended minimum distances for safe operation based on the appropriate approach speeds. That being said, it is recommended that the south driveway to "Building A" be configured as a one-way, entrance only driveway given the proximity of the driveway to Middlesex Avenue (approximately 40 feet).

SUMMARY

VAI has conducted a TIA in order to determine the potential impacts on the transportation infrastructure associated with the proposed construction of a multifamily residential development that is to be located off Middlesex Avenue (Route 62) and Jefferson Road in Wilmington, Massachusetts. This assessment has defined the existing conditions context of the Project in relation to the transportation infrastructure and has evaluated the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE[8] and after applying appropriate adjustments to account for resident use of alternative modes of transportation, including commuter rail services available from North Wilmington Station which is immediately adjacent to the Project site, the Project is expected to generate approximately 490 vehicle trips on an average weekday (two-way, 24-hour volume), with 33 vehicle trips expected during the weekday morning peak-hour and 43 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with traffic volume increases outside of the immediate proximity of the Project site predicted to be less than one (1) added vehicle every 3-4 minutes during the peak hours. In fact, the Project represents an increase in traffic of less than 5 percent along Middlesex Avenue, which is well within the normal fluctuation in traffic volumes that occurs between Monday and Friday over the course of a typical week;

3. No apparent safety deficiencies were noted with respect to the motor vehicle crash history along Middlesex Avenue in the vicinity of the Project site; and

4. Lines of sight at the Project site driveway intersections with Middlesex Avenue and Jefferson Road and at the Middlesex Avenue/Jefferson Road intersection were found to meet, exceed or could be made to meet or exceed the recommended minimum distances for safe operation based on the appropriate approach speeds.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

[8]Ibid 1.

Project Access

Access to the Project site will be provided as follows: *Building A* – access to "Building A" will be provided by way of the existing driveway that serves 382 Middlesex Avenue and intersects the north side of Middlesex Avenue approximately 185 feet east of Jefferson Road and two (2) driveways that will intersect the east side of Jefferson Road approximately 40 feet and 325 feet north of Middlesex Avenue, respectively; *Building B* – access to "Building B" will be provided by way of a driveway that will intersect the north end of Jefferson Road. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the Site Plans:

- The Project site driveways should be a minimum of 20 feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle.

- Given the proximity of the south driveway to "Building A" to Middlesex Avenue (within 40 feet), this driveway should be configured to function as a one-way entrance drive with the requisite signs ("One Way" and "Do Not Enter") and pavement markings installed at Jefferson Road to regulate use of the driveway.

- Where perpendicular parking is proposed, the drive aisle behind the parking should be a minimum of 23-feet in order to facilitate parking maneuvers.

- Vehicles exiting the Project site should be placed under STOP-sign control with a marked STOP-line provided.

- "No Parking" signs should be installed along both sides of Jefferson Road.

- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).[9]

- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas of the Project site roadway should be designed and maintained so as not to restrict lines of sight.

- Existing trees and vegetation located along the east side of Jefferson Road within the sight triangle areas of the "Building A" north driveway should be selectively trimmed or removed as may be necessary to afford the recommended sight distance from the driveway.

- Surface parking for "Building A" should not be located within the sight triangle area of the Middlesex Avenue/Jefferson Road intersection.

- Snow windrows within sight triangle areas of the Project site roadway should be promptly removed where such accumulations would impede sight lines.

- A sidewalk should be installed along at least one side of Jefferson Road between Middlesex Avenue and "Building B" and include Americans with Disabilities Act (ADA) compliant wheelchair ramps where pedestrian crossings will be provided.

- A school bus waiting area should be provided at an appropriate location defined in consultation with Wilmington School Department.

[9] *Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

Transportation Demand Management

In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures should be implemented as a part of the townhouse component of the Project:

- Information regarding public transportation services, maps, schedules and fare information should be posted in a central location and/or otherwise made available to residents;
- A "welcome packet" should be provided to residents detailing available public transportation services, bicycle and walking alternatives, and commuter options available;
- Work-at-home workspaces should be provided to support telecommuting by residents of the Project;
- Pedestrian accommodations should be provided and consist of sidewalks and ADA compliant wheelchair ramps at all pedestrian crossings internal to the Project site that will link building entrances to the sidewalk infrastructure along Jefferson Road and Middlesex Avenue;
- Bicycle parking should be provided consisting of both exterior bicycle racks located proximate to building entrances and weather protected bicycle parking;
- A centralized mail kiosk should be provided to limit off-site trips; and
- Transit screens/displays should be provided in the building lobby to display real-time transportation information (similar to https://transitscreen.com/).

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing and improved transportation system.

cc: File

ATTACHMENTS

AUTOMATIC TRAFFIC RECORDER COUNTS
PUBLIC TRANSPORTATION SCHEDULES
MASSDOT HIGH CRASH LOCATION MAPPING
TRIP-GENERATION CALCULATIONS

AUTOMATIC TRAFFIC RECORDER COUNTS

Accurate Counts
978-664-2565

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074VOL1

Start Time	12/13/201 Thu	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		6	137			4	147				
12:15		8	140			3	105				
12:30		12	134			4	93				
12:45		4	123	30	534	4	107	15	452	45	986
01:00		4	135			2	91				
01:15		0	106			2	112				
01:30		6	104			4	99				
01:45		3	115	13	460	1	92	9	394	22	854
02:00		4	131			4	123				
02:15		3	119			5	94				
02:30		3	149			1	124				
02:45		0	99	10	498	2	112	12	453	22	951
03:00		3	138			5	111				
03:15		5	136			2	104				
03:30		2	148			3	111				
03:45		2	128	12	550	3	108	13	434	25	984
04:00		9	137			6	141				
04:15		9	142			8	91				
04:30		15	153			11	118				
04:45		8	183	41	615	20	103	45	453	86	1068
05:00		14	155			25	130				
05:15		15	154			25	105				
05:30		28	142			46	138				
05:45		43	166	100	617	54	133	150	506	250	1123
06:00		53	154			96	124				
06:15		43	135			117	90				
06:30		59	111			97	104				
06:45		79	96	234	496	169	94	479	412	713	908
07:00		104	97			132	65				
07:15		127	69			161	68				
07:30		138	72			123	65				
07:45		123	65	492	303	140	56	556	254	1048	557
08:00		157	93			134	52				
08:15		104	78			155	42				
08:30		91	65			157	41				
08:45		82	46	434	282	135	41	581	176	1015	458
09:00		103	52			97	29				
09:15		122	38			115	15				
09:30		121	43			86	30				
09:45		88	32	434	165	110	26	408	100	842	265
10:00		94	24			97	16				
10:15		110	13			95	20				
10:30		95	15			97	13				
10:45		90	14	389	66	107	16	396	65	785	131
11:00		108	18			93	17				
11:15		100	8			115	12				
11:30		130	12			101	12				
11:45		101	4	439	42	128	8	437	49	876	91
Total		2628	4628			3101	3748			5729	8376
Percent		36.2%	63.8%			45.3%	54.7%			40.6%	59.4%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA
8074VOL1

Start Time	12/14/201 Fri	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		8	132			7	146				
12:15		6	132			2	120				
12:30		3	135			2	126				
12:45		3	120	20	519	1	128	12	520	32	1039
01:00		8	123			3	123				
01:15		5	128			2	106				
01:30		2	128			4	121				
01:45		5	117	20	496	5	132	14	482	34	978
02:00		3	132			0	110				
02:15		1	136			8	91				
02:30		6	154			1	139				
02:45		1	130	11	552	1	118	10	458	21	1010
03:00		5	130			3	93				
03:15		3	162			1	112				
03:30		2	165			2	134				
03:45		3	143	13	600	4	131	10	470	23	1070
04:00		2	159			6	115				
04:15		8	158			10	113				
04:30		14	169			13	111				
04:45		11	148	35	634	16	133	45	472	80	1106
05:00		10	169			21	107				
05:15		13	169			35	128				
05:30		32	142			41	102				
05:45		42	131	97	611	46	95	143	432	240	1043
06:00		59	122			61	110				
06:15		48	136			91	91				
06:30		55	127			107	91				
06:45		76	123	238	508	126	79	385	371	623	879
07:00		92	99			110	80				
07:15		83	91			134	72				
07:30		120	76			109	59				
07:45		122	66	417	332	102	56	455	267	872	599
08:00		138	47			101	56				
08:15		109	69			132	42				
08:30		100	60			131	34				
08:45		116	56	463	232	174	52	538	184	1001	416
09:00		136	63			115	44				
09:15		120	50			117	33				
09:30		119	35			95	40				
09:45		105	24	480	172	122	44	449	161	929	333
10:00		103	49			132	23				
10:15		106	36			135	27				
10:30		115	22			117	22				
10:45		119	18	443	125	121	26	505	98	948	223
11:00		119	23			88	24				
11:15		127	18			94	20				
11:30		128	17			113	19				
11:45		112	18	486	76	115	22	410	85	896	161
Total		2723	4857			2976	4000			5699	8857
Percent		35.9%	64.1%			42.7%	57.3%			39.2%	60.8%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074VOL1

Start	12/15/201	EB		Hour Totals		WB		Hour Totals		Combined Totals	
Time	Sat	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		20	115			18	145				
12:15		7	132			7	107				
12:30		11	156			14	124				
12:45		9	89	47	492	11	116	50	492	97	984
01:00		8	149			7	129				
01:15		5	112			4	118				
01:30		4	113			3	112				
01:45		5	108	22	482	7	95	21	454	43	936
02:00		3	133			4	102				
02:15		9	121			2	94				
02:30		3	124			2	94				
02:45		1	103	16	481	2	96	10	386	26	867
03:00		6	103			1	114				
03:15		5	115			2	108				
03:30		3	113			1	124				
03:45		2	98	16	429	3	103	7	449	23	878
04:00		8	113			4	98				
04:15		0	98			5	112				
04:30		6	112			3	110				
04:45		5	107	19	430	3	92	15	412	34	842
05:00		8	123			12	98				
05:15		7	119			10	84				
05:30		17	103			16	79				
05:45		16	78	48	423	18	84	56	345	104	768
06:00		15	93			21	81				
06:15		26	106			24	95				
06:30		21	116			30	75				
06:45		29	89	91	404	36	87	111	338	202	742
07:00		27	94			34	75				
07:15		42	62			39	65				
07:30		54	51			58	67				
07:45		51	71	174	278	63	68	194	275	368	553
08:00		60	56			56	59				
08:15		71	53			77	64				
08:30		69	64			77	42				
08:45		90	56	290	229	113	52	323	217	613	446
09:00		86	40			103	41				
09:15		94	63			90	38				
09:30		95	54			91	46				
09:45		101	41	376	198	130	41	414	166	790	364
10:00		108	42			141	36				
10:15		136	45			89	31				
10:30		121	30			134	43				
10:45		102	32	467	149	117	31	481	141	948	290
11:00		136	26			128	22				
11:15		125	25			121	24				
11:30		137	27			111	17				
11:45		124	20	522	98	108	19	468	82	990	180
Total		2088	4093			2150	3757			4238	7850
Percent		33.8%	66.2%			36.4%	63.6%			35.1%	64.9%
Grand Total		7439	13578			8227	11505			15666	25083
Percent		35.4%	64.6%			41.7%	58.3%			38.4%	61.6%

ADT ADT 13,583 AADT 13,583

Accurate Counts
978-664-2565

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074VOL1

Start	12/10/2018		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	*	*	*	*	30	15	20	12	47	50	*	*	32	26
01:00	*	*	*	*	*	*	13	9	20	14	22	21	*	*	18	15
02:00	*	*	*	*	*	*	10	12	11	10	16	10	*	*	12	11
03:00	*	*	*	*	*	*	12	13	13	10	16	7	*	*	14	10
04:00	*	*	*	*	*	*	41	45	35	45	19	15	*	*	32	35
05:00	*	*	*	*	*	*	100	150	97	143	48	56	*	*	82	116
06:00	*	*	*	*	*	*	234	479	238	385	91	111	*	*	188	325
07:00	*	*	*	*	*	*	**492**	556	417	455	174	194	*	*	361	402
08:00	*	*	*	*	*	*	434	**581**	463	**538**	290	323	*	*	396	**481**
09:00	*	*	*	*	*	*	434	408	480	449	376	414	*	*	430	424
10:00	*	*	*	*	*	*	389	396	443	505	467	**481**	*	*	433	461
11:00	*	*	*	*	*	*	439	437	**486**	410	**522**	468	*	*	**482**	438
12:00 PM	*	*	*	*	*	*	534	452	519	**520**	**492**	**492**	*	*	515	**488**
01:00	*	*	*	*	*	*	460	394	496	482	482	454	*	*	479	443
02:00	*	*	*	*	*	*	498	453	552	458	481	386	*	*	510	432
03:00	*	*	*	*	*	*	550	434	600	470	429	449	*	*	526	451
04:00	*	*	*	*	*	*	615	453	**634**	472	430	412	*	*	**560**	446
05:00	*	*	*	*	*	*	**617**	**506**	611	432	423	345	*	*	550	428
06:00	*	*	*	*	*	*	496	412	508	371	404	338	*	*	469	374
07:00	*	*	*	*	*	*	303	254	332	267	278	275	*	*	304	265
08:00	*	*	*	*	*	*	282	176	232	184	229	217	*	*	248	192
09:00	*	*	*	*	*	*	165	100	172	161	198	166	*	*	178	142
10:00	*	*	*	*	*	*	66	65	125	98	149	141	*	*	113	101
11:00	*	*	*	*	*	*	42	49	76	85	98	82	*	*	72	72
Lane	0	0	0	0	0	0	7256	6849	7580	6976	6181	5907	0	0	7004	6578
Day	0		0		0		14105		14556		12088		0		13582	
AM Peak	-	-	-	-	-	-	07:00	08:00	11:00	08:00	11:00	10:00	-	-	11:00	08:00
Vol.	-	-	-	-	-	-	492	581	486	538	522	481	-	-	482	481
PM Peak	-	-	-	-	-	-	17:00	17:00	16:00	12:00	12:00	12:00	-	-	16:00	12:00
Vol.	-	-	-	-	-	-	617	506	634	520	492	492	-	-	560	488

Comb. Total	0	0	0	14105	14556	12088	0	13582

ADT ADT 13,583 AADT 13,583

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

EB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/13/18	0	0	0	4	11	11	3	1	0	0	0	0	0	0	30
01:00	0	0	0	3	5	3	1	1	0	0	0	0	0	0	13
02:00	0	0	1	5	2	2	0	0	0	0	0	0	0	0	10
03:00	0	0	0	1	6	5	0	0	0	0	0	0	0	0	12
04:00	2	2	1	9	17	7	3	0	0	0	0	0	0	0	41
05:00	3	0	0	12	52	26	7	0	0	0	0	0	0	0	100
06:00	11	1	10	49	109	49	5	0	0	0	0	0	0	0	234
07:00	36	3	16	98	239	90	10	0	0	0	0	0	0	0	492
08:00	26	7	16	72	224	76	10	2	1	0	0	0	0	0	434
09:00	34	5	22	126	168	77	2	0	0	0	0	0	0	0	434
10:00	21	4	24	101	171	66	2	0	0	0	0	0	0	0	389
11:00	24	4	21	153	179	53	5	0	0	0	0	0	0	0	439
12 PM	37	1	25	157	233	68	12	0	1	0	0	0	0	0	534
13:00	21	5	18	140	208	60	6	2	0	0	0	0	0	0	460
14:00	47	4	52	158	189	44	3	1	0	0	0	0	0	0	498
15:00	45	3	27	181	215	72	7	0	0	0	0	0	0	0	550
16:00	39	9	39	195	246	85	2	0	0	0	0	0	0	0	615
17:00	46	7	49	197	252	64	1	0	1	0	0	0	0	0	617
18:00	19	2	15	153	243	60	3	1	0	0	0	0	0	0	496
19:00	20	0	16	76	135	52	4	0	0	0	0	0	0	0	303
20:00	7	1	9	71	131	58	4	1	0	0	0	0	0	0	282
21:00	6	1	5	34	76	40	3	0	0	0	0	0	0	0	165
22:00	0	2	2	13	28	19	2	0	0	0	0	0	0	0	66
23:00	0	0	0	3	19	16	4	0	0	0	0	0	0	0	42
Total	444	61	368	2011	3158	1103	99	9	3	0	0	0	0	0	7256

Daily

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	35 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	5169
Percent in Pace :	71.2%
Number of Vehicles > 30 MPH :	4372
Percent of Vehicles > 30 MPH :	60.3%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

EB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/14/18	0	0	1	2	7	8	2	0	0	0	0	0	0	0	20
01:00	0	0	0	5	6	8	1	0	0	0	0	0	0	0	20
02:00	0	0	0	3	6	1	1	0	0	0	0	0	0	0	11
03:00	0	0	0	5	3	5	0	0	0	0	0	0	0	0	13
04:00	3	0	1	5	9	15	2	0	0	0	0	0	0	0	35
05:00	2	0	0	14	54	24	3	0	0	0	0	0	0	0	97
06:00	19	1	2	55	111	40	10	0	0	0	0	0	0	0	238
07:00	32	1	8	76	197	90	11	2	0	0	0	0	0	0	417
08:00	34	4	27	115	202	77	4	0	0	0	0	0	0	0	463
09:00	29	3	14	122	241	69	2	0	0	0	0	0	0	0	480
10:00	23	2	20	138	193	61	6	0	0	0	0	0	0	0	443
11:00	36	7	27	161	192	57	6	0	0	0	0	0	0	0	486
12 PM	29	5	10	170	230	72	3	0	0	0	0	0	0	0	519
13:00	30	2	18	108	245	85	7	1	0	0	0	0	0	0	496
14:00	45	6	32	181	216	68	4	0	0	0	0	0	0	0	552
15:00	64	6	43	175	234	74	4	0	0	0	0	0	0	0	600
16:00	32	13	48	197	254	83	6	1	0	0	0	0	0	0	634
17:00	45	13	35	188	259	65	5	0	0	0	0	0	0	1	611
18:00	15	3	44	144	239	61	1	1	0	0	0	0	0	0	508
19:00	9	4	12	91	163	44	8	1	0	0	0	0	0	0	332
20:00	5	0	5	50	121	44	6	1	0	0	0	0	0	0	232
21:00	1	0	6	30	93	37	5	0	0	0	0	0	0	0	172
22:00	0	0	4	25	59	31	6	0	0	0	0	0	0	0	125
23:00	1	0	3	15	32	23	2	0	0	0	0	0	0	0	76
Total	454	70	360	2075	3366	1142	105	7	0	0	0	0	0	1	7580

Daily

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	35 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	5441
Percent in Pace :	71.8%
Number of Vehicles > 30 MPH :	4621
Percent of Vehicles > 30 MPH :	61.0%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

EB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/15/18	1	0	0	5	26	12	3	0	0	0	0	0	0	0	47
01:00	0	0	0	2	9	10	1	0	0	0	0	0	0	0	22
02:00	0	0	1	1	10	4	0	0	0	0	0	0	0	0	16
03:00	0	0	0	8	4	2	2	0	0	0	0	0	0	0	16
04:00	0	0	0	4	7	5	3	0	0	0	0	0	0	0	19
05:00	1	0	0	7	17	20	3	0	0	0	0	0	0	0	48
06:00	3	0	5	18	32	30	3	0	0	0	0	0	0	0	91
07:00	5	2	9	27	81	43	7	0	0	0	0	0	0	0	174
08:00	14	2	14	70	132	51	7	0	0	0	0	0	0	0	290
09:00	18	6	19	81	160	85	7	0	0	0	0	0	0	0	376
10:00	33	5	29	137	183	71	9	0	0	0	0	0	0	0	467
11:00	26	5	26	130	247	80	6	1	0	0	0	0	0	1	522
12 PM	40	3	14	136	238	57	4	0	0	0	0	0	0	0	492
13:00	34	1	19	146	210	69	3	0	0	0	0	0	0	0	482
14:00	25	1	7	127	217	101	3	0	0	0	0	0	0	0	481
15:00	26	1	14	145	178	60	5	0	0	0	0	0	0	0	429
16:00	25	0	17	123	214	47	4	0	0	0	0	0	0	0	430
17:00	8	0	15	131	211	50	8	0	0	0	0	0	0	0	423
18:00	19	2	14	114	203	49	3	0	0	0	0	0	0	0	404
19:00	12	2	11	79	130	42	2	0	0	0	0	0	0	0	278
20:00	1	0	14	41	117	54	2	0	0	0	0	0	0	0	229
21:00	5	0	1	39	97	51	5	0	0	0	0	0	0	0	198
22:00	1	0	3	25	80	33	5	2	0	0	0	0	0	0	149
23:00	2	0	1	12	50	32	1	0	0	0	0	0	0	0	98
Total	299	30	233	1608	2853	1058	96	3	0	0	0	0	0	1	6181

Daily

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	4461
Percent in Pace :	72.2%
Number of Vehicles > 30 MPH :	4011
Percent of Vehicles > 30 MPH :	64.9%

Grand Total	1197	161	961	5694	9377	3303	300	19	3	0	0	0	0	2	21017

Overall

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	35 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	15071
Percent in Pace :	71.7%
Number of Vehicles > 30 MPH :	13004
Percent of Vehicles > 30 MPH :	61.9%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/13/18	0	0	0	1	6	1	6	0	1	0	0	0	0	0	15
01:00	0	0	2	1	2	4	0	0	0	0	0	0	0	0	9
02:00	0	0	2	3	1	4	1	1	0	0	0	0	0	0	12
03:00	0	0	0	2	6	3	2	0	0	0	0	0	0	0	13
04:00	0	0	1	6	17	16	5	0	0	0	0	0	0	0	45
05:00	6	1	2	27	65	41	8	0	0	0	0	0	0	0	150
06:00	42	23	29	120	182	73	6	4	0	0	0	0	0	0	479
07:00	39	13	28	135	205	119	16	1	0	0	0	0	0	0	556
08:00	46	20	45	139	219	93	18	1	0	0	0	0	0	0	581
09:00	62	18	38	78	135	66	10	1	0	0	0	0	0	0	408
10:00	20	6	35	117	134	74	9	1	0	0	0	0	0	0	396
11:00	43	18	34	119	144	65	14	0	0	0	0	0	0	0	437
12 PM	63	15	32	93	144	97	8	0	0	0	0	0	0	0	452
13:00	27	7	27	109	150	63	11	0	0	0	0	0	0	0	394
14:00	76	21	26	119	145	59	6	1	0	0	0	0	0	0	453
15:00	68	18	36	85	136	79	11	1	0	0	0	0	0	0	434
16:00	50	34	47	98	127	77	19	1	0	0	0	0	0	0	453
17:00	65	8	51	151	167	60	4	0	0	0	0	0	0	0	506
18:00	31	2	18	96	162	90	12	1	0	0	0	0	0	0	412
19:00	16	1	11	53	105	55	13	0	0	0	0	0	0	0	254
20:00	5	2	1	22	80	55	10	0	1	0	0	0	0	0	176
21:00	1	0	1	21	43	30	4	0	0	0	0	0	0	0	100
22:00	1	0	1	13	19	25	5	1	0	0	0	0	0	0	65
23:00	0	1	2	6	17	14	7	2	0	0	0	0	0	0	49
Total	661	208	469	1614	2411	1263	205	16	2	0	0	0	0	0	6849

Daily

15th Percentile :	21 MPH
50th Percentile :	30 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	4025
Percent in Pace :	58.8%
Number of Vehicles > 30 MPH :	3897
Percent of Vehicles > 30 MPH :	56.9%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/14/18	0	0	0	0	6	5	1	0	0	0	0	0	0	0	12
01:00	0	0	0	3	5	5	1	0	0	0	0	0	0	0	14
02:00	0	0	0	2	5	3	0	0	0	0	0	0	0	0	10
03:00	0	0	1	1	3	3	2	0	0	0	0	0	0	0	10
04:00	1	0	0	7	25	7	5	0	0	0	0	0	0	0	45
05:00	2	1	6	23	53	48	7	2	0	1	0	0	0	0	143
06:00	21	8	15	91	159	77	14	0	0	0	0	0	0	0	385
07:00	34	6	24	118	162	95	16	0	0	0	0	0	0	0	455
08:00	48	16	36	114	210	94	18	1	1	0	0	0	0	0	538
09:00	39	14	43	93	153	81	24	2	0	0	0	0	0	0	449
10:00	37	13	35	139	154	100	25	2	0	0	0	0	0	0	505
11:00	40	20	21	97	127	91	12	2	0	0	0	0	0	0	410
12 PM	63	34	35	87	183	103	14	1	0	0	0	0	0	0	520
13:00	36	5	33	95	182	107	22	2	0	0	0	0	0	0	482
14:00	90	30	50	98	125	55	10	0	0	0	0	0	0	0	458
15:00	74	20	54	108	143	58	11	2	0	0	0	0	0	0	470
16:00	55	16	37	97	180	78	7	2	0	0	0	0	0	0	472
17:00	60	17	35	80	168	62	9	1	0	0	0	0	0	0	432
18:00	20	8	15	106	145	73	4	0	0	0	0	0	0	0	371
19:00	12	2	14	64	116	52	7	0	0	0	0	0	0	0	267
20:00	7	0	2	24	91	51	8	1	0	0	0	0	0	0	184
21:00	1	5	3	30	70	41	10	1	0	0	0	0	0	0	161
22:00	1	0	3	11	47	30	5	1	0	0	0	0	0	0	98
23:00	1	0	0	18	33	26	6	1	0	0	0	0	0	0	85
Total	642	215	462	1506	2545	1345	238	21	1	1	0	0	0	0	6976

Daily

15th Percentile :	22 MPH
50th Percentile :	31 MPH
85th Percentile :	37 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	4051
Percent in Pace :	58.1%
Number of Vehicles > 30 MPH :	4151
Percent of Vehicles > 30 MPH :	59.5%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/15/18	1	0	0	5	18	18	8	0	0	0	0	0	0	0	50
01:00	0	0	0	4	11	6	0	0	0	0	0	0	0	0	21
02:00	0	0	1	2	2	4	0	0	0	1	0	0	0	0	10
03:00	0	0	1	2	2	2	0	0	0	0	0	0	0	0	7
04:00	0	0	0	3	5	3	3	1	0	0	0	0	0	0	15
05:00	0	0	0	9	18	22	7	0	0	0	0	0	0	0	56
06:00	2	1	3	22	45	31	6	1	0	0	0	0	0	0	111
07:00	7	1	8	38	88	38	14	0	0	0	0	0	0	0	194
08:00	16	3	25	79	116	70	13	1	0	0	0	0	0	0	323
09:00	19	14	38	97	139	87	17	3	0	0	0	0	0	0	414
10:00	46	11	25	135	151	96	16	1	0	0	0	0	0	0	481
11:00	38	6	29	98	169	106	19	2	1	0	0	0	0	0	468
12 PM	74	12	32	89	168	95	20	2	0	0	0	0	0	0	492
13:00	45	15	28	81	166	102	15	2	0	0	0	0	0	0	454
14:00	21	4	21	92	152	80	13	3	0	0	0	0	0	0	386
15:00	26	5	21	121	166	94	14	1	1	0	0	0	0	0	449
16:00	36	4	26	108	149	71	18	0	0	0	0	0	0	0	412
17:00	15	1	20	63	158	77	10	1	0	0	0	0	0	0	345
18:00	21	8	9	99	114	75	9	3	0	0	0	0	0	0	338
19:00	18	2	8	57	128	53	9	0	0	0	0	0	0	0	275
20:00	4	5	5	34	95	59	13	1	0	1	0	0	0	0	217
21:00	5	1	7	25	72	40	14	2	0	0	0	0	0	0	166
22:00	3	1	1	30	52	45	6	2	1	0	0	0	0	0	141
23:00	2	0	0	7	23	42	7	1	0	0	0	0	0	0	82
Total	399	94	308	1300	2207	1316	251	27	3	2	0	0	0	0	5907

Daily

15th Percentile : 25 MPH
50th Percentile : 31 MPH
85th Percentile : 37 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 31 MPH
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 3523
Percent in Pace : 59.6%
Number of Vehicles > 30 MPH : 3806
Percent of Vehicles > 30 MPH : 64.4%

Grand Total	1702	517	1239	4420	7163	3924	694	64	6	3	0	0	0	0	19732

Overall

15th Percentile : 22 MPH
50th Percentile : 31 MPH
85th Percentile : 37 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 30 MPH
10 MPH Pace Speed : 26-35 MPH
Number in Pace : 11583
Percent in Pace : 58.7%
Number of Vehicles > 30 MPH : 11854
Percent of Vehicles > 30 MPH : 60.1%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

EB, WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/13/18	0	0	0	5	17	12	9	1	1	0	0	0	0	0	45
01:00	0	0	2	4	7	7	1	1	0	0	0	0	0	0	22
02:00	0	0	3	8	3	6	1	1	0	0	0	0	0	0	22
03:00	0	0	0	3	12	8	2	0	0	0	0	0	0	0	25
04:00	2	2	2	15	34	23	8	0	0	0	0	0	0	0	86
05:00	9	1	2	39	117	67	15	0	0	0	0	0	0	0	250
06:00	53	24	39	169	291	122	11	4	0	0	0	0	0	0	713
07:00	75	16	44	233	444	209	26	1	0	0	0	0	0	0	1048
08:00	72	27	61	211	443	169	28	3	1	0	0	0	0	0	1015
09:00	96	23	60	204	303	143	12	1	0	0	0	0	0	0	842
10:00	41	10	59	218	305	140	11	1	0	0	0	0	0	0	785
11:00	67	22	55	272	323	118	19	0	0	0	0	0	0	0	876
12 PM	100	16	57	250	377	165	20	0	1	0	0	0	0	0	986
13:00	48	12	45	249	358	123	17	2	0	0	0	0	0	0	854
14:00	123	25	78	277	334	103	9	2	0	0	0	0	0	0	951
15:00	113	21	63	266	351	151	18	1	0	0	0	0	0	0	984
16:00	89	43	86	293	373	162	21	1	0	0	0	0	0	0	1068
17:00	111	15	100	348	419	124	5	0	1	0	0	0	0	0	1123
18:00	50	4	33	249	405	150	15	2	0	0	0	0	0	0	908
19:00	36	1	27	129	240	107	17	0	0	0	0	0	0	0	557
20:00	12	3	10	93	211	113	14	1	1	0	0	0	0	0	458
21:00	7	1	6	55	119	70	7	0	0	0	0	0	0	0	265
22:00	1	2	3	26	47	44	7	1	0	0	0	0	0	0	131
23:00	0	1	2	9	36	30	11	2	0	0	0	0	0	0	91
Total	1105	269	837	3625	5569	2366	304	25	5	0	0	0	0	0	14105

Daily

15th Percentile :	24 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	9194
Percent in Pace :	65.2%
Number of Vehicles > 30 MPH :	8269
Percent of Vehicles > 30 MPH :	58.6%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

EB, WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/14/18	0	0	1	2	13	13	3	0	0	0	0	0	0	0	32
01:00	0	0	0	8	11	13	2	0	0	0	0	0	0	0	34
02:00	0	0	0	5	11	4	1	0	0	0	0	0	0	0	21
03:00	0	0	1	6	6	8	2	0	0	0	0	0	0	0	23
04:00	4	0	1	12	34	22	7	0	0	0	0	0	0	0	80
05:00	4	1	6	37	107	72	10	2	0	1	0	0	0	0	240
06:00	40	9	17	146	270	117	24	0	0	0	0	0	0	0	623
07:00	66	7	32	194	359	185	27	2	0	0	0	0	0	0	872
08:00	82	20	63	229	412	171	22	1	1	0	0	0	0	0	1001
09:00	68	17	57	215	394	150	26	2	0	0	0	0	0	0	929
10:00	60	15	55	277	347	161	31	2	0	0	0	0	0	0	948
11:00	76	27	48	258	319	148	18	2	0	0	0	0	0	0	896
12 PM	92	39	45	257	413	175	17	1	0	0	0	0	0	0	1039
13:00	66	7	51	203	427	192	29	3	0	0	0	0	0	0	978
14:00	135	36	82	279	341	123	14	0	0	0	0	0	0	0	1010
15:00	138	26	97	283	377	132	15	2	0	0	0	0	0	0	1070
16:00	87	29	85	294	434	161	13	3	0	0	0	0	0	0	1106
17:00	105	30	70	268	427	127	14	1	0	0	0	0	0	1	1043
18:00	35	11	59	250	384	134	5	1	0	0	0	0	0	0	879
19:00	21	6	26	155	279	96	15	1	0	0	0	0	0	0	599
20:00	12	0	7	74	212	95	14	2	0	0	0	0	0	0	416
21:00	2	5	9	60	163	78	15	1	0	0	0	0	0	0	333
22:00	1	0	7	36	106	61	11	1	0	0	0	0	0	0	223
23:00	2	0	3	33	65	49	8	1	0	0	0	0	0	0	161
Total	1096	285	822	3581	5911	2487	343	28	1	1	0	0	0	1	14556

Daily

15th Percentile :	24 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	9492
Percent in Pace :	65.2%
Number of Vehicles > 30 MPH :	8772
Percent of Vehicles > 30 MPH :	60.3%

Location : Middlesex Avenue (Route 62)
Location : East of Jefferson Avenue
City/State: Wilmington, MA

8074SPD1

EB, WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
12/15/18	2	0	0	10	44	30	11	0	0	0	0	0	0	0	97
01:00	0	0	0	6	20	16	1	0	0	0	0	0	0	0	43
02:00	0	0	2	3	12	8	0	0	0	1	0	0	0	0	26
03:00	0	0	1	10	6	4	2	0	0	0	0	0	0	0	23
04:00	0	0	0	7	12	8	6	1	0	0	0	0	0	0	34
05:00	1	0	0	16	35	42	10	0	0	0	0	0	0	0	104
06:00	5	1	8	40	77	61	9	1	0	0	0	0	0	0	202
07:00	12	3	17	65	169	81	21	0	0	0	0	0	0	0	368
08:00	30	5	39	149	248	121	20	1	0	0	0	0	0	0	613
09:00	37	20	57	178	299	172	24	3	0	0	0	0	0	0	790
10:00	79	16	54	272	334	167	25	1	0	0	0	0	0	0	948
11:00	64	11	55	228	416	186	25	3	1	0	0	0	0	1	990
12 PM	114	15	46	225	406	152	24	2	0	0	0	0	0	0	984
13:00	79	16	47	227	376	171	18	2	0	0	0	0	0	0	936
14:00	46	5	28	219	369	181	16	3	0	0	0	0	0	0	867
15:00	52	6	35	266	344	154	19	1	1	0	0	0	0	0	878
16:00	61	4	43	231	363	118	22	0	0	0	0	0	0	0	842
17:00	23	1	35	194	369	127	18	1	0	0	0	0	0	0	768
18:00	40	10	23	213	317	124	12	3	0	0	0	0	0	0	742
19:00	30	4	19	136	258	95	11	0	0	0	0	0	0	0	553
20:00	5	5	19	75	212	113	15	1	0	1	0	0	0	0	446
21:00	10	1	8	64	169	91	19	2	0	0	0	0	0	0	364
22:00	4	1	4	55	132	78	11	4	1	0	0	0	0	0	290
23:00	4	0	1	19	73	74	8	1	0	0	0	0	0	0	180
Total	698	124	541	2908	5060	2374	347	30	3	2	0	0	0	1	12088

Daily

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	31 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	7968
Percent in Pace :	65.9%
Number of Vehicles > 30 MPH :	7817
Percent of Vehicles > 30 MPH :	64.7%

Grand Total	2899	678	2200	10114	16540	7227	994	83	9	3	0	0	0	2	40749

Overall

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	39 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	26654
Percent in Pace :	65.4%
Number of Vehicles > 30 MPH :	24858
Percent of Vehicles > 30 MPH :	61.0%

PUBLIC TRANSPORTATION SCHEDULES

HAVERHILL LINE

Effective October 21, 2019

Monday to Friday

Inbound to Boston

ZONE	STATION	TRAIN #	AM								PM												
	Bikes Allowed		200	202	204	206	286	288	208	290	210	212	214	216	218	292	220	294	296	222	224	226	228
7	Haverhill	♿	5:05	5:40	6:10	6:38	-	-	7:35	-	9:05	10:49	12:05	2:00	3:25	-	4:47	-	-	6:25	7:45	9:10	10:50
7	Bradford	♿	5:07	5:42	6:12	6:40	-	-	7:37	-	f 9:07	f 10:52	f 12:07	f 2:02	f 3:27	-	f 4:49	-	-	f 6:28	f 7:47	f 9:12	f 10:52
6	Lawrence	♿	5:16	5:51	6:21	6:50	-	-	7:46	-	9:15	10:59	12:15	2:10	3:35	-	4:57	-	-	6:39	7:55	9:20	11:00
5	Andover	♿	5:23	5:58	6:28	6:57	-	-	7:53	-	f 9:22	f 11:06	f 12:22	f 2:17	f 3:42	-	f 5:04	-	-	f 6:46	f 8:02	f 9:27	f 11:07
4	Ballardvale	♿	5:29	6:04	6:34	7:02	-	-	7:59	-	f 9:27	f 11:11	f 12:27	f 2:22	f 3:47	-	f 5:09	-	-	f 6:51	f 8:07	f 9:32	f 11:12
3	North Wilmington		5:36	6:11	6:41	-	-	-	-	-	f 9:34	f 11:18	f 12:34	f 2:29	-	-	-	-	-	-	-	f 9:39	f 11:19
2	Reading	♿	5:43	6:18	6:48	-	7:30	8:00	-	8:30	9:41	11:25	12:41	2:36	-	4:50	-	5:37	6:55	-	8:21	9:46	11:26
2	Wakefield		5:49	6:24	6:54	-	7:36	8:06	VIA	8:36	f 9:46	f 11:30	f 12:46	f 2:41	-	f 4:55	-	f 5:42	f 7:00	-	f 8:27	f 9:51	f 11:31
2	Greenwood		5:52	6:27	6:57	-	7:39	8:09	LOWELL	8:39	f 9:49	f 11:33	f 12:49	f 2:44	-	f 4:58	-	f 5:45	f 7:03	-	f 8:30	f 9:54	f 11:34
1	Melrose Highlands	♿	5:54	6:29	6:59	-	7:41	8:11	LINE	8:41	f 9:51	f 11:35	f 12:51	f 2:46	-	f 5:00	-	f 5:47	f 7:05	-	f 8:32	f 9:56	f 11:36
1	Melrose/Cedar Park		5:56	6:31	7:01	-	7:43	8:13	-	8:43	f 9:53	f 11:37	f 12:53	f 2:48	-	f 5:01	-	f 5:48	f 7:06	-	f 8:34	f 9:58	f 11:38
1	Wyoming Hill		5:58	6:33	7:03	-	7:45	8:15	-	8:45	f 9:55	f 11:39	f 12:55	f 2:50	-	f 5:03	-	f 5:51	f 7:08	-	f 8:36	f 10:00	f 11:40
1A	Malden Center	♿	L 6:03	L 6:38	L 7:08	-	L 7:51	L 8:19	-	L 8:49	L 9:58	L 11:43	L 12:58	L 2:54	-	L 5:06	-	L 5:54	L 7:11	-	L 8:39	L 10:03	L 11:43
1A	North Station	♿	6:16	6:51	7:21	7:36	8:02	8:30	8:38	9:00	10:10	11:55	1:10	3:06	4:23	5:17	5:45	6:05	7:22	7:25	8:50	10:15	11:55

Trains in purple box indicate peak period trains.

Monday to Friday

Outbound from Boston

ZONE	STATION	TRAIN #	AM									PM									AM			
	Bikes Allowed		285	287	201	289	203	205	207	209	211	291	213	293	215	217	295	219	221	223	225	227	229
1A	North Station	♿	6:43	7:10	7:35	7:55	9:20	10:30	12:20	1:44	3:15	3:50	4:30	4:48	5:15	5:35	6:05	6:25	6:55	7:30	9:20	11:00	12:10
1A	Malden Center	♿	f 6:54	f 7:21	f 7:45	-	f 9:31	f 10:41	f 12:31	f 1:55	3:26	4:01	4:41	4:59	5:26	5:46	6:16	6:36	-	f 7:41	f 9:31	f 11:11	f 12:21
1	Wyoming Hill		f 6:57	f 7:24	f 7:48	-	f 9:34	f 10:44	f 12:34	f 1:58	3:30	4:05	4:45	5:03	-	5:50	6:20	6:40	-	f 7:44	f 9:34	f 11:14	f 12:24
1	Melrose/Cedar Park		f 6:59	f 7:26	f 7:50	-	f 9:36	f 10:46	f 12:36	f 2:00	3:32	4:07	4:47	5:05	-	5:52	6:22	6:42	-	f 7:46	f 9:36	f 11:16	f 12:26
1	Melrose Highlands	♿	f 7:02	f 7:29	f 7:53	-	f 9:39	f 10:49	f 12:39	f 2:03	3:36	4:11	4:51	5:09	-	5:56	6:26	6:46	VIA	f 7:49	f 9:39	f 11:19	f 12:29
2	Greenwood		f 7:05	f 7:32	f 7:56	-	f 9:42	f 10:52	f 12:42	f 2:06	3:39	4:14	4:54	5:12	-	5:59	6:29	6:49	LOWELL	f 7:52	f 9:42	f 11:22	f 12:32
2	Wakefield		f 7:09	f 7:36	f 8:00	-	f 9:46	f 10:56	f 12:46	f 2:10	3:43	4:18	4:58	5:16	5:36	6:03	6:33	6:53	LINE	f 7:56	f 9:46	f 11:26	f 12:36
2	Reading	♿	7:15	7:42	8:06	8:17	9:52	11:02	12:52	2:16	3:49	4:24	5:04	5:22	5:42	6:09	6:39	6:59	-	8:02	9:52	11:32	12:42
3	North Wilmington		-	-	8:12	-	f 9:58	f 11:08	f 12:58	f 2:22	3:56	-	5:11	-	5:49	6:16	-	7:06	-	f 8:08	f 9:58	f 11:38	f 12:48
4	Ballardvale	♿	-	-	8:19	-	f 10:05	f 11:16	f 1:05	f 2:30	4:03	-	5:18	-	5:56	6:23	-	7:13	7:35	f 8:15	f 10:05	f 11:45	f 12:55
5	Andover	♿	-	-	8:24	-	f 10:10	f 11:21	f 1:10	f 2:35	4:09	-	5:24	-	6:02	6:29	-	7:19	7:41	f 8:20	f 10:10	f 11:50	f 1:00
6	Lawrence	♿	-	-	8:31	-	10:17	11:28	1:17	2:42	4:16	-	5:31	-	6:09	6:36	-	7:26	7:48	8:28	10:17	11:57	1:07
7	Bradford	♿	-	-	L 8:40	-	L 10:26	L 11:38	L 1:27	L 2:54	L 4:26	-	L 5:42	-	L 6:20	L 6:47	-	L 7:37	L 7:59	L 8:39	L 10:26	L 12:06	L 1:16
7	Haverhill	♿	-	-	8:43	-	10:29	11:41	1:30	2:57	4:29	-	5:45	-	6:23	6:50	-	7:40	8:02	8:42	10:29	12:09	1:19

Trains in purple box indicate peak period trains.

Saturday & Sunday

Inbound to Boston

ZONE	STATION		AM		PM			
		SATURDAY TRAIN #	1200	1202	1204	1206	1208	1210
		SUNDAY TRAIN #	2200	2202	2204	2206	2208	2210
	Bikes Allowed							
7	Haverhill	♿	7:15	10:20	1:15	4:20	7:15	10:00
7	Bradford	♿	7:18	10:23	1:18	4:23	7:18	10:03
6	Lawrence	♿	7:27	10:32	1:27	4:32	7:27	10:12
5	Andover	♿	7:32	10:37	1:33	4:37	7:33	10:18
4	Ballardvale	♿	f 7:37	f 10:42	f 1:37	f 4:42	f 7:37	f 10:22
3	North Wilmington		f 7:44	f 10:49	f 1:44	f 4:49	f 7:44	f 10:29
2	Reading	♿	7:50	10:56	1:50	4:55	7:50	10:35
2	Wakefield		7:55	11:01	1:55	5:00	7:55	10:40
2	Greenwood		f 7:59	f 11:05	f 1:59	f 5:04	f 7:59	f 10:44
1	Melrose Highlands	♿	8:02	11:08	2:02	5:07	8:02	10:47
1	Melrose/Cedar Park		f 8:04	f 11:10	f 2:04	f 5:09	f 8:04	f 10:49
1	Wyoming Hill		f 8:06	f 11:12	f 2:06	f 5:11	f 8:06	f 10:51
1A	Malden Center	♿	L 8:10	L 11:16	L 2:10	L 5:15	L 8:10	L 10:55
1A	North Station	♿	8:21	11:27	2:21	5:26	8:21	11:06

Saturday & Sunday

Outbound from Boston

ZONE	STATION		AM		PM			
		SATURDAY TRAIN #	1201	1203	1205	1207	1209	1211
		SUNDAY TRAIN #	2201	2203	2205	2207	2209	2211
	Bikes Allowed							
1A	North Station	♿	8:40	11:40	2:50	5:20	8:20	11:30
1A	Malden Center	♿	8:50	11:50	3:00	5:30	8:30	11:40
1	Wyoming Hill		f 8:54	f 11:54	f 3:04	f 5:34	f 8:34	f 11:44
1	Melrose/Cedar Park		f 8:56	f 11:56	f 3:06	f 5:36	f 8:36	f 11:46
1	Melrose Highlands	♿	8:59	11:59	3:09	5:39	8:39	11:49
2	Greenwood		f 9:02	f 12:02	f 3:12	f 5:42	f 8:42	f 11:52
2	Wakefield		9:05	12:05	3:15	5:45	8:45	11:55
2	Reading	♿	9:11	12:11	3:21	5:51	8:51	12:01
3	North Wilmington		f 9:17	f 12:17	f 3:27	f 5:57	f 8:57	f 12:07
4	Ballardvale	♿	f 9:23	f 12:23	f 3:33	f 6:03	f 9:03	f 12:13
5	Andover	♿	9:28	12:28	3:38	6:08	9:08	12:18
6	Lawrence	♿	9:35	12:35	3:45	6:15	9:15	12:25
7	Bradford	♿	L 9:45	L 12:45	L 3:55	L 6:25	L 9:25	L 12:35
7	Haverhill	♿	9:48	12:48	3:58	6:28	9:28	12:38

Keep in Mind:

This schedule will be effective from October 21, 2019 and will replace the schedule of May 20, 2019

Presidents' Day and 4th of July operate on a **Saturday service schedule.**

New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, and Christmas Day operate on a **Sunday service schedule**.

For all other holiday schedules, please check MBTA.com or call 617-222-3200.

Via Lowell Line: Operates via the Lowell Line between Wilmington and North Station. See the Lowell Line schedule for all stops.

Times in purple with "f" indicate a flag stop: Passengers must tell the conductor that they wish to leave. Passengers waiting to board must be visible on the platform for the train to stop.

Times in blue indicate an early departure (L stop): The train may leave ahead of schedule at these stops.

Bikes: Bicycles are allowed on trains with the bicycle symbol shown below the train number.

High level platform and bridge plate available. Visit mbta.com/accessibility for more information.

Schedules may change in the event of severe weather

The MBTA and Keolis closely monitor weather forecasts to determine if conditions necessitate changes to the Commuter Rail schedule.

During weather events, the symbols below will communicate service level and impact on passengers. Service level for the following day will be announced mid-afternoon on the prior day.

REGULAR SCHEDULE
Trains will operate on a normal schedule.

STORM SCHEDULE
Major changes to the regular schedule. Schedules will be available on mbta.com, and in Boston stations.

NO SERVICE
No passenger service on Commuter Rail.

2020 REDUCED SERVICE SCHEDULE

Reduced service schedule in effect when declared in advance by the MBTA. In most cases, announcement made late in the afternoon on the prior day. Should an event occur requiring a more immediate service change, please check departure times prior to travel, and stay connected to MBTA.com for up-to-the minute information.

HAVERHILL LINE

Monday to Friday

Inbound to Boston

ZONE	STATION	TRAIN #	7280	1200	1202	1204	1206	1208	1210
			AM	AM	AM	PM	PM	PM	PM
7	Haverhill	♿	-	7:15	10:20	1:15	4:20	7:15	10:00
7	Bradford	♿	-	7:18	10:23	1:18	4:23	7:18	10:03
6	Lawrence	♿	-	7:27	10:32	1:27	4:32	7:27	10:12
5	Andover	♿	-	7:32	10:37	1:33	4:37	7:33	10:18
4	Ballardvale	♿	-	7:37	10:42	1:37	4:42	7:37	10:22
3	North Wilmington		-	7:44	10:49	1:44	4:49	7:44	10:29
2	Reading	♿	5:50	7:50	10:56	1:50	4:55	7:50	10:35
2	Wakefield		5:56	7:55	11:01	1:55	5:00	7:55	10:40
2	Greenwood		5:59	7:59	11:05	1:59	5:04	7:59	10:44
1	Melrose Highlands	♿	6:01	8:02	11:08	2:02	5:07	8:02	10:47
1	Melrose/Cedar Park		6:03	8:04	11:10	2:04	5:09	8:04	10:49
1	Wyoming Hill		6:05	8:06	11:12	2:06	5:11	8:06	10:51
1A	Malden Center	♿	6:10	8:10	11:16	2:10	5:15	8:10	10:55
1A	NORTH STATION	♿	6:23	8:21	11:27	2:21	5:26	8:21	11:06

Monday to Friday

Outbound from Boston

ZONE	STATION	TRAIN #	1201	1203	1205	1207	1209	1211
			AM	AM	PM	PM	PM	PM
1A	NORTH STATION	♿	8:40	11:40	2:50	5:20	8:20	11:30
1A	Malden Center	♿	8:50	11:50	3:00	5:30	8:30	11:40
1	Wyoming Hill		8:54	11:54	3:04	5:34	8:34	11:44
1	Melrose/Cedar Park		8:56	11:56	3:06	5:36	8:36	11:46
1	Melrose Highlands	♿	8:59	11:59	3:09	5:39	8:39	11:49
2	Greenwood		9:02	12:02	3:12	5:42	8:42	11:52
2	Wakefield		9:05	12:05	3:15	5:45	8:45	11:55
2	Reading	♿	9:11	12:11	3:21	5:51	8:51	12:01
3	North Wilmington		9:17	12:17	3:27	5:57	8:57	12:07
4	Ballardvale	♿	9:23	12:23	3:33	6:03	9:03	12:13
5	Andover	♿	9:28	12:28	3:38	6:08	9:08	12:18
6	Lawrence	♿	9:35	12:35	3:45	6:15	9:15	12:25
7	Bradford	♿	9:45	12:45	3:55	6:25	9:25	12:35
7	Haverhill	♿	9:48	12:48	3:58	6:28	9:28	12:38

Reduced schedule advisory system

The MBTA and Keolis closely monitor events to determine if changes to the Commuter Rail schedule are needed. During these times, the symbols to the right will communicate service level and impact on passengers.

REGULAR SCHEDULE
Trains will operate on a normal schedule.

REDUCED SCHEDULE
Major changes to the regular schedule. Schedules also available on MBTA.com and in Boston stations.

NO SERVICE
No passenger service on Commuter Rail.

Service Change ONGOING

All MBTA services are running on a reduced schedule until further notice in the interest of the health and safety of our riders and employees. Effective May 6, all riders must use a face covering when on the MBTA. Full details: MBTA.com/coronavirus

Commuter Rail Fares

One-Way Fares

Each Commuter Rail station is located in a fare zone, from 1A – 10. Your Commuter Rail fare depends on which zones your boarding and exiting stations are located in.

Commuter Rail One-Way

$2.40 – $13.25

with CharlieTicket or mTicket App

Price based on distance traveled

Learn about Commuter Rail zones

Commuter Rail Weekend Pass

$10.00

with CharlieTicket, Cash, or mTicket App

Learn about $10 weekends

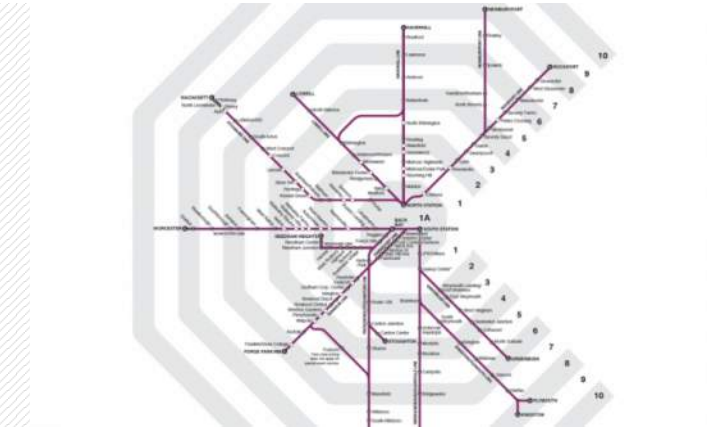
Commuter Rail Fare Zones

Download our map to see which zone your station is in.

Find my fare zone

Find the cost of your trip with our fare finder.

Find your fare



Passes

The price of your monthly Commuter Rail pass depends on which zones your boarding and exiting stations are located in.

Tip! Reduced monthly Commuter Rail passes are not available, but reduced 10-ride passes are available at fare vending machines, at ticket windows, and from mTicket.

Monthly Commuter Rail Pass CharlieTicket

$90.00 – $426.00

Unlimited travel for 1 calendar month

Valid on:

- Commuter Rail, up to designated pass zone
- Subway
- Bus
- Charlestown Ferry
- Hingham/Hull Ferry with Zone 6 passes and up

Please note:

- Zone 1A passes not valid on Express Bus
- Interzone passes not valid on subway, Express Bus, and ferry

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Monthly Commuter Rail Pass mTicket

$80.00 – $416.00

Unlimited travel for 1 calendar month

Valid on:

- Commuter Rail, up to designated pass zone

No transfers to other modes

Weekend Pass

$10.00

- Unlimited travel to all zones on all lines
- Valid Saturdays and Sundays
- Available onboard trains, at ticket windows, and from mTicket

Valid only on:
Commuter Rail

$10 Commuter Rail Weekends

Take unlimited Commuter Rail trips on Saturdays and Sundays for just $10.

Learn more about weekend passes



Auto-pay

Get a monthly Commuter Rail pass that renews automatically.

Sign up for Auto-pay

Perq

Get monthly passes—at pre-tax rates—through your employer.

Learn more about Perq

How to Pay Your Commuter Rail Fare

First, choose how you'll pay your fare

Conductors will check your ticket or pass after you board the train.

Tip! During Fare Is Fair events, your ticket may be checked at any point during your trip, including before you board or after you get off the train.

CharlieTicket

★ Best for frequent Commuter Rail riders who also take the subway or bus
✔ Monthly passes available
⊘ No online card management
⊘ No discounts

One-way and round trip tickets valid on:
Commuter Rail, up to designated zone

Monthly passes valid on:
Commuter Rail, up to designated zone
Subway
Bus
Charlestown Ferry
Hingham/Hull Ferry with Zone 6 passes and up

Note: Interzone passes not valid on subway, Express Bus, and ferry

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mTicket

★ Best for infrequent Commuter Rail riders or pass holders who don't often take subway or bus
✔ $10 discount on monthly passes
✔ Convenient smartphone app for ticket purchase and validation
✔ 10-ride passes available
⊘ No transfers

	Valid on: Commuter Rail, up to designated zone 
Cash Onboard	★ Best for infrequent Commuter Rail riders at stations where tickets can't be purchased at fare vending machines or ticket windows ✔ May include a $3 fee if you board at a station where tickets can be purchased ✔ Only available for one-way and round trip tickets ⊘ Not available during Fare is Fair events

Then, choose where to buy your ticket or pass

- mTicket app
- Ticket booths
- Fare vending machines
- Online
- Retail stores

When you're ready to board the train

The conductor will verify your fare payment after you board the train. The conductor may tuck a small piece of paper on the seat back in front of you to indicate that you paid your fare.

The only exception to this is during Fare Is Fair events, when your ticket may be checked at any point during your trip, including before you board or after you get off the train.

- Pay with a prepaid ticket or pass
- Pay with mTicket

Pay with cash or credit on board

Reduced Fares

Some customers are eligible for reduced fares or can ride the T for free.

Learn more about reduced fares

Have a Question?

Fares FAQ

Visit our fares FAQ for detailed answers about the MBTA's ticketing system

Other MBTA Fares

Subway Fares

See all MBTA subway fares

Bus Fares

See all MBTA bus fares

Ferry Fares

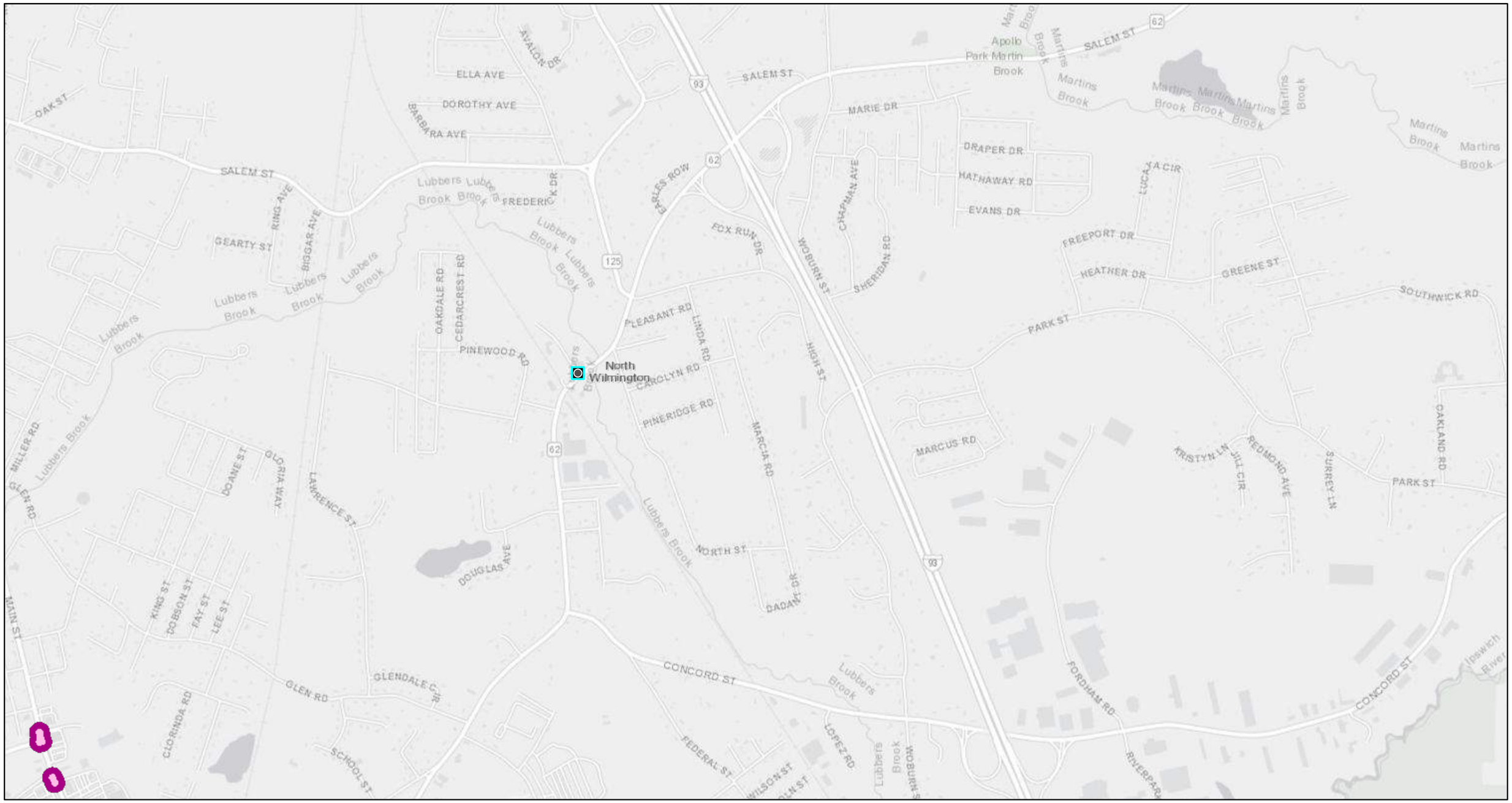
See all MBTA ferry fares

Common Fares

See common fares across all MBTA modes

MASSDOT HIGH CRASH LOCATION MAPPING

HAZUS



$

- 6,3%HGHVWULDQ&RXQWHU
- 6,3%LFFOH&RXQWHUV
- 6,3&RXQWHU

P

NP

YUL $SBUPQ F 2HQVWUHHWDSFRQWULEXWRUV DQG WKH,6 XVHU FRPPXQLW\

DVZ

YUL $_YUL $_

TRIP-GENERATION CALCULATIONS

Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors). Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (Land Use 225), and mid-rise residential with 1st-floor commercial (Land Use 231) are related land uses.

Additional Data

In prior editions of *Trip Generation Manual*, the mid-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.46 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 95.7 percent of the total dwelling units were occupied.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 4:45 and 5:45 p.m., respectively.

For the four dense multi-use urban sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:15 and 5:15 p.m., respectively. For the three center city core sites with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:45 and 7:45 a.m. and 5:00 and 6:00 p.m., respectively.

For the six sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.46 residents per occupied dwelling unit.

For the five sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 95.7 percent of the units were occupied.

The average numbers of person trips per vehicle trip at the five center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 1.84 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.94 during Weekday, AM Peak Hour of Generator
- 2.07 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.59 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 32 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.90 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.90 during Weekday, AM Peak Hour of Generator
- 2.00 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.08 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 13 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.56 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.88 during Weekday, AM Peak Hour of Generator
- 1.70 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 2.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Delaware, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, and Wisconsin.

Source Numbers

168, 188, 204, 305, 306, 321, 357, 390, 436, 525, 530, 579, 638, 818, 857, 866, 901, 904, 910, 912, 918, 934, 936, 939, 944, 947, 948, 949, 959, 963, 964, 966, 967, 969, 970

Graph Look Up

ITETripGen Web-based App

- Graph Look Up
- Technical Support
- Add Users
- Comments

ADD-ONS

Try OTISS Pro

Query | Filter

DATA SOURCE: Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE: 221

LAND USE GROUP: (200-299) Residential

LAND USE : 221 - Multifamily Housing (Mid-Rise)

LAND USE SUBCATEGORY: All Sites

INDEPENDENT VARIABLE (IV): Dwelling Units

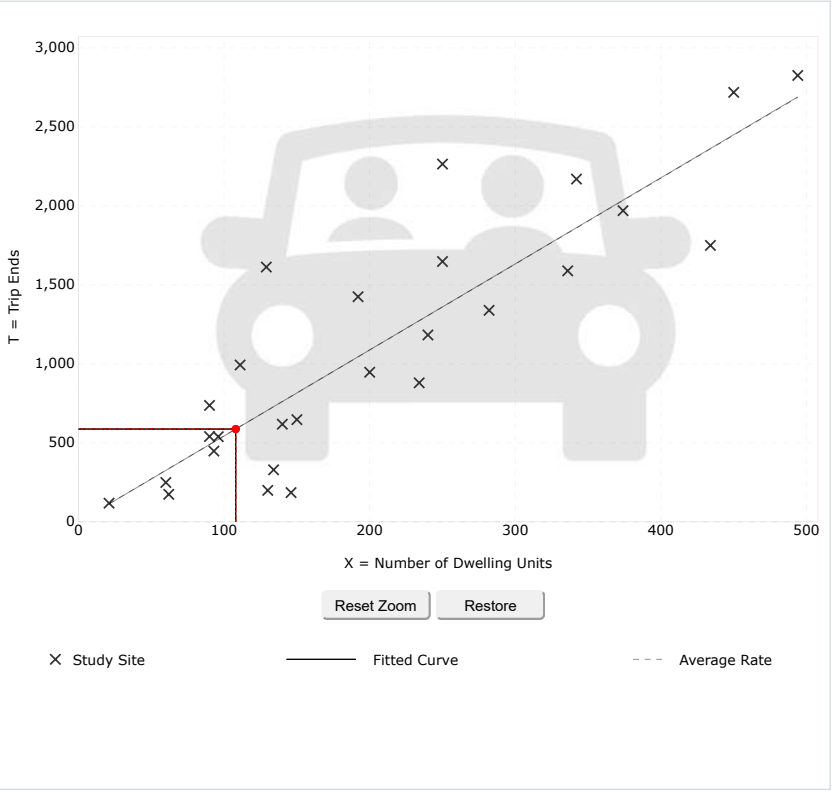
TIME PERIOD: Weekday

SETTING/LOCATION: General Urban/Suburban

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 108 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Mid-Rise) (221) Click for more details

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
27

Avg. Num. of Dwelling Units:
205

Average Rate:
5.44

Range of Rates:
1.27 - 12.50

Standard Deviation:
2.03

Fitted Curve Equation:
T = 5.45(X) - 1.75

R^2:
0.77

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 588 (Total), 294 (Entry), 294 (Exit)
Fitted Curve: 587 (Total), 293 (Entry), 294 (Exit)

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Graph Look Up

ITETripGen Web-based App

Graph Look Up

Technical Support

Add Users

Comments

ADD-ONS

Try OTISS Pro

Query | Filter

DATA SOURCE:
Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE:
221

LAND USE GROUP:
(200-299) Residential

LAND USE :
221 - Multifamily Housing (Mid-Rise)

LAND USE SUBCATEGORY:
All Sites

INDEPENDENT VARIABLE (IV):
Dwelling Units

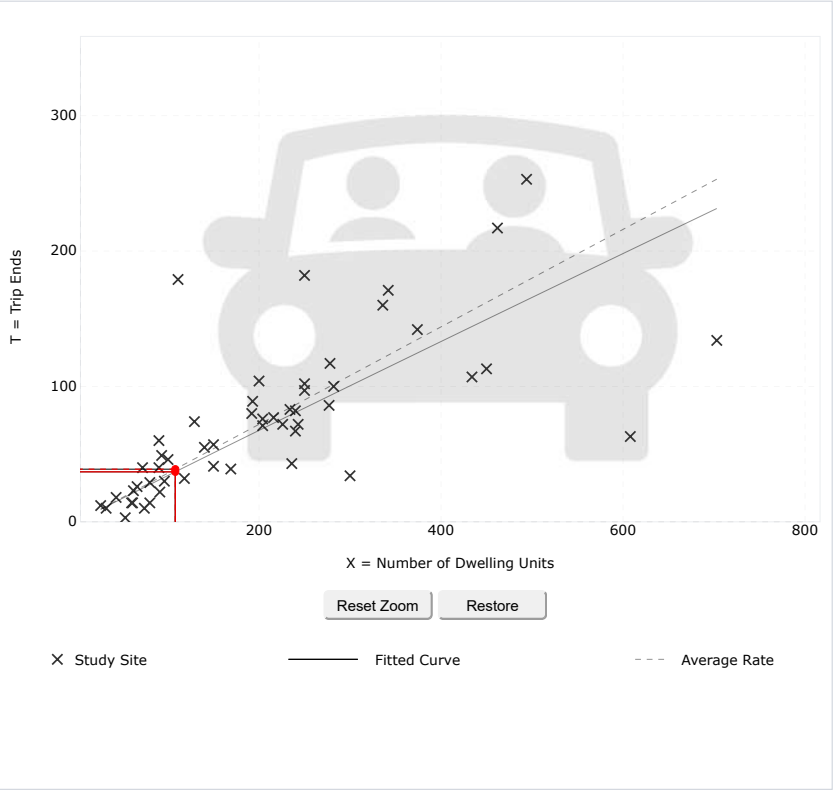
TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
108 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Mid-Rise) (221) Click for more details

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
53

Avg. Num. of Dwelling Units:
207

Average Rate:
0.36

Range of Rates:
0.06 - 1.61

Standard Deviation:
0.19

Fitted Curve Equation:
Ln(T) = 0.98 Ln(X) - 0.98

R^2:
0.67

Directional Distribution:
26% entering, 74% exiting

Calculated Trip Ends:
Average Rate: 39 (Total), 10 (Entry), 29 (Exit)
Fitted Curve: 37 (Total), 10 (Entry), 27 (Exit)

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Graph Look Up

Query | Filter

DATA SOURCE: Trip Gen Manual, 10th Ed + Supplement

SEARCH BY LAND USE CODE: 221

LAND USE GROUP: (200-299) Residential

LAND USE : 221 - Multifamily Housing (Mid-Rise)

LAND USE SUBCATEGORY: All Sites

INDEPENDENT VARIABLE (IV): Dwelling Units

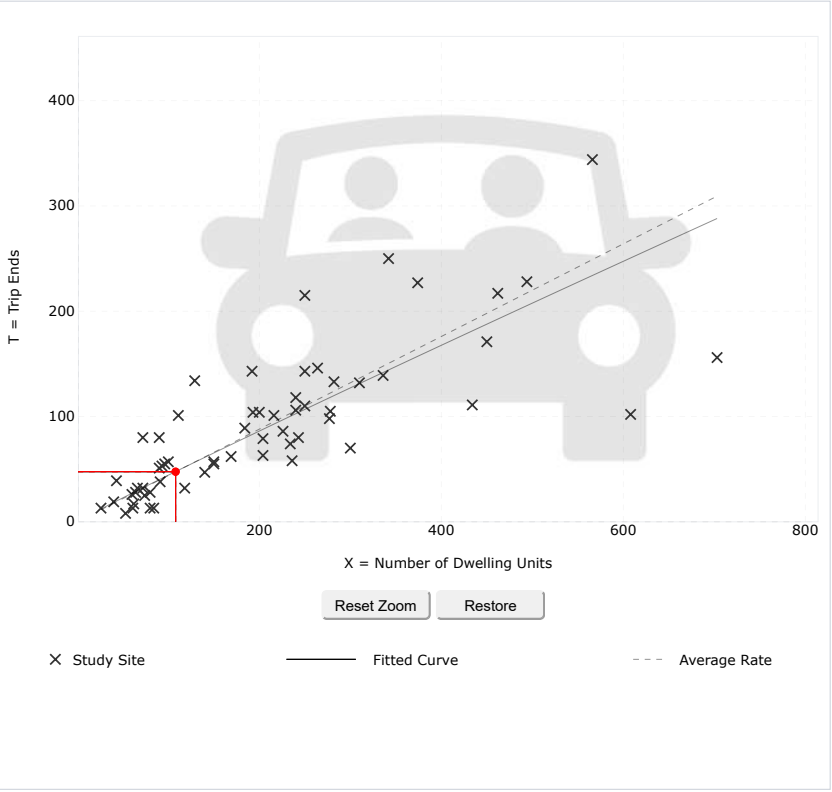
TIME PERIOD: Weekday, Peak Hour of Adjacent Street Traffic

SETTING/LOCATION: General Urban/Suburban

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 108 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Mid-Rise) (221) Click for more details

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
60

Avg. Num. of Dwelling Units:
208

Average Rate:
0.44

Range of Rates:
0.15 - 1.11

Standard Deviation:
0.19

Fitted Curve Equation:
Ln(T) = 0.96 Ln(X) - 0.63

R^2:
0.72

Directional Distribution:
61% entering, 39% exiting

Calculated Trip Ends:
Average Rate: 48 (Total), 29 (Entry), 19 (Exit)
Fitted Curve: 48 (Total), 29 (Entry), 19 (Exit)

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TECHNICAL MEMORANDUM

REF: MAX-2018119.02

DATE: September 14, 2022

TO: Mr. Matthew Costa, P.E.
Beals Associates, Inc.
22 Park Plaza, Suite 200
Boston, MA 02116

FROM: Ms. Rebecca L. Brown, P.E., Senior Project Manager
Ms. Susannah E. Theriault, P.E., Project Engineer

RE: Updated Traffic Impact Assessment
Upton Park Mixed Commercial Development
36 & 38 Upton Drive, Massachusetts

EXECUTIVE SUMMARY

Greenman-Pedersen, Inc. (GPI) previously prepared a *Traffic Impact and Access Study*[1] (TIAS) for a proposed warehouse/office development referred to as Upton Park to be located at #36 & #38 Upton Drive in Wilmington, Massachusetts. The site is currently a vacant vegetated lot with a gravel driveway which spurs off the southwesterly corner of Upton Drive. The site was recently approved for the construction of an approximately ±263,900 square feet (SF) warehouse distribution development within three buildings with access/egress proposed via five driveways along Upton Drive. To attract a wider range of potential tenants to the site, the developer is seeking approval for a mixed commercial development that would allow a potential light industrial, manufacturing, or research and development (R&D) use to occupy a portion of the previously permitted buildings. Access and egress will continue to be provided via the five previously proposed site driveways.

To allow flexibility in the marketing of the overall development, the various uses may be separated between each building and could include up to 19,800 SF of R&D space, up to 39,000 SF of light industrial space, and up to 78,500 SF of manufacturing space with the remainder of the buildings being occupied by warehousing space. This *Updated Traffic Impact Assessment* (Updated TIA) is intended to evaluate the traffic impacts associated with the proposed change in use in comparison to the originally approved development and assess the need for any additional mitigation measures to offset the project's impacts on the study area roadways. The Applicant acknowledges that if the overall development's traffic generation exceeds the amount depicted in this report, than additional studies will be provided to the approving authority.

The study area for this Updated TIA is consistent with the study area contained in the original TIAS and is graphically depicted in Figure 1. The Updated TIA utilizes the traffic volumes and analysis contained in the original 2018 TIAS to evaluate 2022 Existing and 2029 No-Build traffic operations at the study area intersections. The potential traffic to be generated by the proposed mix of light industrial, manufacturing, warehousing, and R&D space has been estimated based on Institute of Transportation Engineers (ITE) trip

[1] *Traffic Impact and Access Study, Upton Park, Wilmington, Massachusetts*; Greenman-Pedersen, Inc.; September 14, 2018.

generation rates and distributed to the roadway network to estimate 2029 Build conditions. The currently proposed development is anticipated to generate an additional 84 vehicle trips (68 entering and 16 exiting) during the weekday AM peak hour and an additional 85 vehicle trips (21 entering and 64 exiting) during the weekday PM peak hour as compared to the previously approved warehouse distribution center.

Capacity and queue analyses were completed at all of the study area intersections for the 2029 Build condition with the currently proposed development and compared to the 2029 No-Build condition and 2029 Build condition with the previously proposed development. The results of the analysis indicate that all movements at the signalized intersections of Route 125 (Ballardvale Street) with the I-93 Northbound (NB) and Southbound (SB) ramps are anticipated to operate at LOS D or better under all analysis conditions. The additional traffic generated by the proposed mixed commercial development is not expected to increase delay on any movement through these intersections by more than four seconds per vehicle or increase queues by more than two vehicles.

Although some movements at the Route 125 / Ballardvale Street intersection will operate at LOS F under 2029 No-Build and Build conditions, the additional traffic generated by the proposed warehouse / office development is not anticipated to increase delay on any movement through the intersection by more than seven seconds per vehicle or increase queues by more than two vehicles.

Similarly, although some side street movements at the unsignalized intersections of Andover Street with Upon Drive and Jonspin Road are expected to operate at LOS F under 2029 No-Build and/or Build conditions, the volume-to-capacity (V/C) ratios will be well below 1.00, indicating there will be adequate capacity to accommodate the anticipated traffic volumes. Improvements are also proposed by the Applicant at the intersection of Andover Street / Upton Drive, which include installation of DO NOT BLOCK INTERSECTION signage and pavement markings, and reconstruction of the median island on Upton Drive to better accommodate truck turns. These improvements will help to facilitate turning movements into and exiting Upton Drive.

Several movements at the intersection of Route 125 / Andover Street are anticipated to operate at LOS E or F during the weekday AM and PM peak hours under 2029 No-Build and Build conditions. However, the additional traffic generated by the proposed mixed commercial development is not expected to increase overall delay through the intersection by more than 13 seconds per vehicle or increase queues by more than five vehicles. Although MassDOT recently installed a new traffic signal controller at this intersection, it operates with a single timing plan 24 hours per day that is designed to accommodate traffic volumes during the weekday AM peak hour. By implementing a separate timing plan for the weekday PM peak hour, all movements through the intersection can operate under capacity (V/C <1.0) and at LOS D or better during the weekday PM peak hour. The Applicant for the development at #30 Upton Drive has committed to contacting MassDOT to implement the recommended signal timing modifications as mitigation for the proposed development.

Based on the findings above, the proposed mixed commercial development can be safely and efficiently accommodated along the existing roadway network. No additional project-specific mitigation is warranted based on the incremental impacts of the development.

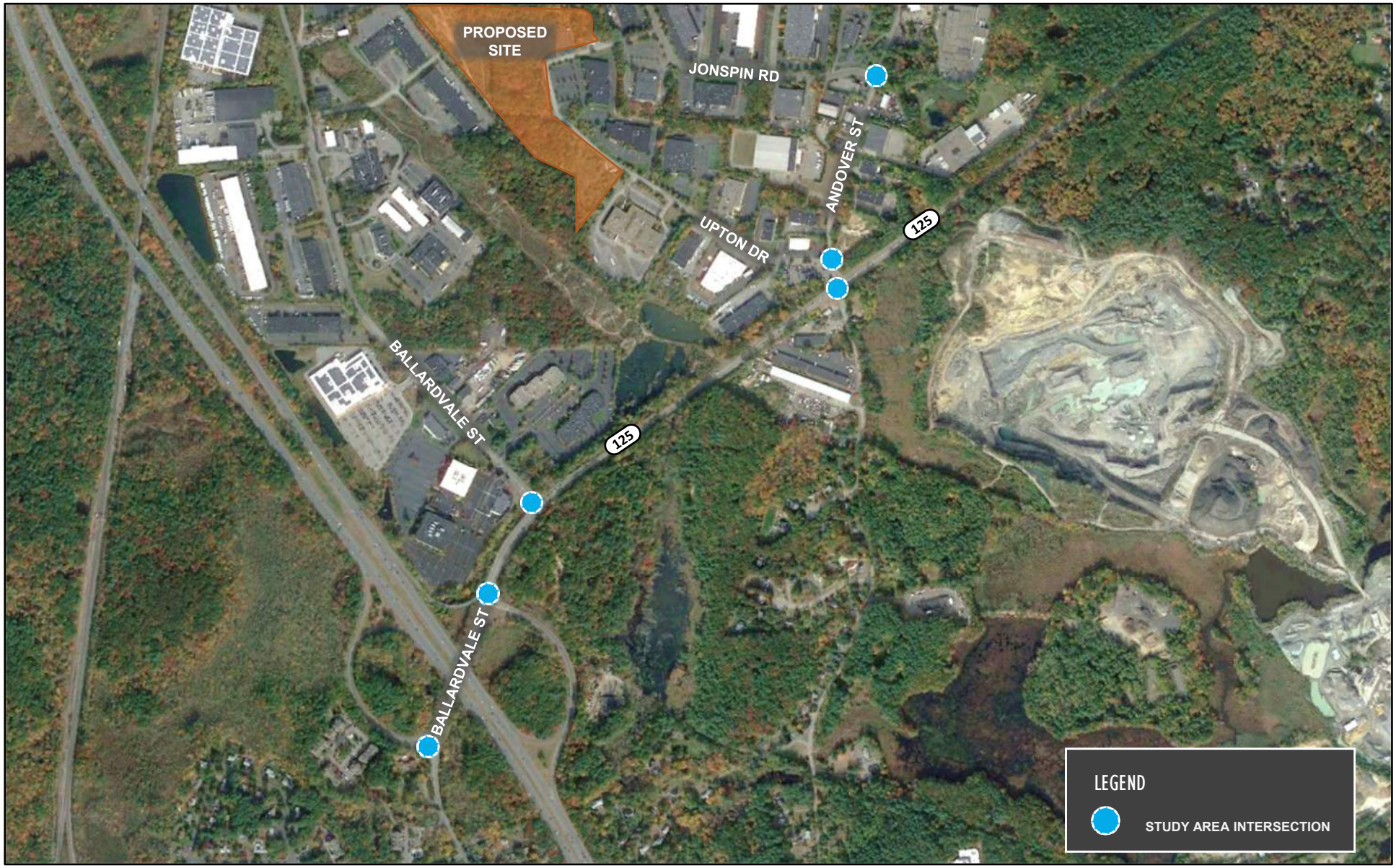


FIGURE 1 – SITE LOCATION MAP

EXISTING CONDITIONS

Study Area

Evaluation of the traffic impacts associated with the proposed project requires an evaluation of existing and projected traffic volumes on the adjacent streets, the volume of traffic expected to be generated by the project, and the impact that this traffic will have on the adjacent streets and nearby intersections. To be consistent with the original *Traffic Impact and Access Study*[2] (TIAS) prepared as part of the permitting for the Upton Park development, the following key intersections have been evaluated in the completion of this study:

- Route 125 (Ballardvale Street) / Route 93 SB Ramps (Signalized)
- Route 125 (Ballardvale Street) / Route 93 NB Ramps (Signalized)
- Route 125 (Ballardvale Street) / Ballardvale Street (Signalized)
- Route 125 / Andover Street (Signalized)
- Andover Street / Upton Drive (Unsignalized)
- Andover Street / Jonspin Road (Unsignalized)

Traffic Volumes

Existing conditions traffic volumes during the weekday AM (7:30 AM – 8:30 AM) and weekday PM (4:30 PM – 5:30 PM) peak hours at the study area intersections were obtained from the original 2018 TIAS[3] prepared for the Upton Park development. Manual turning movement counts (TMCs) and vehicle classification counts were collected in June and August 2018 as part of the Upton Park 2018 TIAS. The TMCs were collected during the weekday AM (7:00 AM – 9:00 AM) and weekday PM (4:00 PM – 6:00 PM) peak periods on Thursday, August 16, 2018 at each of the following intersections:

- Route 125 / Andover Street
- Andover Street / Upton Drive
- Andover Street / Jonspin Road

In addition, GPI previously collected manual turning movement counts along Route 125 and Ballardvale Street in June 2018, while school was in session, as part of a signal timing modification project with the Massachusetts Department of Transportation (MassDOT) during the same weekday AM and PM peak periods at the following intersections:

- Route 125 / Ballardvale Street
- Ballardvale Street / Route 93 NB Ramps
- Ballardvale Street / Route 93 SB Ramps

Seasonal Adjustment

Traffic on a given roadway typically fluctuates throughout the year depending on the area and the type of roadway. To determine if the June and August traffic-volume data needed to be adjusted to account for this

[2] *Traffic Impact and Access Study, Upton Park, Wilmington, MA;* Prepared by Greenman-Pedersen, Inc.; September 14, 2018.

[3] *Traffic Impact and Access Study, Upton Park, Wilmington, MA;* Prepared by Greenman-Pedersen, Inc.; September 14, 2018.

fluctuation, traffic-volume data from Massachusetts Department of Transportation (MassDOT) Permanent Count Stations in the area were researched[4]. Based on the MassDOT traffic-volume data, traffic during the months of June and August is 5.3 and 3.1 percent higher than average-month conditions, respectively. Therefore, the June traffic volumes were unadjusted to represent a conservative (worse case) scenario of average-month conditions. The MassDOT seasonal adjustment data are provided in the Appendix.

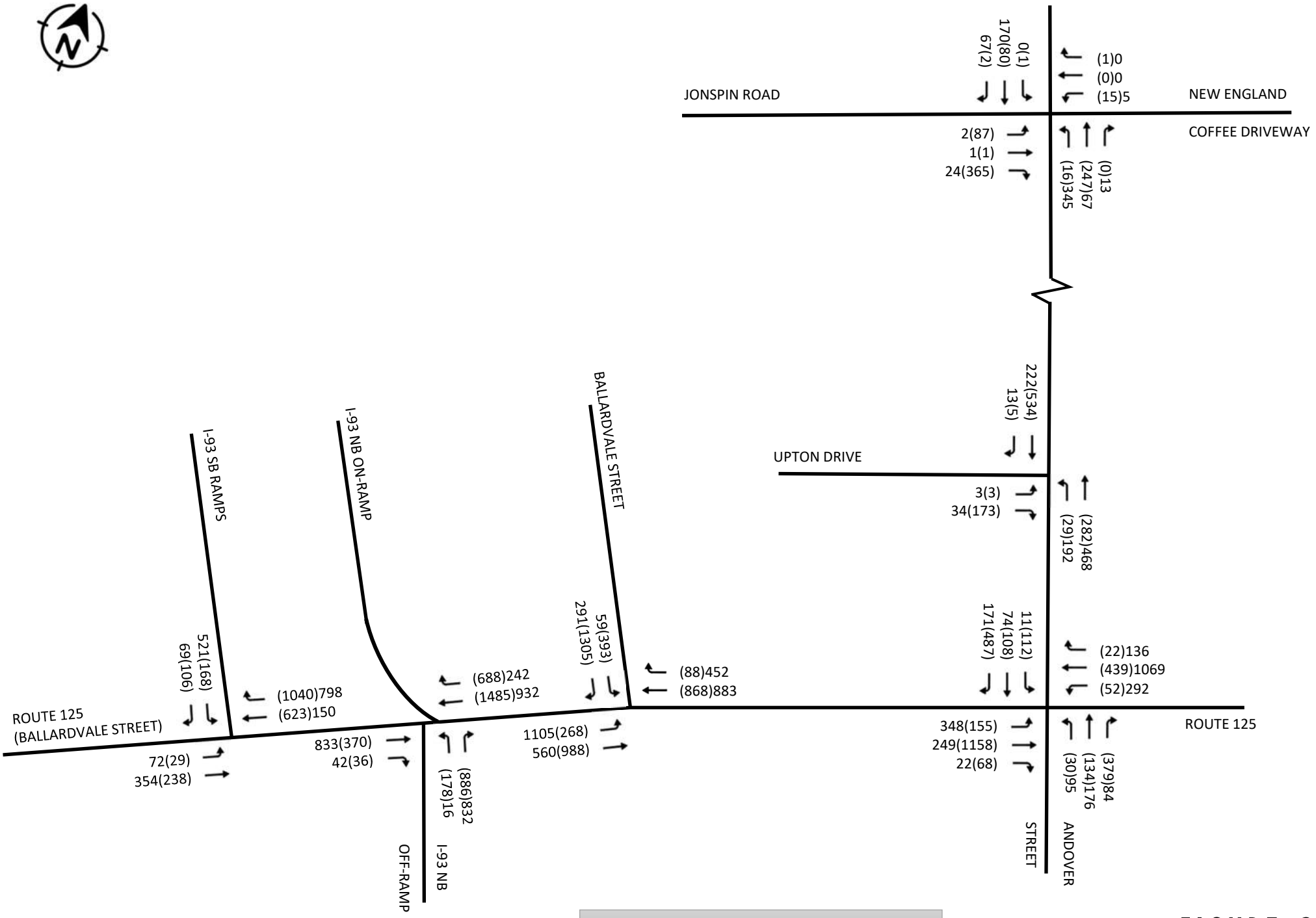
While the historic traffic count data indicates that traffic volumes in August are typically higher than average month conditions, GPI compared the volumes collected in August to those collected in June for the section of Route 125 between Ballardvale Street and Andover Street, and discovered that the traffic volumes collected in August were 10.5 and 5.2 percent lower than traffic volumes collected in June during the weekday AM and PM peak hours, respectively, in the westbound direction. This difference is likely due to school traffic and summer vacations. To account for this difference, the August traffic volumes were increased accordingly to balance with the June traffic volumes in the westbound direction. In the eastbound direction, however, the August traffic volumes were 17.9 to 2.3 percent higher than the June traffic volumes during the AM and PM peak hours, respectively. Therefore, the June traffic volumes were increased accordingly to balance with the August traffic volumes in the eastbound direction. Overall, two-way traffic volumes along Route 125 between Ballardvale Street and Andover Street were 0.7 to 0.8 percent higher in June than in August. Therefore, all other volumes collected in August were increased by 0.7 to 0.8 percent to account for this seasonal variation in traffic.

Annual Adjustment

The MassDOT directive, "Guidance of Traffic Count Data" dated April 2020 provides growth rates to be applied to traffic volumes on various roadway types to adjust traffic volumes collected prior to March 2020 to 2021 Existing conditions. According to MassDOT's Yearly Growth Rates for data from 2014 to 2018, an adjustment of -0.004 should be applied to traffic volumes collected on Group U4-7 (urban arterials and collectors) to grow volumes from 2018 to 2019 conditions. However, to provide a conservative (worse case) analysis condition, no adjustment was applied to the 2018 traffic volumes to adjust to 2019 conditions. MassDOT's directive also notes the significant decrease in traffic volumes that occurred on nearly all roadways across the Commonwealth due to the COVID-19 pandemic in 2020 and 2021. Therefore, MassDOT recommends that no annual growth adjustment be applied to 2019 traffic volumes to grow them to 2022 conditions. As a result, the 2018 seasonally adjusted traffic volumes were assumed to represent a 2022 Existing condition.

The resulting 2022 Existing traffic-flow networks for the weekday AM and weekday PM peak hours are shown graphically on Figure 2.

[4] *MassDOT Traffic Volumes*; Permanent Count Stations 5022 – Route I-93 north of Ramp Route 62 to I-93 (Wilmington), 5127 – Route 125 south of Route 28 (Wilmington).



XX (XX) = AM(PM) PEAK HOUR

FIGURE 2

2022 EXISTING CONDITIONS WEEKDAY PEAK HOUR TRAFFIC VOLUMES

FUTURE CONDITIONS

To estimate the impact of site-generated traffic within the study area, existing traffic volumes were projected to the year 2029. This represents a seven-year design horizon in accordance with the EOEEA/EOT traffic impact assessment guidelines. The proposed development is expected to be occupied within this time period. Traffic volumes on the roadway network at that time will include existing traffic, new traffic due to normal traffic growth, and traffic related to any significant development by others expected to be completed within the area by 2029. Consideration of these factors resulted in the development of 2029 No-Build traffic volumes, which assume that the proposed project is not built. The incremental impacts of the proposed project may then be determined by adding site-generated traffic volumes (Build conditions) and making comparisons to the No-Build conditions.

Traffic Growth

To develop the 2029 No-Build (seven-year) forecast volumes, two components of traffic growth were considered. First, an annual growth percentage was determined. Based on historic traffic-volume counts provided by MassDOT and recent traffic studies completed for other projects in the area, traffic volumes in the area had been increasing at a rate of approximately 1.1 percent per year prior to COVID-19.[5] Therefore a 1.1 percent compounded annual growth was assumed for the project area. The MassDOT adjustment data are provided in the Appendix.

Second, any planned or approved specific developments in the area that would generate a significant volume of traffic on study area roadways within the next seven years were considered. At the time that the project was originally permitted, the following additional projects were identified:

- *58 Jonspin Road (Heilind Electronics Inc.)* – Commercial Development proposes a 60,000 square feet (SF) office building addition and the re-purposing of the existing 41,131 SF manufacturing building located at 58 Jonspin Road. As a result of the project, approximately 50 employees from 30 Upton Drive will be relocated to the new office building. Access is proposed via two full access/egress driveways with one east and one west of the project site. A Traffic Impact and Access Study (TIAS) prepared by Vanasse & Associates Inc. (VAI) dated May 2018 identifies the impacts on surrounding roads resulting from the proposed site-generated traffic.

- *401 Andover Street (Spruce Farm)* – The project consists of 27 age-restricted (age 55+) residential units located at 401 Andover Street. Access is proposed via a full access/egress driveway onto Andover Street. A Traffic Impact Assessment (TIA) prepared by GPI dated April 2017 identifies the impacts on surrounding roads resulting from the proposed site-generated traffic.

- *228 Andover Street (Arrow Paper Corporation)* – The project consists of 34,450 SF building addition located at 228 Andover Street. A Traffic Impact Assessment (TIA) prepared by Dana D. Perkins Inc. dated February 2020 identifies the impacts on surrounding roads resulting from the proposed site-generated traffic. The impact of site-generated traffic volumes on the roadway network is considered minimal, therefore, the trips are accounted for in the conservative background growth rate.

- *225 Andover Street (Self-Storage Facility)* – The project consists of 30,500 SF building addition located at 225 Andover Street. A Traffic Impact Assessment has not yet been received but it is assumed that the vehicle trips resulting from this proposal will be very minimal. Therefore, the impact

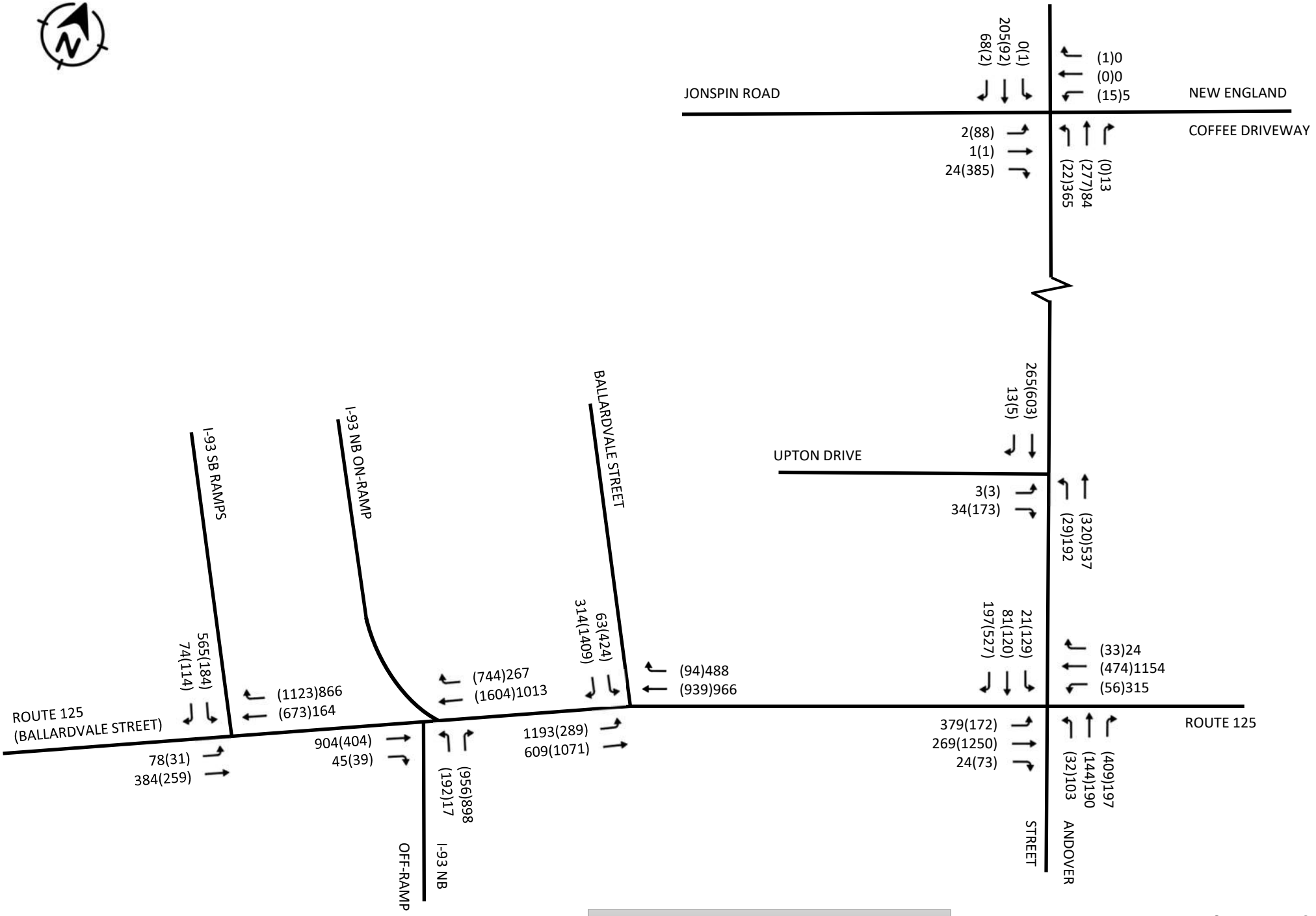
[5] *MassDOT Transportation Data Management System;* Tewksbury and Wilmington, MA.

of site-generated traffic volumes on the roadway network are accounted for in the conservative background growth rate.

Although additional development projects have recently been approved or proposed in the surrounding area, those developments entered the permitting process after the approved development at Upton Park and were required to include the traffic generated by Upton Park within their No-Build traffic-volume projections. Therefore, the traffic generated by these additional projects was not included in the 2029 No-Build projections to assess the impacts of the proposed change in use of Upton Park.

No-Build Conditions

The 2029 No-Build networks were accordingly developed by applying a compounded 1.1 percent annual traffic growth rate (8.0 percent over seven years) to the 2022 Existing traffic volumes and adding the traffic to be generated by the four (4) other planned development. The 2029 No-Build peak-hour traffic-flow networks are shown graphically on Figure 3 for the weekday AM and weekday PM peak hours.



XX (XX) = AM(PM) PEAK HOUR

FIGURE 3

2029 NO-BUILD CONDITIONS
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

Trip Generation

The project consists of constructing three buildings to contain a total of up to ±125,300 SF of warehouse space, ±39,000 SF of light industrial space, ±78,500 SF of manufacturing space, and ±19,800 SF of research and development space. To estimate the volume of traffic to be generated by the proposed development, trip generation rates published by the Institute of Transportation Engineers (ITE) *Trip Generation Manual*[6] were used for Land Use Code (LUC) 150 (Warehouse), LUC 110 (Light Industrial), LUC 140 (Manufacturing), and LUC 760 (Research & Development Center), respectively. Table 1 summarizes the result of trip generation estimates. All trip-generation calculations are provided in the Appendix.

It should be noted that the site was previously approved for the development of three warehouse buildings totaling ±293,600 SF. Table 1 also provides a comparison of the trips generated by the currently proposed development in comparison to the previously approved development on the site.

As shown in Table 1, the currently proposed development is anticipated to generate an additional 84 vehicle trips (68 entering and 16 exiting) during the weekday AM peak hour and an additional 85 vehicle trips (21 entering and 64 exiting) during the weekday PM peak hour.

6 *Trip Generation Manual, 11th Edition*; Institute of Transportation Engineers; Washington, DC; 2021.

TABLE 1
PROPOSED TRIP-GENERATION SUMMARY

Time Period / Direction	Previously Approved Development [a]	Currently Proposed Development					Net Change in Trips [g]
		Warehouse (LUC 150) [b]	Manufacturing (LUC 140) [c]	Light Industrial (LUC 110) [d]	R&D (LUC 760) [e]	Total Trips [f]	
Weekday Daily	**462**	236	372	190	220	**1,018**	**556**
Weekday AM Peak Hour							
Enter	**44**	30	40	26	16	**112**	**68**
Exit	**13**	9	13	3	4	**29**	**16**
Total	**57**	39	53	29	20	**141**	**84**
Weekday PM Peak Hour							
Enter	**16**	12	18	4	3	**37**	**21**
Exit	**43**	30	40	21	16	**107**	**64**
Total	**59**	42	58	25	19	**144**	**85**

[a] Obtained from Table 1 of *Upton Parking, Wilmington, Massachusetts – Trip Generation Comparison*; prepared by Greenman-Pedersen, Inc.; dated October 1, 2021.
[b] Based on ITE trip rates for LUC 150 for ±125,300 SF.
[c] Based on ITE trip rates for LUC 140 for ±78,500 SF.
[d] Based on ITE trip rates for LUC 110 for ±39,000 SF.
[e] Based on ITE trip rates for LUC 760 for ±19,800 SF.
[f] Sum of Proposed Warehouse, Manufacturing, Light Industrial, and R&D Trips.
[g] Currently Proposed Development Trips minus Previously Approved Development Trips.

Trip Distribution

Having estimated project-generated vehicle trips, the next step is to determine the distribution of project traffic and assign these trips to the local roadway network. The directional distribution of site traffic was based on the trip distribution patterns contained in the *Response to Comments on the TIAS*[7] prepared for the previously permitted Upton Park development, which was reviewed and approved by the Town's peer review consultant. Table 2 summarizes the results of the trip distribution estimates. All trip distribution data are provided in the Appendix.

TABLE 2
Trip Distribution Summary

Roadway	Direction To/From	Percentage Trips to/from
Route 125	West	15%
Route 125	East	10%
I-93	North	30%
I-93	South	30%
Andover Street	North	5%
Andover Street	South	10%
TOTAL	**--**	**100%**

Build Traffic Volumes

Based on the traffic generation and distribution estimates for this project, the traffic volumes associated with the proposed development were assigned to the roadway network. The site-generated traffic networks are shown on Figures 4A and 4B for the weekday AM and weekday PM peak hours, respectively. The site-generated traffic volumes were then combined with the 2029 No-Build traffic volumes to develop the 2029 Build peak-hour traffic-volume networks. The 2029 Build weekday AM and weekday PM peak hour traffic volumes are illustrated on Figure 5.

[7] *Response to Comments from TEC, Inc., 36 and 38 Upton Drive, Wilmington, MA;* Prepared by Greenman-Pedersen, Inc.; July 22, 2019.

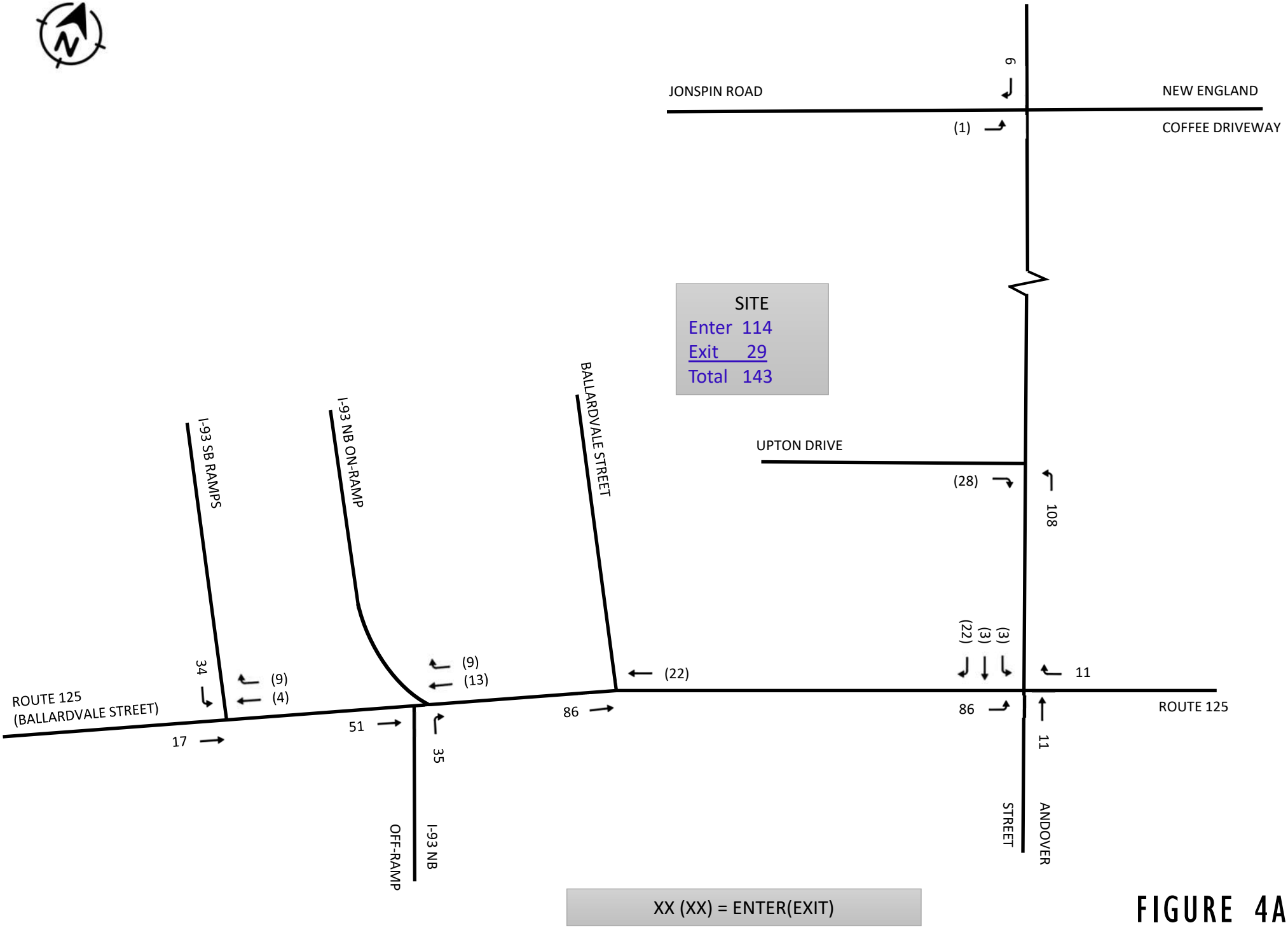


FIGURE 4A

AM SITE-GENERATED WEEKDAY PEAK HOUR TRAFFIC VOLUMES

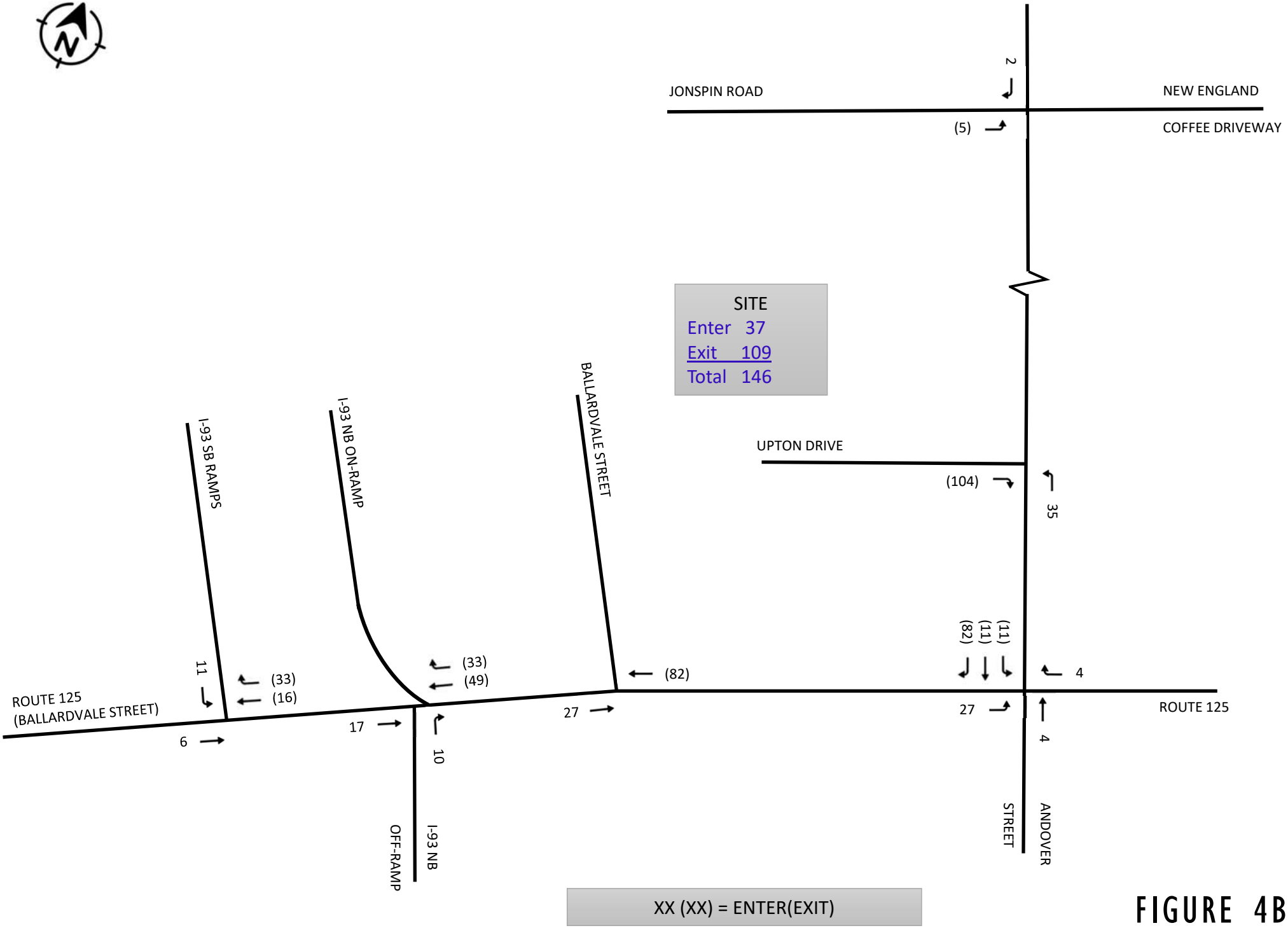
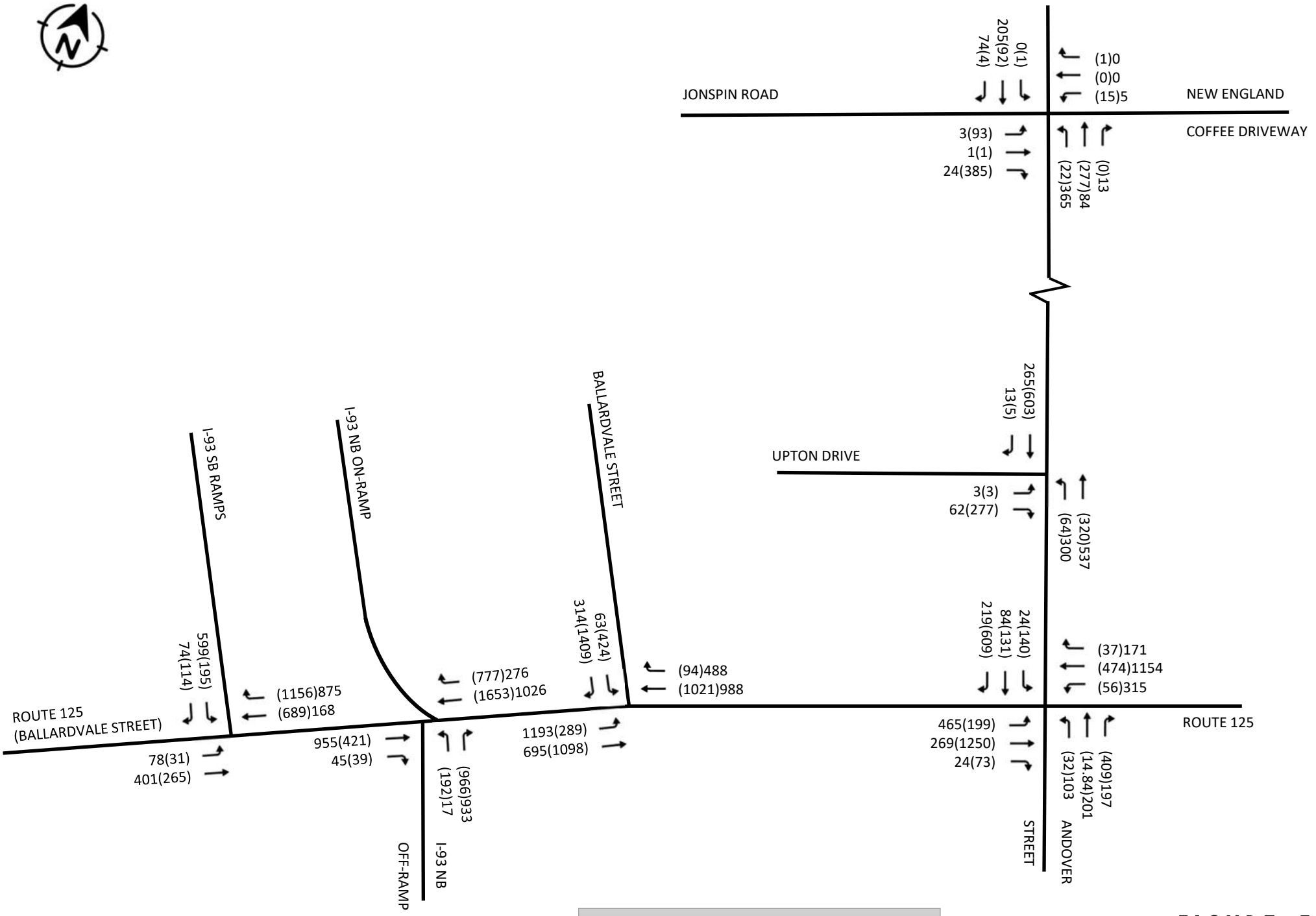


FIGURE 4B

PM SITE-GENERATED WEEKDAY PEAK HOUR TRAFFIC VOLUMES



XX (XX) = AM(PM) PEAK HOUR

FIGURE 5

2029 BUILD CONDITIONS
WEEKDAY PEAK HOUR TRAFFIC VOLUMES

CAPACITY AND QUEUE ANALYSIS

Capacity and queue analyses were conducted at all study area locations under 2022 Existing, 2029 No-Build, and 2029 Build traffic-volume conditions. The impact of site-generated traffic can be measured by comparing 2029 No-Build conditions to 2029 Build conditions.

Methodology

The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM)[8] and is described in the Appendix. The TIAS utilizes the HCM 2000 methodology at the signalized intersection due to the fact that *HCM* methodology does not support non-NEMA signal phasing provided at the signalized study rea intersections. MassDOT has recognized such inefficiencies in the HCM 6 method and still accepts the HCM 2000 results as the most recently previously approved method for this scenario. However, the HCM 6 methodology was used for all unsignalized intersections within the study area to utilize the most recent analysis methodology.

For signalized intersections, the maximum back of queue during a typical (average) signal cycle and a 95th percentile signal cycle were calculated for each lane group during the peak periods studied. The back of queue is the length of a backup of vehicles from the stop line of a signalized intersection to the last vehicle in the queue that is required to stop, regardless of the signal indication. The length of this queue depends on a number of factors including signal timing, vehicle arrival patterns, and the saturation flow rate. For unsignalized intersections, the 95th percentile queue represents the length of queue of the critical minor-street movement that is not expected to be exceeded 95 percent of the time during the analysis period (typically one hour). In this case, the queue length is a function of the capacity of the movement and the movement's degree of saturation.

Analysis Results

The results of the level-of-service (LOS) and queue analyses are shown in Table 3 and are discussed below. Capacity and queue analyses were conducted at the study area intersections utilizing *Synchro* software.[9] The capacity and queue analysis worksheets for all conditions are provided in the Appendix.

Route 125 (Ballardvale Street) at Route 93 SB Ramps

All movements at this intersection are anticipated to operate at acceptable levels of service (LOS D or better) under 2029 No-Build and Build conditions during the weekday AM and PM peak hours. The additional traffic generated by the proposed mixed commercial development is not anticipated to increase delay on any given movement by more than one second per vehicle and not increase queues on any approach by more than one vehicle as compared to the 2029 No-Build condition.

Route 125 (Ballardvale Street) at Route 93 NB Ramps

All movements at this intersection are anticipated to operate at acceptable levels of service (LOS D or better) under all analysis conditions. The additional traffic generated by the proposed mixed commercial development is not anticipated to increase delay on any given movement by more than four seconds per

[8] *Highway Capacity Manual 2000*, Transportation Research Board; Washington, D.C.; 2000.

[9] *Synchro plus SimTraffic 10*; Trafficware LLC.; Sugar Land, TX; 2017.

vehicle or increase queues on any approach by more than two vehicles as compared to the 2029 No-Build condition.

Route 125 (Ballardvale Street) at Ballardvale Street

The Route 125 southbound through / right-turn movement currently operates at level-of-service (LOS) E during the weekday AM peak hour and is anticipated to operate at LOS F under 2029 No-Build conditions. However, the additional traffic generated by the proposed mixed commercial development is not anticipated to increase delay on this movement by more than eight (8) seconds per vehicle or increase queues by more than one vehicle. All other movements through the intersection are anticipated to operate at LOS E or better during all analysis time periods. The additional traffic generated by the proposed mixed commercial development will not increase delays on any other movements by more than seven (7) seconds per vehicle or increase queues by more than two vehicles as compared to the 2029 No-Build condition.

Route 125 at Andover Street

Several movements at this intersection are anticipated to operate at LOS E or F during the weekday AM and PM peak hours under 2029 No-Build and Build conditions, particularly the Andover Street northbound and southbound left-turn/through movements and Route 125 eastbound left and westbound right-turn/through movements. However, the additional traffic generated by the proposed warehouse / office development is not expected to increase overall intersection delay by more 13 seconds per vehicle during the weekday AM peak hour or by more than four (4) seconds per vehicle during the weekday PM peak hour. Queues on all approaches are not anticipated to increase by more than five vehicles.

Although MassDOT recently installed a new traffic signal controller at this intersection, it is currently running the same timing plan all day long, resulting in inefficient traffic operations during the weekday PM peak hour. By implementing separate time-of-day plans at the intersection, green time can be better allocated to each phase throughout the day and the signal timings can be optimized for the traffic volumes in each peak time period. As shown in Table 3, with implementation of the separate time-of-day plans, all movements through the intersection are anticipated to operate under capacity (V/C <1.0) and at LOS D or better during the weekday PM peak hour. Therefore, independent of the proposed development, GPI recommends that MassDOT implement time-of-day plans within the new traffic signal controller to optimize operations at this intersection. The developer for the proposed commercial development at 30 Upton Drive has committed to contacting MassDOT to implement the recommended signal timing modifications as a condition of approval.

Andover Street at Upton Drive

Although traffic exiting left from Upton Drive onto Andover Street is expected to experience LOS F during the weekday AM peak hour under 2029 Build conditions, the volume-to-capacity (V/C) ratio will be well below 1.00, indicating there will be more than adequate capacity to accommodate the anticipated traffic volumes. In addition, queues are not expected to exceed seven vehicles exiting Upton Drive

The intersection of Andover Street / Upton Drive is located in close proximity to the signalized intersection of Route 125 / Andover Street. During the weekday AM and PM peak hours, queues from the signal extend along Andover Street beyond Upton Drive. As part of the approval of the previously permitted warehouse / office development at #36 & #38 Upton Drive, the Applicant was required to install DO NOT BLOCK INTERSECTION pavement markings and signage on Andover Street southbound at the intersection with Upton Drive to ensure vehicles stopped at the signal do not block vehicles from exiting or entering Upton Drive. In addition, large trucks occasionally drive over the center median island or curb when turning on and off Upton Drive. To improve turning maneuverability for large trucks, the Applicant was required to remove a portion of the raised landscaped island at the intersection with Andover Street and replace this with a striped or scored concrete island that is mountable by trucks. The Applicant continues to be committed to implementing these modifications at this intersection as mitigation for the proposed mixed

commercial development. A conceptual improvement plan depicting these modifications is provided within the Appendix

Andover Street at Jonspin Road

Although traffic exiting the New England Coffee Driveway onto Andover Street is expected to experience LOS F during the weekday AM peak hour under 2029 No-Build and Build conditions, the proposed mixed commercial development is not anticipated to increase traffic volumes on the New England Coffee Driveway. In addition, the volume-to-capacity (V/C) ratio will be well below 1.00, indicating there will be more than adequate capacity to accommodate the anticipated traffic volumes. Queues on this approach are not expected to exceed one vehicle. All other movements at this intersection are anticipated to operate at acceptable levels of service (LOS D or better) under all analysis conditions.

TABLE 3
Intersection Capacity Analysis Summary

Intersection/Peak Hour/Lane Group	2022 Existing				2029 No-Build				2029 Build – Previously Approved Development				2029 Build – Currently Proposed Development			
	V/C [a]	Del. [b]	LOS [c]	V/C	V/C	V/C	V/C	Queue	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
Route 125 (Ballardvale Street) / Route 93 SB Ramps																
Weekday AM:																
Route 93 SB Ramps EBL	0.79	53.4	D	210/256	0.79	52.5	D	227/273	0.80	52.2	D	232/278	0.80	51.9	D	240/286
Route 93 SB Ramps EBR	0.04	0.0	A	<25/<25	0.04	0.0	A	<25/<25	0.04	0.0	A	<25/<25	0.04	0.0	A	<25/<25
Route 125 NBL	0.09	5.7	A	<25/36	0.10	6.2	A	<25/40	0.10	6.4	A	<25/41	0.10	6.7	A	<25/42
Route 125 NBT	0.28	7.1	A	94/163	0.31	8.1	A	110/189	0.31	8.3	A	115/195	0.33	8.7	B	121/206
Route 125 SBT	0.14	10.0	B	49/94	0.16	11.0	B	56/107	0.16	11.2	B	58/109	0.17	11.6	B	60/113
Route 125 SBR	0.54	1.4	A	<25/<25	0.59	1.7	A	<25/<25	0.59	1.8	A	<25/<25	0.60	1.8	A	<25/<25
Overall Intersection	**0.65**	**17.0**	**B**	**--/--**	**0.70**	**17.1**	**B**	**--/--**	**0.70**	**17.3**	**B**	**--/--**	**0.71**	**17.6**	**B**	**--/--**
Weekday PM:																
Route 93 SB Ramps EBL	0.50	33.3	C	73/673	0.53	33.5	C	49/78	0.53	33.4	C	50/79	0.55	33.5	C	52/81
Route 93 SB Ramps EBR	0.06	0.1	A	<25/<25	0.07	0.1	A	<25/<25	0.07	0.1	A	<25/<25	0.07	0.1	A	<25/<25
Route 125 NBL	0.08	4.9	A	<25/<25	0.09	5.9	A	<25/<25	0.10	6.0	A	<25/<25	0.10	6.3	A	<25/<25
Route 125 NBT	0.19	3.7	A	32/64	0.21	3.9	A	36/72	0.21	4.0	A	37/73	0.22	4.1	A	38/75
Route 125 SBT	0.57	10.3	B	122/225	0.64	11.8	B	188/226	0.65	12.0	B	192/225	0.66	12.1	B	199/225
Route 125 SBR	0.71	1.6	A	35//518	0.77	1.8	A	433/518	0.78	1.8	A	462/519	0.79	1.8	A	478/519
Overall Intersection	**0.91**	**6.7**	**A**	**--/--**	**0.98**	**7.3**	**A**	**--/--**	**0.99**	**7.3**	**A**	**--/--**	**1.01**	**7.5**	**A**	**--/--**
Route 125 (Ballardvale Street) / Route 93 NB Ramps																
Weekday AM:																
Route 93 NB Ramps WBL	0.03	23.4	C	<25/28	0.04	27.1	C	<25/36	0.04	28.1	C	<25/37	0.04	29.6	C	<25/37
Route 93 NB Ramps WBR	0.63	15.3	B	172/343	0.69	19.0	B	239/422	0.70	19.9	B	253/439	0.73	21.7	C	274/469
Route 125 NBT	0.79	30.0	C	221/351	0.79	32.1	C	253/442	0.80	33.2	C	267/468	0.81	33.5	C	292/488
Route 125 NBR	0.02	0.0	A	<25/<25	0.03	0.0	A	<25/<25	0.03	0.0	A	<25/<25	0.03	0.0	A	<25/<25
Route 125 SBT	0.48	10.2	B	160/201	0.50	10.5	B	182/220	0.50	10.6	B	183/221	0.49	10.4	B	185/222
Route 125 SBR	0.19	0.3	A	<25/<25	0.21	0.4	A	<25/<25	0.21	0.4	A	<25/<25	0.22	0.4	A	<25/<25
Overall Intersection	**0.75**	**16.4**	**B**	**--/--**	**0.79**	**18.3**	**B**	**--/--**	**0.80**	**18.9**	**B**	**--/--**	**0.81**	**19.5**	**B**	**--/--**
Weekday PM:																
Route 93 NB Ramps WBL	0.32	20.2	C	72/125	0.36	20.9	C	79/136	0.36	20.9	C	79/136	0.36	20.9	C	79/136
Route 93 NB Ramps WBR	0.66	13.4	B	201/201	0.70	13.6	B	218/218	0.70	13.7	B	219/219	0.70	13.6	B	220/220
Route 125 NBT	0.39	22.6	C	95/151	0.45	24.4	C	106/166	0.46	24.5	C	109/168	0.48	25.0	C	112/173
Route 125 NBR	0.02	0.0	A	<25/<25	0.02	0.0	A	<25/<25	0.02	0.0	A	<25/<25	0.02	0.0	A	<25/<25
Route 125 SBT	0.87	23.2	C	344/449	0.93	27.6	C	398/581	0.94	29.1	C	407/593	0.96	31.5	C	422/611
Route 125 SBR	0.48	1.1	A	<25/<25	0.52	1.3	A	<25/<25	0.53	1.3	A	<25/<25	0.55	1.4	A	<25/<25
Overall Intersection	**0.88**	**16.2**	**B**	**--/--**	**0.94**	**18.3**	**B**	**--/--**	**0.95**	**18.9**	**B**	**--/--**	**0.96**	**20.0**	**B**	**--/--**

[a] Volume-to-capacity ratio.
[b] Average control delay in seconds per vehicle.
[c] Level of service.
[d] 50th/95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

TABLE 3 (CONTINUED)
Intersection Capacity Analysis Summary

Intersection/Peak Hour/Lane Group	2022 Existing				2029 No-Build				2029 Build – Previously Approved Development				2029 Build – Currently Proposed Development				2029 Build with Improvements Currently Proposed Development			
	V/C [a]	Del. [b]	LOS [c]	V/C	V/C	V/C	V/C	Queue	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
Route 125 (Ballardvale Street) / Route 125 / Ballardvale Street																				
Weekday AM:																				
Ballardvale Street EBL	0.43	50.1	D	44/94	0.46	52.1	D	51/100	0.46	52.1	D	51/100	0.46	52.1	D	51/100				
Ballardvale Street EBR	0.23	15.2	B	53/81	0.25	14.8	B	63/93	0.25	14.8	B	64/94	0.25	14.8	B	64/94				
Route 125 NBL	0.91	43.6	D	412/510	0.94	46.4	D	471/573	0.94	46.4	D	471/573	0.94	46.4	D	471/573	N/A – Same as Build			
Route 125 NBT	0.41	3.1	A	98/142	0.44	3.3	A	117/162	0.47	3.4	A	128/177	0.50	3.6	A	145/200				
Route 125 SB T/R	1.06	76.5	E	594/816	1.20	137.2	F	783/927	1.21	141.3	F	794/939	1.22	145.5	F	805/951				
Overall Intersection	**0.93**	**47.6**	**D**	**--/--**	**1.00**	**72.9**	**E**	**--/--**	**1.00**	**74.0**	**E**	**--/--**	**1.01**	**75.0**	**E**	**--/--**				
Weekday PM:																				
Ballardvale Street EBL	0.84	41.5	D	232/398	0.94	57.8	E	256/442	0.94	57.8	E	256/442	0.94	57.8	E	256/442				
Ballardvale Street EBR	0.96	35.7	D	419/611	1.08	71.7	E	549/697	1.08	72.6	E	552/700	1.08	73.7	E	555/703				
Route 125 NBL	0.59	34.9	C	80/122	066	38.1	C	87/131	0.66	38.1	D	87/131	0.66	38.1	D	87/131	N/A – Same as Build			
Route 125 NBT	0.96	35.9	D	515/842	1.02	51.1	D	668/955	1.03	53.9	D	725/968	1.05	58.9	E	747/991				
Route 125 SB T/R	0.80	28.6	C	262/339	0.82	29.0	C	293/378	0.84	30.3	C	306/395	0.88	33.0	C	328/457				
Overall Intersection	**1.06**	**34.5**	**C**	**--/--**	**1.16**	**52.3**	**D**	**--/--**	**1.17**	**53.5**	**D**	**--/--**	**1.18**	**55.6**	**E**	**--/--**				
Route 125 / Andover Street																				
Weekday AM:																				
Route 125 EBL	0.89	59.0	E	234/390	0.94	66.6	E	261/442	1.00	83.4	F	294/498	1.12	120.8	F	379/580				
Route 125 EB T/R	0.20	19.1	B	60/96	0.22	19.9	B	67/103	0.22	19.8	B	67/103	0.22	19.8	B	67/103				
Route 125 WBL	0.80	49.5	D	195/280	0.83	51.8	D	211/306	0.83	52.3	D	211/306	0.83	52.3	D	211/306				
Route 125 WB T/R	0.94	43.0	D	431/582	1.04	67.8	E	533/669	1.05	72.0	E	537/673	1.06	74.1	E	542/679				
Andover Street NB L/T	0.94	76.0	E	191/355	1.05	107.6	F	227/397	1.08	117.0	F	234/405	1.11	130.1	F	247/420	N/A – Same as Build			
Andover Street NBR	0.12	16.3	B	32/57	0.13	16.1	B	35/61	0.13	16.4	B	35/61	0.13	16.4	B	35/61				
Andover Street SB L/T	0.32	36.4	D	53/101	0.54	40.7	D	65/124	0.58	42.9	D	67/128	0.65	47.4	D	71/150				
Andover Street SBR	0.26	15.9	B	86/111	0.30	16.0	B	78/128	0.31	16.1	B	82/135	0.33	16.3	B	88/143				
Overall Intersection	**0.93**	**43.9**	**D**	**--/--**	**1.01**	**59.3**	**E**	**--/--**	**1.04**	**64.4**	**E**	**--/--**	**1.09**	**72.5**	**E**	**--/--**				
Weekday PM:																				
Route 125 EBL	0.58	36.3	D	85/140	0.62	37.7	D	92/156	0.63	37.7	D	99/166	0.62	36.1	D	108/179	0.69	40.8	D	111/179
Route 125 EB T/R	0.83	25.3	C	302/489	0.87	28.2	C	335/599	0.87	28.2	C	335/599	0.87	28.1	C	335/599	0.91	32.1	C	375/523
Route 125 WBL	0.25	35.4	D	28/62	0.27	36.0	D	31/66	0.27	36.0	D	31/66	0.27	36.1	D	31/66	0.37	39.8	D	32/71
Route 125 WB T/R	0.36	18.9	B	94/165	0.39	19.6	B	108/185	0.40	20.1	C	109/185	0.42	21.3	C	110/186	0.46	23.7	C	126/183
Andover Street NB L/T	0.45	29.7	C	82/162	0.56	32.9	C	89/182	0.58	33.6	C	90/184	0.62	34.9	C	92/203	0.42	27.0	C	88/151
Andover Street NBR	0.61	21.8	C	170/260	0.66	24.2	C	188/286	0.66	24.2	C	188/286	0.67	24.2	C	188/286	0.64	22.4	C	185/286
Andover Street SB L/T	0.83	49.9	D	121/286	1.02	95.9	F	142/347	1.06	107.2	F	154/363	1.12	128.0	F	175/385	0.86	49.5	D	153/296
Andover Street SBR	0.71	22.0	C	218/309	0.76	24.9	C	232/354	0.80	26.1	C	254/388	0.83	27.7	C	288/445	0.78	22.3	C	264/383
Overall Intersection	**0.87**	**26.1**	**C**	**--/--**	**0.96**	**31.7**	**C**	**--/--**	**0.98**	**33.0**	**C**	**--/--**	**1.01**	**35.1**	**D**	**--/--**	**0.94**	**29.8**	**C**	**--**

[a] Volume-to-capacity ratio.
[b] Average control delay in seconds per vehicle.
[c] Level of service.
[d] 50th/95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

TABLE 3 (CONTINUED)
Intersection Capacity Analysis Summary

Intersection/Peak Hour/Lane Group	2022 Existing				2029 No-Build				2029 Build – Previously Approved Development				2029 Build – Currently Proposed Development			
	V/C [a]	Del. [b]	LOS [c]	Queue [d]	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue	V/C	Del.	LOS	Queue
Andover Street / Upton Drive																
Weekday AM:																
Andover Street NB Approach	0.19	8.5	A	<25	0.20	8.7	A	<25	0.24	8.9	A	<25	0.30	9.2	A	33
Upton Drive EBL	0.03	34.9	D	<25	0.04	43.6	E	<25	0.05	54.8	F	<25	0.07	81.0	F	<25
Upton Drive EBR	0.06	10.2	B	<25	0.06	10.6	B	<25	0.08	10.7	B	<25	0.11	10.9	B	<25
Weekday PM:																
Andover Street NB Approach	0.04	9.1	A	<25	0.04	9.5	A	<25	0.06	9.6	A	<25	0.09	9.7	A	<25
Upton Drive EBL	0.02	20.5	C	<25	0.02	23.7	C	<25	0.02	25.4	D	<25	0.02	27.7	D	<25
Upton Drive EBR	0.45	18.9	C	58	0.50	21.9	C	68	0.62	26.6	D	103	0.80	39.9	E	178
Andover Street / Jonspin Road / New England Coffee Driveway																
Weekday AM:																
Andover Street NB Approach	0.36	9.5	A	40	0.39	9.9	A	48	0.39	9.9	A	48	0.40	10.0	A	48
Jonspin Road EB Approach	0.09	14.8	B	<25	0.11	16.1	C	<25	0.13	17.6	C	<25	0.13	17.6	C	<25
N.E. Coffee Driveway WB Approach	0.07	49.1	E	<25	0.10	64.4	F	<25	0.10	64.4	F	<25	0.10	64.4	F	<25
Andover Street SB Approach	0.00	0.0	A	<25	0.00	0.0	A	<25	0.00	0.0	A	<25	0.00	0.0	A	<25
Weekday PM:																
Andover Street NB Approach	0.01	7.6	A	<25	0.02	7.7	A	<25	0.02	7.7	A	<25	0.02	7.7	A	<25
Jonspin Road EB Approach	0.64	16.7	A	120	0.70	19.1	C	128	0.71	19.5	C	148	0.71	19.9	C	153
N.E. Coffee Driveway WB Approach	0.09	23.1	C	<25	0.10	27.0	D	<25	0.10	27.2	D	<25	0.10	27.2	D	<25
Andover Street SB Approach	0.00	7.8	A	<25	0.00	7.9	A	<25	0.00	7.9	A	<25	0.00	7.9	A	<25

[a] Volume-to-capacity ratio. [b] Average control delay in seconds per vehicle.
[c] Level of service. [d] 95th percentile queue length in feet per lane (assuming 25 feet per vehicle).

CONCLUSIONS

Existing and future conditions in the study area have been described, analyzed, and evaluated with respect to traffic operations and the impact of the proposed redevelopment. Conclusions of this effort are presented below.

- The site is currently a vacant vegetated lot with a gravel driveway which spurs off the southwesterly corner of Upton Drive. The site was recently approved for the construction of an approximately ±263,900 square feet (SF) warehouse distribution development within three buildings with access/egress proposed via five driveways along Upton Drive. To attract a wider range of potential tenants to the site, the developer is seeking approval for a mixed commercial development that would allow up to 19,800 SF of research and development space, 39,000 SF of light industrial space, 78,500 SF of manufacturing space, and 125,300 SF of warehousing space. Access and egress will continue to be provided via the five previously proposed site driveways.

- The currently proposed development is anticipated to generate an additional 84 vehicle trips (68 entering and 16 exiting) during the weekday AM peak hour and an additional 85 vehicle trips (21 entering and 64 exiting) during the weekday PM peak hour as compared to the previously approved warehouse distribution center.

- All movements at the signalized intersections of Route 125 (Ballardvale Street) with the I-93 Northbound (NB) and Southbound (SB) ramps are anticipated to operate at LOS D or better under all analysis conditions. The additional traffic generated by the proposed mixed commercial development is not expected to increase delay on any movement through these intersections by more than four seconds per vehicle or increase queues by more than two vehicles.

- Although some movements at the Route 125 / Ballardvale Street intersection will operate at LOS F under 2029 No-Build and Build conditions, the additional traffic generated by the proposed warehouse / office development is not anticipated to increase delay on any movement through the intersection by more than seven seconds per vehicle or increase queues by more than two vehicles.

- Similarly, although some side street movements at the unsignalized intersections of Andover Street with Upon Drive and Jonspin Road are expected to operate at LOS F under 2029 No-Build and/or Build conditions, the volume-to-capacity (V/C) ratios will be well below 1.00, indicating there will be adequate capacity to accommodate the anticipated traffic volumes. Improvements are also proposed by the Applicant at the intersection of Andover Street / Upton Drive, which include installation of DO NOT BLOCK INTERSECTION signage and pavement markings, and reconstruction of the median island on Upton Drive to better accommodate truck turns. These improvements will help to facilitate turning movements into and exiting Upton Drive.

- Several movements at the intersection of Route 125 / Andover Street are anticipated to operate at LOS E or F during the weekday AM and PM peak hours under 2029 No-Build and Build conditions. However, the additional traffic generated by the proposed mixed commercial development is not expected to increase overall delay through the intersection by more than 13 seconds per vehicle or increase queues by more than five vehicles. Although MassDOT recently installed a new traffic signal controller at this intersection, it operates with a single timing plan 24 hours per day that is designed to accommodate traffic volumes during the weekday AM peak hour. By implementing a separate timing plan for the weekday PM peak hour, all movements through the intersection can operate under capacity (V/C <1.0) and at LOS D or better during the weekday PM peak hour. The Applicant for the development at #30 Upton Drive has committed to contacting MassDOT to

implement the recommended signal timing modifications as mitigation for the proposed development.

Based on the findings above, the proposed mixed commercial development can be safely and efficiently accommodated along the existing roadway network. No additional project-specific mitigation is warranted based on the incremental impacts of the development.

- APPENDIX

- ***Conceptual Improvement Plan***
- ***Traffic Volume Adjustment Data***
- ***Trip Generation Calculations***
- ***Capacity Analysis Methodology***
- ***Capacity and Queue Analysis Worksheets***

CONCEPTUAL IMPROVEMENT PLAN

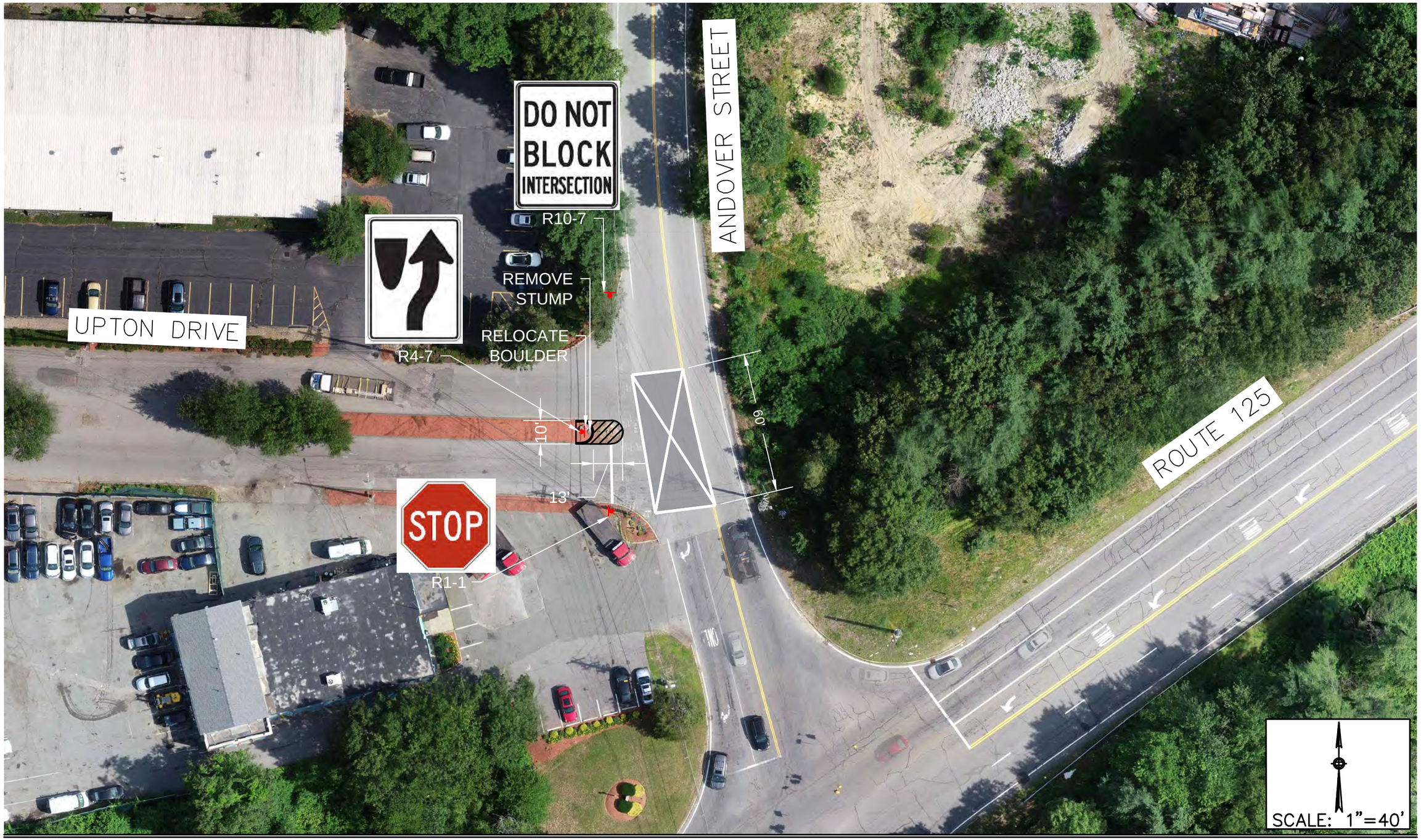


Figure 7
Conceptual Improvements

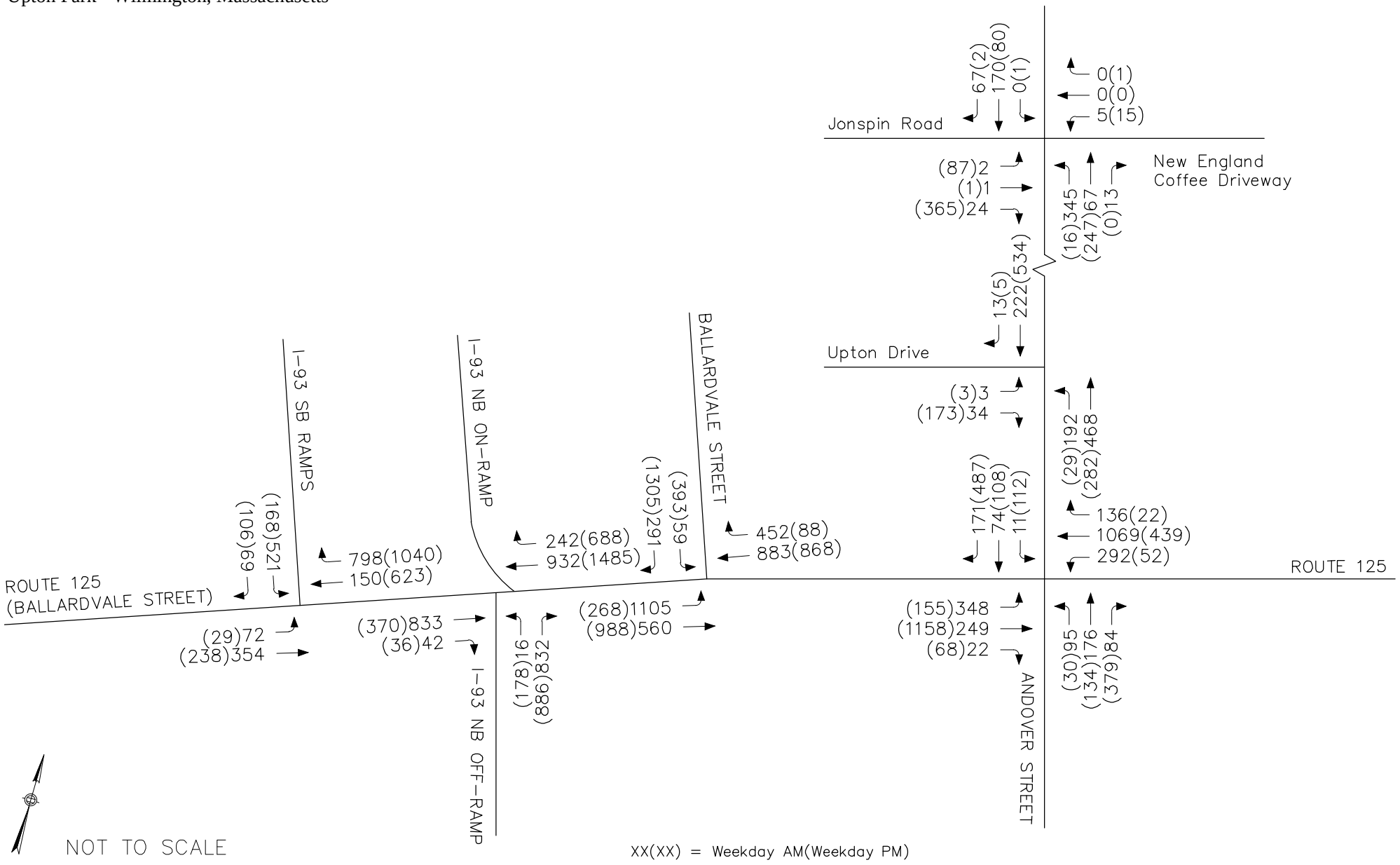


Figure 8
Entering Upton Drive



Figure 9
Exiting Upton Drive

TRAFFIC VOLUME ADJUSTMENT DATA

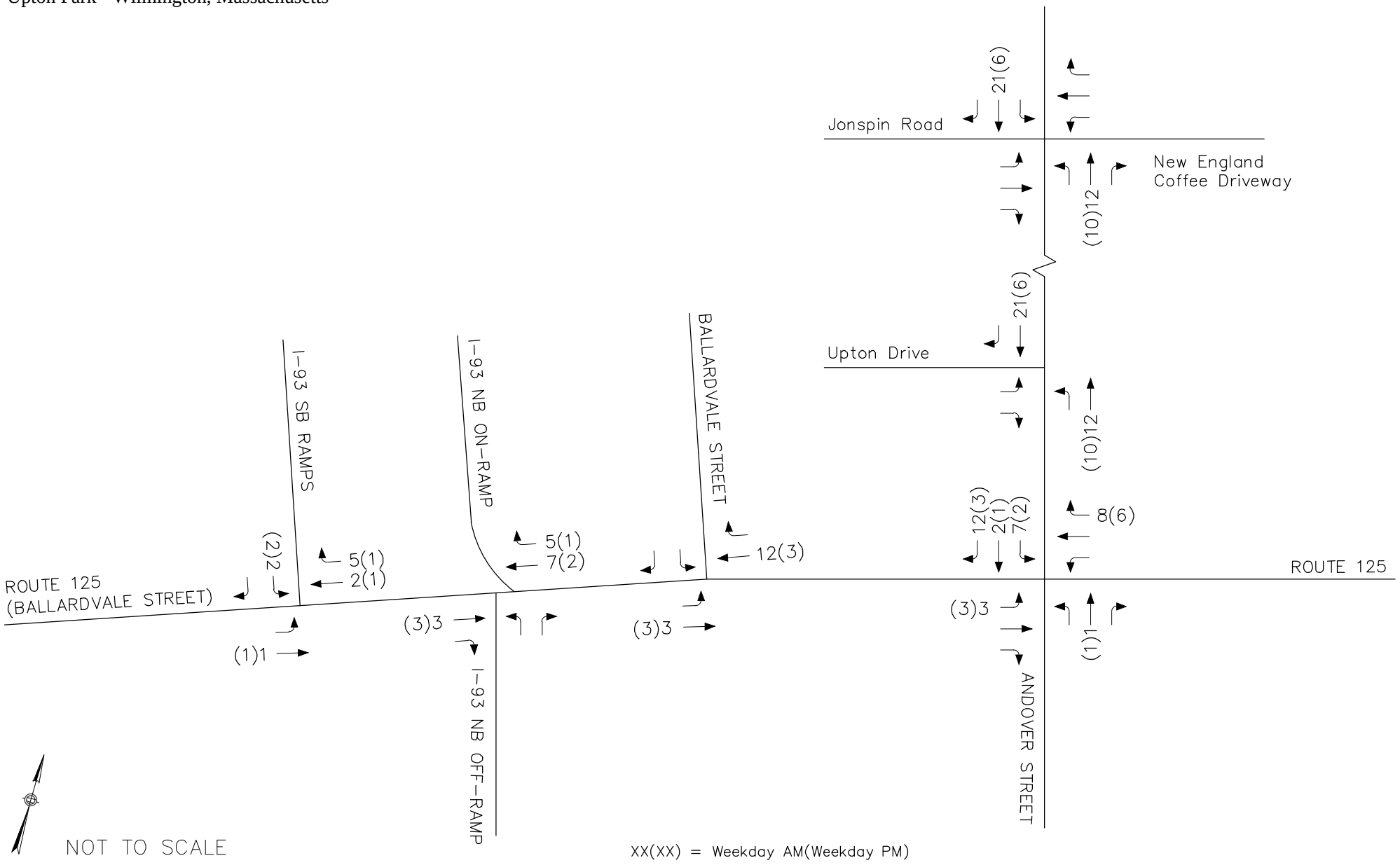


Greenman-Pedersen, Inc.

Engineering and Construction Services

Figure 2

2018 Existing
Peak Hour Traffic Volumes

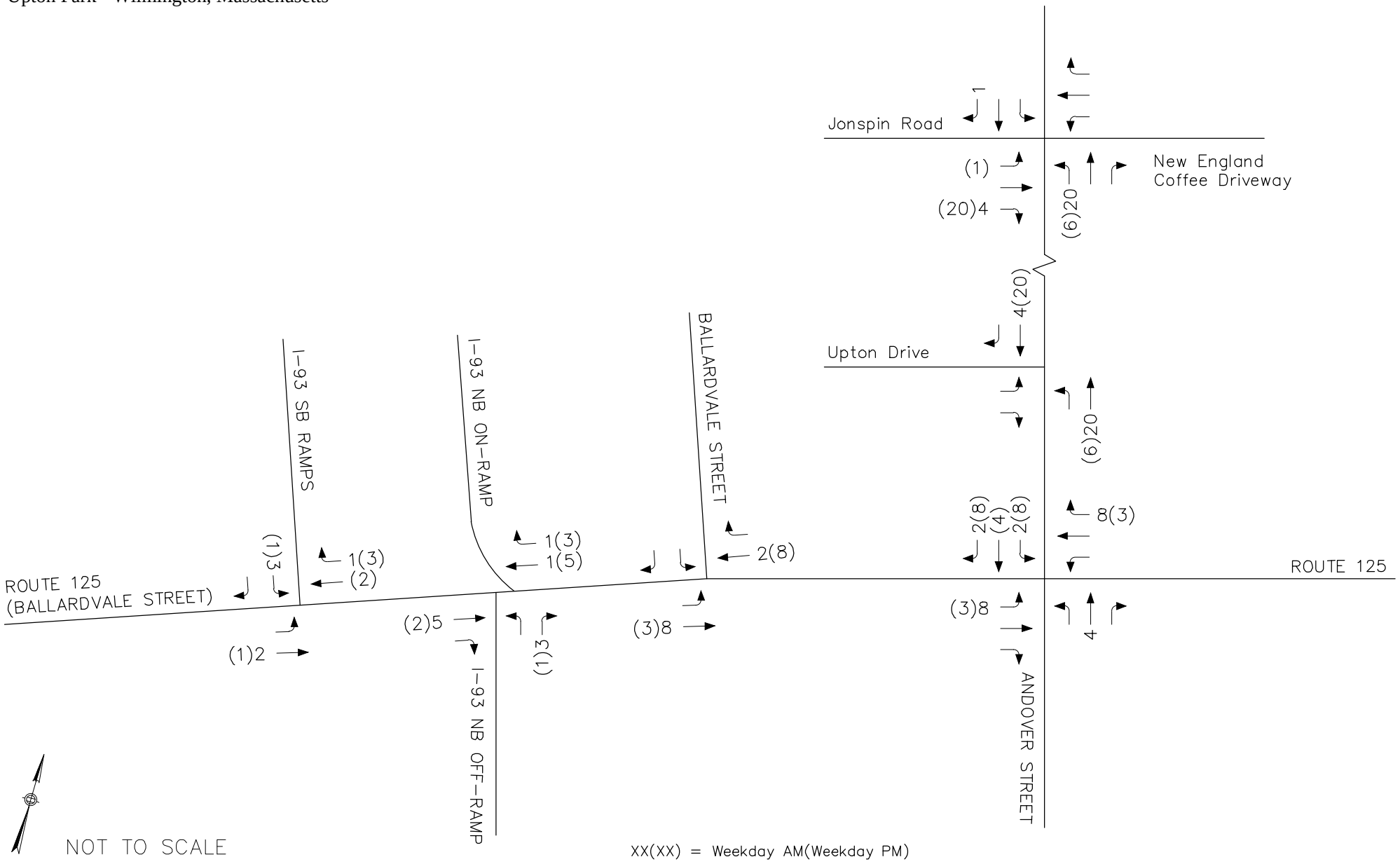


GPI Greenman-Pedersen, Inc.

Engineering and Construction Services

Figure 3A

401 Andover Street
Peak Hour Traffic Volumes

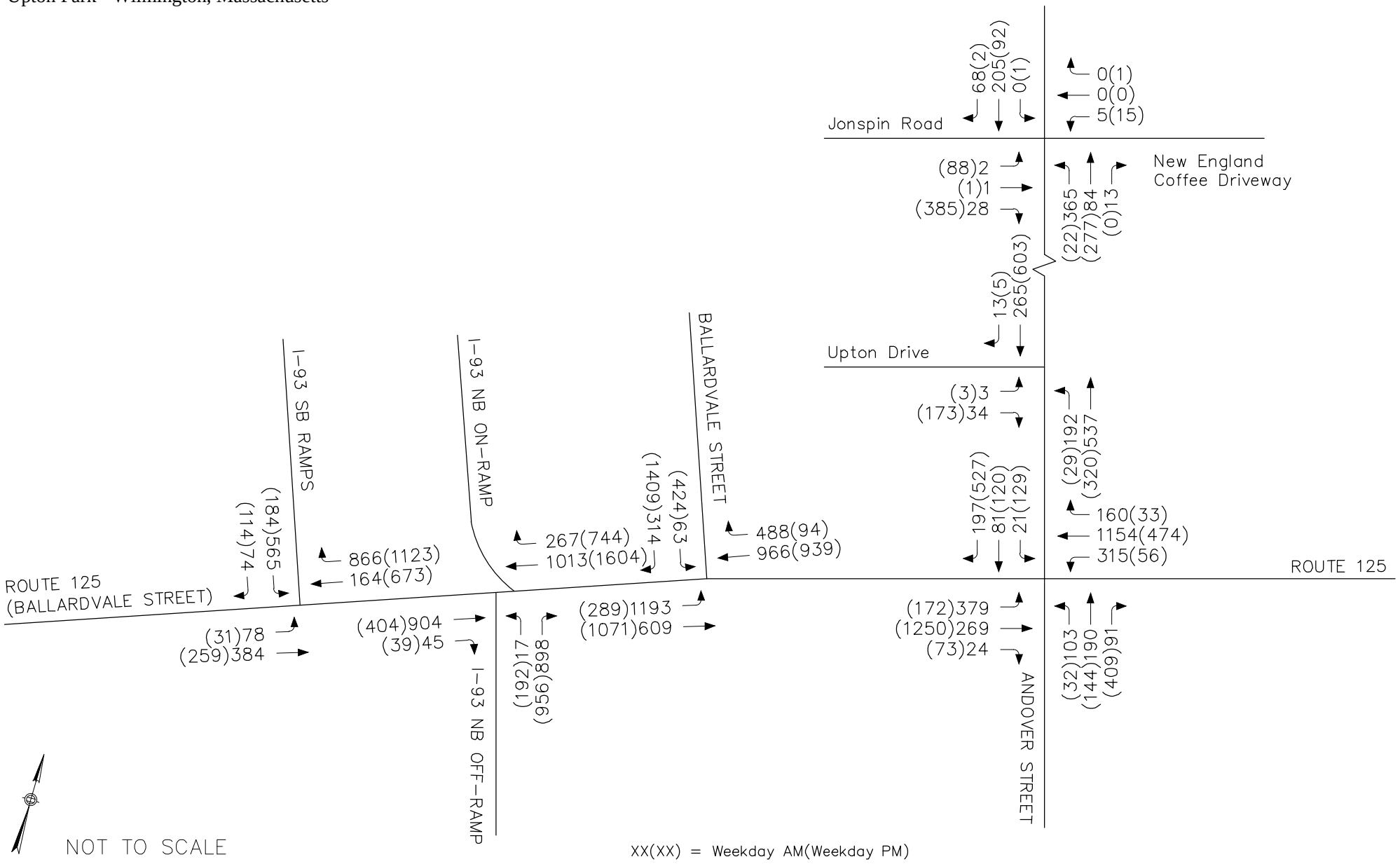


GPI Greenman-Pedersen, Inc.

Engineering and Construction Services

Figure 3B

58 Jonspin Road
Peak Hour Traffic Volumes



Greenman-Pedersen, Inc.

Engineering and Construction Services

Figure 4

2025 No-Build
Peak Hour Traffic Volumes

MassDOT Traffic Volumes

Permanent Count Station 5022 [a]
Wilmington - Route I-93 - North of Ramp Route 62 to I-93 NB

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	AADT[b]
2015	125,444	126,309	140,654	143,059	144,180	150,259	146,755	150,695	145,957	148,892	141,259	138,759	141,852
Seasonal Adj. [c]	**13.1%**	**12.3%**	**0.9%**	**-0.8%**	**-1.6%**	**-5.6%**	**-3.3%**	**-5.9%**	**-2.8%**	**-4.7%**	**0.4%**	**2.2%**	**0.0%**

Permanent Count Station 5127 [a]
Andover - Route 125 - South of Route 28

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	AADT[b]
2014	13,612	13,831	14,899	15,465	15,677	16,135	14,733	15,427	16,369	16,918	14,392	N/A	15,089
2017	N/A	15,720	16,229	17,373	17,358	17,833	16,908	16,949	17,918	18,264	17,151	17,471	17,198
Seasonal Adj. [c]		**9.3%**	**3.7%**	**-1.7%**	**-2.3%**	**-4.9%**	**2.0%**	**-0.3%**	**-5.8%**	**-8.2%**	**2.4%**	**-1.6%**	**0.0%**
Seasonal Adj. Avg		**10.8%**	**2.3%**	**-1.3%**	**-1.9%**	**-5.3%**	**-0.6%**	**-3.1%**	**-4.3%**	**-6.5%**	**1.4%**	**0.3%**	**0.0%**

[a] Based upon historical data. Source: MassDOT Traffic Volumes.

[b] Average Annual Daily Traffic.

[c] Seasonal adjustment to yearly average.

Traffic Growth Factor Worksheet

Count Stations

(Source: MassDOT Transportation Data Management System)

STA.	CITY/TOWN	ROUTE/STREET	LOCATION	2010	2011	2012	2013	2014	2015	2016	2017	Average % Growth
H8460	WILMINGTON	I-93	NORTH OF ROUTE 62	130,262	126,719	128,434	128,582	131,929	129,528	145,814	144,492	1.6%
5127	WILMINGTON	ANDOVER BYPASS	RAMP - RTE 28 SB TO TRE 125	15,210	15,173	15,312	15,008	15,292	15,659			0.6%
4105	TEWKSBURY	SALEM RD	EAST OF MAIN ST	5,375	5,965	5,884	5,938	5,679				1.5%
4112	TEWKSBURY	CHANDLER STREET	NORTH OF WHIPPLE ROAD	2,091	1,820	1,827	1,846	2,172			2,069	0.2%
5022	WILMINGTON	I-93	NORTH OF ROUTE 125	137,116		135,921	136,213	136,495	142,104	145,189	151,255	1.4%

Average Growth: 1.1%

Say **1.1%**

TRIP-GENERATION CALCULATIONS

Size	Units	Land Use
19.8	SF	LUC 760
39.0	SF	LUC 110
78.5	SF	LUC 140
125.3	SF	LUC 150

		Total Trips					Previously Approved Trips	Net Change in Trips
		LUC 760	LUC 110	LUC 140	LUC 150	TOTAL		
Weekday Daily	Entering	110	95	186	118	509	231	278
	Exiting	110	95	186	118	509	231	278
	Total	220	190	372	236	1,018	462	556
Weekday AM Peak Hour	Entering	16	26	40	30	112	44	68
	Exiting	4	3	13	9	29	13	16
	Total	20	29	53	39	141	57	84
Weekday PM Peak Hour	Entering	3	4	18	12	37	16	21
	Exiting	16	21	40	30	107	43	64
	Total	19	25	58	42	144	59	85
Saturday Daily	Entering	19	13	58	9	99	--	--
	Exiting	19	13	58	9	99	--	--
	Total	38	26	116	18	198	--	--
Saturday Midday Peak Hour	Entering	3	2	7	4	16	--	--
	Exiting	2	2	7	2	13	--	--
	Total	5	4	14	6	29	--	--

Institute of Transportation Engineers (ITE)

Land Use Code (LUC) 760 - Research and Development Center

General Urban/Suburban

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 19.800

AVERAGE WEEKDAY DAILY

T = 11.08 * (X)
T = 11.08 * 19.800
T = 219.38
T = 220 vehicle trips
with 50% (110 vpd) entering and 50% (110 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 1.03 * (X)
T = 1.03 * 19.800
T = 20.39
T = 20 vehicle trips
with 82% (16 vph) entering and 18% (4 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.98 * (X)
T = 0.98 * 19.800
T = 19.40
T = 19 vehicle trips
with 16% (3 vph) entering and 84% (16 vph) exiting.

SATURDAY DAILY

T = 1.91 * (X)
T = 1.91 * 19.800
T = 37.82
T = 38 vehicle trips
with 50% (19 vpd) entering and 50% (19 vpd) exiting.

SATURDAY PEAK HOUR OF GENERATOR

T = 0.24 * (X)
T = 0.24 * 19.800
T = 4.75
T = 5 vehicle trips
with 54% (3 vph) entering and 46% (2 vph) exiting.

Institute of Transportation Engineers (ITE)

Land Use Code (LUC) 110 - General Light Industrial

General Urban/Suburban

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 39.000

AVERAGE WEEKDAY DAILY

T = 4.87 * (X)
T = 4.87 * 39
T = 189.93
T = 190 vehicle trips
with 50% (95 vpd) entering and 50% (95 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.74 * (X)
T = 0.74 * 39.000
T = 28.86
T = 29 vehicle trips
with 88% (26 vph) entering and 12% (3 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.65 * (X)
T = 0.65 * 39.000
T = 25.35
T = 25 vehicle trips
with 14% (4 vph) entering and 86% (21 vph) exiting.

SATURDAY DAILY

T = 0.69 * (X)
T = 0.69 * 39.000
T = 26.91
T = 26 vehicle trips
with 50% (13 vpd) entering and 50% (13 vpd) exiting.

SATURDAY PEAK HOUR OF GENERATOR

$$\frac{\text{ITE LUC 110 Sunday Midday Trip Rate}}{\text{ITE LUC 110 Sunday Daily Trip Rate}} = \frac{\text{ITE LUC 110 Saturday Midday Trip Rate}}{\text{ITE LUC 110 Saturday Daily Trip Rate}}$$

$$\frac{0.69}{5.00} = \frac{(Y)}{0.69} \qquad Y = 0.10$$

T = Y * 39.000
T = 3.71
T = 4 vehicle trips
with 48% (2 vpd) entering and 52% (2 vpd) exiting.

(same distribution split as ITE LUC 110 during the Sunday midday traffic)

Institute of Transportation Engineers (ITE)

Land Use Code (LUC) 140 - Manufacturing

General Urban/Suburban

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 78.500

AVERAGE WEEKDAY DAILY

T = 4.75 * (X)
T = 4.75 * 79
T = 372.88
T = 372 vehicle trips
with 50% (186 vpd) entering and 50% (186 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.68 * (X)
T = 0.68 * 78.500
T = 53.38
T = 53 vehicle trips
with 76% (40 vph) entering and 24% (13 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.74 * (X)
T = 0.74 * 78.500
T = 58.09
T = 58 vehicle trips
with 31% (18 vph) entering and 69% (40 vph) exiting.

SATURDAY DAILY

T = 1.49 * (X)
T = 1.49 * 78.500
T = 116.97
T = 116 vehicle trips
with 50% (58 vpd) entering and 50% (58 vpd) exiting.

SATURDAY PEAK HOUR OF GENERATOR

T = 0.18 * (X)
T = 0.18 * 78.500
T = 14.13
T = 14 vehicle trips
with 52% (7 vph) entering and 48% (7 vph) exiting.

Institute of Transportation Engineers (ITE)

Land Use Code (LUC) 150 - Warehousing

General Urban/Suburban

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 125.300

AVERAGE WEEKDAY DAILY

T = 1.58 * (X) + 38.29
T = 1.58 * 125.300 + 38.29
T = 236.26
T = 236 vehicle trips
with 50% (118 vpd) entering and 50% (118 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.12* (X) + 23.62
T = 0.12 * 125.300 + 23.62
T = 38.66
T = 39 vehicle trips
with 77% (30 vph) entering and 23% (9 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.12* (X) + 26.48
T = 0.12 * 125.300 + 26.48
T = 41.52
T = 42 vehicle trips
with 28% (12 vph) entering and 72% (30 vph) exiting.

SATURDAY DAILY

T = 0.15 * (X)
T = 0.150 * 125.300
T = 18.80
T = 18 vehicle trips
with 50% (9 vpd) entering and 50% (9 vpd) exiting.

SATURDAY PEAK HOUR OF GENERATOR

T = 0.05 * (X)
T = 0.05 * 125.300
T = 6.27
T = 6 vehicle trips
with 64% (4 vph) entering and 36% (2 vph) exiting.

CAPACITY ANALYSIS METHODOLOGY

CAPACITY ANALYSIS METHODOLOGY

A primary result of capacity analysis is the assignment of levels of service to traffic facilities under various traffic flow conditions. The capacity analysis methodology is based on the concepts and procedures in the *Highway Capacity Manual* (HCM).[10] The concept of level of service (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year. A description of the operating condition under each level of service is provided below:

- *LOS A* describes conditions with little to no delay to motorists.
- *LOS B* represents a desirable level with relatively low delay to motorists.
- *LOS C* describes conditions with average delays to motorists.
- *LOS D* describes operations where the influence of congestion becomes more noticeable. Delays are still within an acceptable range.
- *LOS E* represents operating conditions with high delay values. This level is considered by many agencies to be the limit of acceptable delay.
- *LOS F* is considered to be unacceptable to most drivers with high delay values that often occur, when arrival flow rates exceed the capacity of the intersection.

Unsignalized Intersections

Levels of service for unsignalized intersections are calculated using the operational analysis methodology of the HCM. The procedure accounts for lane configuration on both the minor and major street approaches, conflicting traffic stream volumes, and the type of intersection control (STOP, YIELD, or all-way STOP control). The definition of level of service for unsignalized intersections is a function of average *control* delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for unsignalized intersections are shown in Table A-1.

Signalized Intersections

Levels of service for signalized intersections are also calculated using the operational analysis methodology of the HCM. The methodology for signalized intersections assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on average *control* delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Table A-1 summarizes the relationship between level of service and average control delay.

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[10] *Highway Capacity Manual 2000*, Transportation Research Board; Washington, D.C.; 2000.

TABLE A-1
Level-of-Service Criteria for Intersections

Level of Service	Unsignalized Intersection Criteria Average Control Delay (Seconds per Vehicle)	Signalized Intersection Criteria Average Control Delay (Seconds per Vehicle)
A	≤10	≤10
B	>10 and ≤15	>10 and ≤20
C	>15 and ≤25	>20 and ≤35
D	>25 and ≤35	>35 and ≤55
E	>35 and ≤50	>55 and ≤80
F	>50	>80

Source *Highway Capacity Manual 2000*, Transportation Research Board; Washington, D.C.; 2000. Pages 10-16 and 17-2.

For signalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to the entire intersection. For unsignalized intersections, this delay criterion may be applied in assigning level-of-service designations to individual lane groups or to individual intersection approaches.

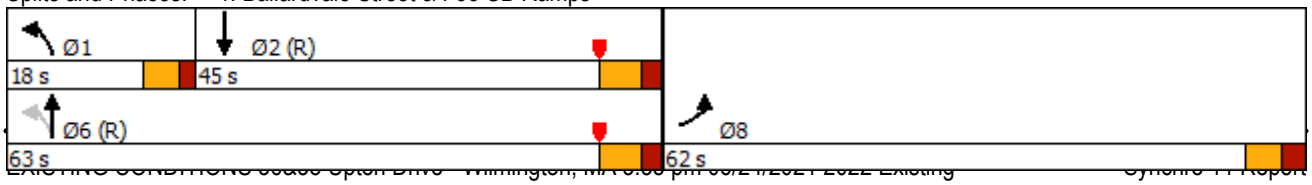
CAPACITY AND QUEUE ANALYSIS WORKSHEETS

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	521	69	72	354	150	798
Future Volume (vph)	521	69	72	354	150	798
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.950		0.621			
Satd. Flow (perm)	3433	1760	1141	1818	1727	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		45				806
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Adj. Flow (vph)	526	70	73	358	152	806
Shared Lane Traffic (%)						
Lane Group Flow (vph)	526	70	73	358	152	806
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	62.0		18.0	63.0	45.0	
Total Split (%)	49.6%		14.4%	50.4%	36.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 12 (10%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	526	70	73	358	152	806
v/c Ratio	0.79	0.04	0.09	0.28	0.14	0.54
Control Delay	56.3	0.0	6.3	7.8	11.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.3	0.0	6.3	7.8	11.4	1.4
Queue Length 50th (ft)	210	0	16	94	49	0
Queue Length 95th (ft)	256	0	36	163	94	0
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1537	1760	880	1288	1088	1482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.04	0.08	0.28	0.14	0.54

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	521	69	72	354	150	798
Future Volume (vph)	521	69	72	354	150	798
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.95	1.00	0.62	1.00	1.00	1.00
Satd. Flow (perm)	3433	1760	1140	1818	1727	1482
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	526	70	73	358	152	806
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	526	70	73	358	152	806
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	24.4	125.0	88.6	88.6	77.8	125.0
Effective Green, g (s)	24.4	125.0	88.6	88.6	77.8	125.0
Actuated g/C Ratio	0.20	1.00	0.71	0.71	0.62	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	670	1760	836	1288	1074	1482
v/s Ratio Prot	c0.15		0.00	0.20	0.09	
v/s Ratio Perm		0.04	0.06			c0.54
v/c Ratio	0.79	0.04	0.09	0.28	0.14	0.54
Uniform Delay, d1	47.8	0.0	5.6	6.6	9.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.6	0.0	0.0	0.5	0.3	1.4
Delay (s)	53.4	0.0	5.7	7.1	10.0	1.4
Level of Service	D	A	A	A	B	A
Approach Delay (s)	47.1			6.9	2.8	
Approach LOS	D			A	A	

Intersection Summary

HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

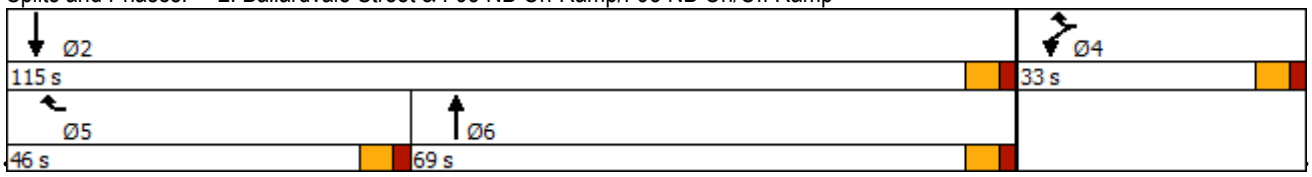
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	16	0	832	0	833	42	0	932	242
Future Volume (vph)	0	0	0	16	0	832	0	833	42	0	932	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									111			213
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Adj. Flow (vph)	0	0	0	16	0	858	0	859	43	0	961	249
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	16	0	858	0	859	43	0	961	249
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				33.0				69.0			115.0	
Total Split (%)				22.3%				46.6%			77.7%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				Min			Min	

Intersection Summary

Area Type: Other
Cycle Length: 148
Actuated Cycle Length: 87.5
Natural Cycle: 55
Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.0
Total Split (s)	46.0
Total Split (%)	31%
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	16	858	859	43	961	249
v/c Ratio	0.03	0.63	0.80	0.02	0.48	0.19
Control Delay	29.7	18.6	33.3	0.0	11.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	18.6	33.3	0.0	11.2	0.3
Queue Length 50th (ft)	6	172	221	0	160	0
Queue Length 95th (ft)	28	343	351	0	201	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	549	2048	2499	1830	3355	1301
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.42	0.34	0.02	0.29	0.19

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	16	0	832	0	833	42	0	932	242
Future Volume (vph)	0	0	0	16	0	832	0	833	42	0	932	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1703		2544		3323	1830		3406	1301
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1703		2544		3323	1830		3406	1301
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	16	0	858	0	859	43	0	961	249
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	16	0	858	0	859	43	0	961	249
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				23.6		46.4		28.6	87.0		51.4	87.0
Effective Green, g (s)				23.6		46.4		28.6	87.0		51.4	87.0
Actuated g/C Ratio				0.27		0.53		0.33	1.00		0.59	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				461		1356		1092	1830		2012	1301
v/s Ratio Prot				0.01		c0.34		c0.26			0.28	
v/s Ratio Perm									0.02			0.19
v/c Ratio				0.03		0.63		0.79	0.02		0.48	0.19
Uniform Delay, d1				23.3		14.3		26.4	0.0		10.1	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.0		1.0		3.5	0.0		0.1	0.3
Delay (s)				23.4		15.3		30.0	0.0		10.2	0.3
Level of Service				C		B		C	A		B	A
Approach Delay (s)		0.0			15.4			28.5			8.2	
Approach LOS		A			B			C			A	

Intersection Summary

HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

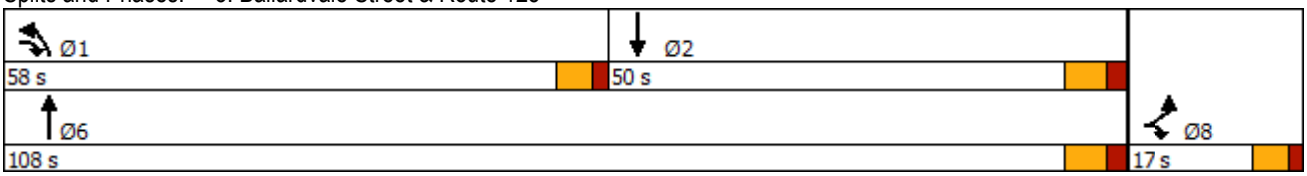
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	291	1105	560	883	452
Future Volume (vph)	59	291	1105	560	883	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.949	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	2311	3303	1759	3284	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	2311	3303	1759	3284	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		56			80	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Adj. Flow (vph)	61	303	1151	583	920	471
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	303	1151	583	1391	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	17.0		58.0	108.0	50.0	
Total Split (%)	13.6%		46.4%	86.4%	40.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 114.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	61	303	1151	583	1391
v/c Ratio	0.44	0.25	0.91	0.41	1.06
Control Delay	61.9	12.4	45.0	4.0	74.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	12.4	45.0	4.0	74.5
Queue Length 50th (ft)	44	53	412	98	~594
Queue Length 95th (ft)	94	81	510	142	#816
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	162	1379	1536	1567	1317
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.22	0.75	0.37	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	59	291	1105	560	883	452
Future Volume (vph)	59	291	1105	560	883	452
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1543	2311	3303	1759	3285	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1543	2311	3303	1759	3285	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	61	303	1151	583	920	471
RTOR Reduction (vph)	0	27	0	0	49	0
Lane Group Flow (vph)	61	276	1151	583	1342	0
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Actuated Green, G (s)	10.5	59.3	43.8	93.2	44.4	
Effective Green, g (s)	10.5	59.3	43.8	93.2	44.4	
Actuated g/C Ratio	0.09	0.52	0.38	0.81	0.39	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	141	1194	1261	1429	1271	
v/s Ratio Prot	c0.04	0.12	c0.35	0.33	c0.41	
v/s Ratio Perm						
v/c Ratio	0.43	0.23	0.91	0.41	1.06	
Uniform Delay, d1	49.3	15.2	33.6	3.0	35.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.8	0.0	10.0	0.1	41.4	
Delay (s)	50.1	15.2	43.6	3.1	76.5	
Level of Service	D	B	D	A	E	
Approach Delay (s)	21.1			30.0	76.5	
Approach LOS	C			C	E	

Intersection Summary

HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	114.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

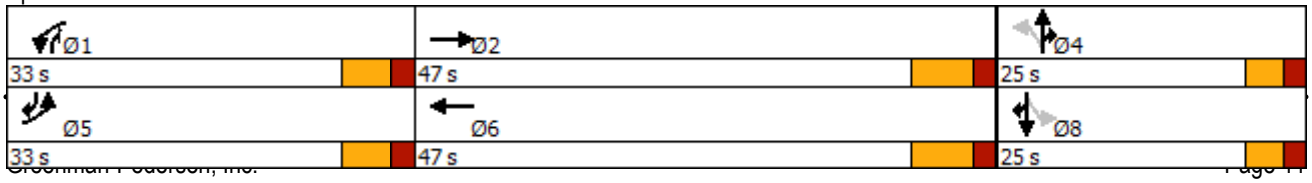
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	348	249	22	292	1069	136	95	176	84	11	74	171
Future Volume (vph)	348	249	22	292	1069	136	95	176	84	11	74	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt		0.988			0.983				0.850			0.850
Flt Protected	0.950			0.950				0.983			0.993	
Satd. Flow (prot)	1687	3334	0	1805	3474	0	0	1824	1583	0	1757	1404
Flt Permitted	0.950			0.950				0.847			0.813	
Satd. Flow (perm)	1687	3334	0	1805	3474	0	0	1572	1583	0	1439	1404
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		10										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			229	
Travel Time (s)		18.9			8.3			12.1			5.2	
Confl. Bikes (#/hr)						4						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Adj. Flow (vph)	366	262	23	307	1125	143	100	185	88	12	78	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	366	285	0	307	1268	0	0	285	88	0	90	180
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 103
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	366	285	307	1268	285	88	90	180
v/c Ratio	0.89	0.20	0.80	0.94	0.94	0.12	0.32	0.26
Control Delay	63.1	19.7	54.2	45.1	80.9	15.4	40.3	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	19.7	54.2	45.1	80.9	15.4	40.3	16.2
Queue Length 50th (ft)	234	60	195	431	191	32	53	66
Queue Length 95th (ft)	#390	96	280	#582	#355	57	101	111
Internal Link Dist (ft)		890		526	540		149	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	442	1401	473	1350	305	799	280	708
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.20	0.65	0.94	0.93	0.11	0.32	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	348	249	22	292	1069	136	95	176	84	11	74	171
Future Volume (vph)	348	249	22	292	1069	136	95	176	84	11	74	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1687	3334		1805	3474			1823	1583		1758	1404
Flt Permitted	0.95	1.00		0.95	1.00			0.85	1.00		0.81	1.00
Satd. Flow (perm)	1687	3334		1805	3474			1572	1583		1438	1404
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	366	262	23	307	1125	143	100	185	88	12	78	180
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	366	279	0	307	1268	0	0	285	88	0	90	180
Confl. Bikes (#/hr)						4						
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	25.0	43.1		21.9	40.0			19.9	46.8		19.9	49.9
Effective Green, g (s)	25.0	43.1		21.9	40.0			19.9	46.8		19.9	49.9
Actuated g/C Ratio	0.24	0.42		0.21	0.39			0.19	0.45		0.19	0.48
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	409	1396		384	1350			304	719		278	680
v/s Ratio Prot	c0.22	c0.08		0.17	c0.37				0.06			0.13
v/s Ratio Perm								c0.18			0.06	
v/c Ratio	0.89	0.20		0.80	0.94			0.94	0.12		0.32	0.26
Uniform Delay, d1	37.7	19.0		38.4	30.3			40.9	16.2		35.7	15.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	21.3	0.1		11.1	12.7			35.1	0.1		0.7	0.2
Delay (s)	59.0	19.1		49.5	43.0			76.0	16.3		36.4	15.9
Level of Service	E	B		D	D			E	B		D	B
Approach Delay (s)		41.5			44.3			61.9			22.7	
Approach LOS		D			D			E			C	

Intersection Summary

HCM 2000 Control Delay	43.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	102.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	34	192	468	222	13
Future Volume (vph)	3	34	192	468	222	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.993	
Flt Protected	0.950			0.986		
Satd. Flow (prot)	1925	1538	0	2039	1929	0
Flt Permitted	0.950			0.986		
Satd. Flow (perm)	1925	1538	0	2039	1929	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1258			229	1411	
Travel Time (s)	34.3			4.5	32.1	
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	12%	2%	5%	11%	8%
Adj. Flow (vph)	4	42	237	578	274	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	42	0	815	290	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	34	192	468	222	13
Future Vol, veh/h	3	34	192	468	222	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	12	2	5	11	8
Mvmt Flow	4	42	237	578	274	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1334	282	290	0	-	0
Stage 1	282	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	171	734	1272	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	339	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	124	734	1272	-	-	-
Mov Cap-2 Maneuver	124	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	339	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.2	2.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1272	-	124	734	-	-
HCM Lane V/C Ratio	0.186	-	0.03	0.057	-	-
HCM Control Delay (s)	8.5	0	34.9	10.2	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.1	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	24	5	0	0	345	67	13	0	170	67
Future Volume (vph)	2	1	24	5	0	0	345	67	13	0	170	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.880						0.996			0.962	
Flt Protected		0.996			0.950			0.961				
Satd. Flow (prot)	0	1468	0	0	1705	0	0	1994	0	0	2057	0
Flt Permitted		0.996			0.950			0.961				
Satd. Flow (perm)	0	1468	0	0	1705	0	0	1994	0	0	2057	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		518			544			1411			503	
Travel Time (s)		14.1			14.8			27.5			11.4	
Confl. Bikes (#/hr)						2						1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	0%	100%	29%	20%	0%	0%	2%	8%	15%	0%	1%	0%
Adj. Flow (vph)	3	1	31	6	0	0	448	87	17	0	221	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	6	0	0	552	0	0	308	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	1	24	5	0	0	345	67	13	0	170	67
Future Vol, veh/h	2	1	24	5	0	0	345	67	13	0	170	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	0	100	29	20	0	0	2	8	15	0	1	0
Mvmt Flow	3	1	31	6	0	0	448	87	17	0	221	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1257	1265	265	1273	1300	96	308	0	0	104	0	0
Stage 1	265	265	-	992	992	-	-	-	-	-	-	-
Stage 2	992	1000	-	281	308	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.49	7.3	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.561	3.68	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	149	110	713	132	163	966	1253	-	-	1500	-	-
Stage 1	745	542	-	274	326	-	-	-	-	-	-	-
Stage 2	299	221	-	688	664	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	105	68	713	88	101	966	1253	-	-	1500	-	-
Mov Cap-2 Maneuver	105	68	-	88	101	-	-	-	-	-	-	-
Stage 1	462	542	-	170	202	-	-	-	-	-	-	-
Stage 2	185	137	-	656	664	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.8	49.1	7.7	0
HCM LOS	B	E		

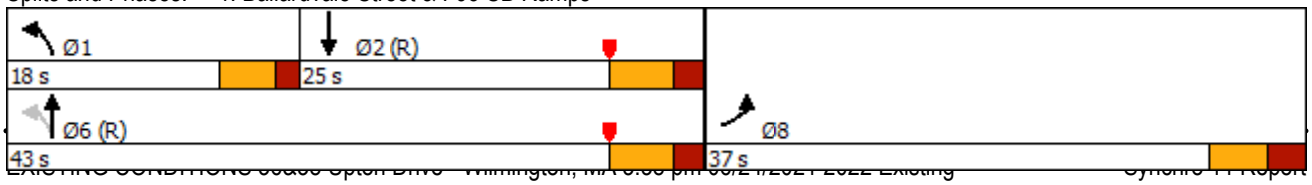
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1253	-	-	401	88	1500	-	-
HCM Lane V/C Ratio	0.358	-	-	0.087	0.074	-	-	-
HCM Control Delay (s)	9.5	0	-	14.8	49.1	0	-	-
HCM Lane LOS	A	A	-	B	E	A	-	-
HCM 95th %tile Q(veh)	1.6	-	-	0.3	0.2	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	168	106	29	238	623	1040
Future Volume (vph)	168	106	29	238	623	1040
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.950		0.284			
Satd. Flow (perm)	3019	1830	487	1837	1881	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		115				826
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Adj. Flow (vph)	183	115	32	259	677	1130
Shared Lane Traffic (%)						
Lane Group Flow (vph)	183	115	32	259	677	1130
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	37.0		18.0	43.0	25.0	
Total Split (%)	46.3%		22.5%	53.8%	31.3%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 2 (3%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	183	115	32	259	677	1130
v/c Ratio	0.50	0.06	0.07	0.19	0.54	0.71
Control Delay	37.5	0.1	3.4	4.1	10.7	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	0.1	3.4	4.1	10.7	8.9
Queue Length 50th (ft)	45	0	3	32	122	358
Queue Length 95th (ft)	73	0	11	64	m225	m518
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1169	1830	547	1339	1258	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.06	0.06	0.19	0.54	0.71

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	168	106	29	238	623	1040
Future Volume (vph)	168	106	29	238	623	1040
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.95	1.00	0.28	1.00	1.00	1.00
Satd. Flow (perm)	3019	1830	488	1837	1881	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	183	115	32	259	677	1130
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	183	115	32	259	677	1130
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	9.7	80.0	58.3	58.3	50.5	80.0
Effective Green, g (s)	9.7	80.0	58.3	58.3	50.5	80.0
Actuated g/C Ratio	0.12	1.00	0.73	0.73	0.63	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	366	1830	395	1338	1187	1583
v/s Ratio Prot	0.06		0.00	0.14	0.36	
v/s Ratio Perm		0.06	0.06			c0.71
v/c Ratio	0.50	0.06	0.08	0.19	0.57	0.71
Uniform Delay, d1	32.9	0.0	4.8	3.4	8.5	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.07	1.00
Incremental Delay, d2	0.4	0.1	0.0	0.3	1.2	1.6
Delay (s)	33.3	0.1	4.9	3.7	10.3	1.6
Level of Service	C	A	A	A	B	A
Approach Delay (s)	20.5			3.9	4.9	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

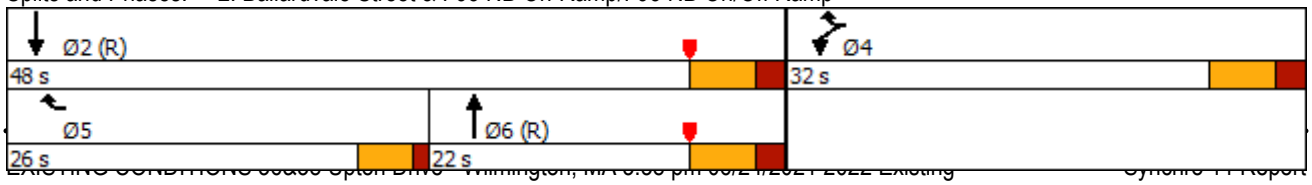
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	178	0	886	0	370	36	0	1485	688
Future Volume (vph)	0	0	0	178	0	886	0	370	36	0	1485	688
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1787	0	2617	0	3292	1830	0	3574	1546
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1787	0	2617	0	3292	1830	0	3574	1546
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									184			706
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	6%	0%	0%	1%	1%
Adj. Flow (vph)	0	0	0	193	0	963	0	402	39	0	1614	748
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	193	0	963	0	402	39	0	1614	748
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				32.0				22.0			48.0	
Total Split (%)				40.0%				27.5%			60.0%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				C-Min			C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow, Master Intersection
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	9.5
Total Split (s)	26.0
Total Split (%)	33%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	193	963	402	39	1614	748
v/c Ratio	0.32	0.68	0.39	0.02	0.87	0.48
Control Delay	21.9	15.9	24.0	0.0	23.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	15.9	24.0	0.0	23.9	1.1
Queue Length 50th (ft)	72	201	95	0	344	0
Queue Length 95th (ft)	125	195	151	0	449	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	601	1692	1022	1830	1886	1546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.57	0.39	0.02	0.86	0.48

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	178	0	886	0	370	36	0	1485	688
Future Volume (vph)	0	0	0	178	0	886	0	370	36	0	1485	688
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1787		2617		3292	1830		3574	1546
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1787		2617		3292	1830		3574	1546
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	193	0	963	0	402	39	0	1614	748
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	193	0	963	0	402	39	0	1614	748
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	6%	0%	0%	1%	1%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				26.7		44.7		24.8	80.0		41.3	80.0
Effective Green, g (s)				26.7		44.7		24.8	80.0		41.3	80.0
Actuated g/C Ratio				0.33		0.56		0.31	1.00		0.52	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				596		1462		1020	1830		1845	1546
v/s Ratio Prot				0.11		c0.37		0.12			c0.45	
v/s Ratio Perm									0.02			0.48
v/c Ratio				0.32		0.66		0.39	0.02		0.87	0.48
Uniform Delay, d1				19.9		12.3		21.7	0.0		17.1	0.0
Progression Factor				1.00		1.00		0.99	1.00		1.00	1.00
Incremental Delay, d2				0.3		1.1		1.1	0.0		6.1	1.1
Delay (s)				20.2		13.4		22.6	0.0		23.2	1.1
Level of Service				C		B		C	A		C	A
Approach Delay (s)		0.0			14.5			20.6			16.2	
Approach LOS		A			B			C			B	

Intersection Summary

HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

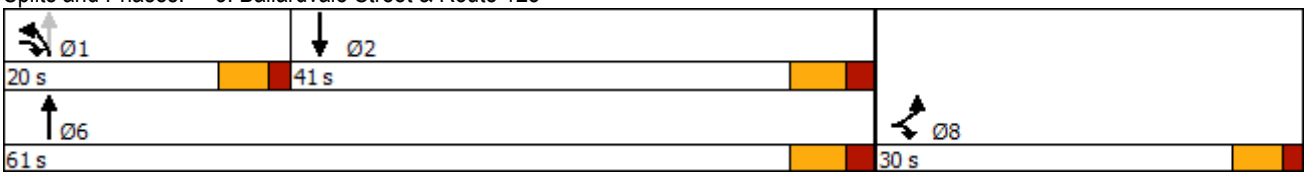
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	393	1305	268	988	868	88
Future Volume (vph)	393	1305	268	988	868	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.986	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	2787	2870	1863	3502	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	2787	2870	1863	3502	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		73			14	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Adj. Flow (vph)	423	1403	288	1062	933	95
Shared Lane Traffic (%)						
Lane Group Flow (vph)	423	1403	288	1062	1028	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	30.0		20.0	61.0	41.0	
Total Split (%)	33.0%		22.0%	67.0%	45.1%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 91
Actuated Cycle Length: 88.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	423	1403	288	1062	1028
v/c Ratio	0.84	0.96	0.59	0.96	0.80
Control Delay	47.8	37.8	40.2	38.3	30.2
Queue Delay	0.0	0.0	0.0	0.3	0.0
Total Delay	47.8	37.8	40.2	38.6	30.2
Queue Length 50th (ft)	232	419	80	515	262
Queue Length 95th (ft)	#398	#611	122	#842	339
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	502	1459	489	1162	1399
Starvation Cap Reductn	0	0	0	7	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.84	0.96	0.59	0.92	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	393	1305	268	988	868	88
Future Volume (vph)	393	1305	268	988	868	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	2870	1863	3502	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	2870	1863	3502	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	423	1403	288	1062	933	95
RTOR Reduction (vph)	0	36	0	0	9	0
Lane Group Flow (vph)	423	1367	288	1062	1019	0
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Actuated Green, G (s)	25.1	45.2	15.1	52.3	32.2	
Effective Green, g (s)	25.1	45.2	15.1	52.3	32.2	
Actuated g/C Ratio	0.28	0.51	0.17	0.59	0.36	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	502	1425	490	1102	1275	
v/s Ratio Prot	0.24	c0.49	0.10	c0.57	0.29	
v/s Ratio Perm						
v/c Ratio	0.84	0.96	0.59	0.96	0.80	
Uniform Delay, d1	29.8	20.7	33.8	17.1	25.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.7	15.0	1.2	18.7	3.4	
Delay (s)	41.5	35.7	34.9	35.9	28.6	
Level of Service	D	D	C	D	C	
Approach Delay (s)	37.0			35.7	28.6	
Approach LOS	D			D	C	

Intersection Summary

HCM 2000 Control Delay	34.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	88.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

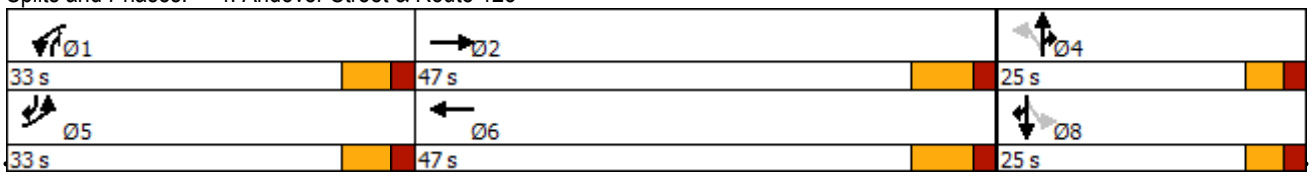
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1158	68	52	439	22	30	134	379	112	108	487
Future Volume (vph)	155	1158	68	52	439	22	30	134	379	112	108	487
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.993				0.850			0.850
Flt Protected	0.950			0.950				0.991			0.975	
Satd. Flow (prot)	1641	3544	0	1770	3477	0	0	1857	1599	0	1773	1583
Flt Permitted	0.950			0.950				0.893			0.671	
Satd. Flow (perm)	1641	3544	0	1770	3477	0	0	1674	1599	0	1220	1583
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		7										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			192	
Travel Time (s)		18.9			8.3			12.1			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Adj. Flow (vph)	163	1219	72	55	462	23	32	141	399	118	114	513
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	1291	0	55	485	0	0	173	399	0	232	513
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	25.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 87.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	163	1291	55	485	173	399	232	513
v/c Ratio	0.58	0.83	0.25	0.36	0.45	0.59	0.83	0.69
Control Delay	41.1	27.7	37.6	20.8	34.9	23.9	59.1	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	27.7	37.6	20.8	34.9	23.9	59.1	23.4
Queue Length 50th (ft)	85	302	28	94	82	170	121	218
Queue Length 95th (ft)	140	#489	62	165	162	260	#286	309
Internal Link Dist (ft)		890		526	540		112	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	509	1634	549	1599	384	974	280	965
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.79	0.10	0.30	0.45	0.41	0.83	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	1158	68	52	439	22	30	134	379	112	108	487
Future Volume (vph)	155	1158	68	52	439	22	30	134	379	112	108	487
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1641	3542		1770	3477			1857	1599		1773	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.89	1.00		0.67	1.00
Satd. Flow (perm)	1641	3542		1770	3477			1674	1599		1220	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	1219	72	55	462	23	32	141	399	118	114	513
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	163	1287	0	55	485	0	0	173	399	0	232	513
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	15.0	38.4		10.8	34.2			20.1	35.9		20.1	40.1
Effective Green, g (s)	15.0	38.4		10.8	34.2			20.1	35.9		20.1	40.1
Actuated g/C Ratio	0.17	0.44		0.12	0.39			0.23	0.41		0.23	0.46
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	3.0		4.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	281	1557		218	1362			385	657		280	727
v/s Ratio Prot	0.10	c0.36		0.03	0.14				0.25			c0.32
v/s Ratio Perm								0.10			c0.19	
v/c Ratio	0.58	0.83		0.25	0.36			0.45	0.61		0.83	0.71
Uniform Delay, d1	33.3	21.5		34.6	18.8			28.8	20.2		32.0	18.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.0	3.7		0.8	0.2			0.8	1.6		17.9	3.1
Delay (s)	36.3	25.3		35.4	18.9			29.7	21.8		49.9	22.0
Level of Service	D	C		D	B			C	C		D	C
Approach Delay (s)		26.5			20.6			24.2			30.7	
Approach LOS		C			C			C			C	

Intersection Summary

HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	87.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	173	29	282	534	5
Future Volume (vph)	3	173	29	282	534	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.999	
Flt Protected	0.950			0.995		
Satd. Flow (prot)	1925	1706	0	2037	2122	0
Flt Permitted	0.950			0.995		
Satd. Flow (perm)	1925	1706	0	2037	2122	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1277			192	1421	
Travel Time (s)	34.8			3.7	32.3	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	1%	7%	5%	1%	40%
Adj. Flow (vph)	4	211	35	344	651	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	211	0	379	657	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	173	29	282	534	5
Future Vol, veh/h	3	173	29	282	534	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	1	7	5	1	40
Mvmt Flow	4	211	35	344	651	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1068	654	657	0	-	0
Stage 1	654	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Critical Hdwy	6.4	6.21	4.17	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	2.263	-	-	-
Pot Cap-1 Maneuver	248	468	907	-	-	-
Stage 1	521	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	236	468	907	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	671	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.9	0.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	907	-	236	468	-	-
HCM Lane V/C Ratio	0.039	-	0.016	0.451	-	-
HCM Control Delay (s)	9.1	0	20.5	18.9	-	-
HCM Lane LOS	A	A	C	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0	2.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	1	365	15	0	1	16	247	0	1	80	2
Future Volume (vph)	87	1	365	15	0	1	16	247	0	1	80	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.891			0.993						0.997	
Flt Protected		0.991			0.955			0.997			0.999	
Satd. Flow (prot)	0	1871	0	0	1915	0	0	2122	0	0	2063	0
Flt Permitted		0.991			0.955			0.997			0.999	
Satd. Flow (perm)	0	1871	0	0	1915	0	0	2122	0	0	2063	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		511			525			1421			503	
Travel Time (s)		13.9			14.3			27.7			11.4	
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	2%	2%	7%	0%	0%	19%	0%	0%	0%	3%	50%
Adj. Flow (vph)	102	1	429	18	0	1	19	291	0	1	94	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	532	0	0	19	0	0	310	0	0	97	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	87	1	365	15	0	1	16	247	0	1	80	2
Future Vol, veh/h	87	1	365	15	0	1	16	247	0	1	80	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	2	2	7	0	0	19	0	0	0	3	50
Mvmt Flow	102	1	429	18	0	1	19	291	0	1	94	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	427	426	95	641	427	291	96	0	0	291	0	0
Stage 1	97	97	-	329	329	-	-	-	-	-	-	-
Stage 2	330	329	-	312	98	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.22	7.17	6.5	6.2	4.29	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.318	3.563	4	3.3	2.371	-	-	2.2	-	-
Pot Cap-1 Maneuver	541	520	962	381	523	753	1397	-	-	1282	-	-
Stage 1	914	815	-	674	650	-	-	-	-	-	-	-
Stage 2	687	646	-	688	818	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	533	511	962	208	514	753	1397	-	-	1282	-	-
Mov Cap-2 Maneuver	533	511	-	208	514	-	-	-	-	-	-	-
Stage 1	899	814	-	663	640	-	-	-	-	-	-	-
Stage 2	675	636	-	380	817	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.7	23.1	0.5	0.1
HCM LOS	C	C		

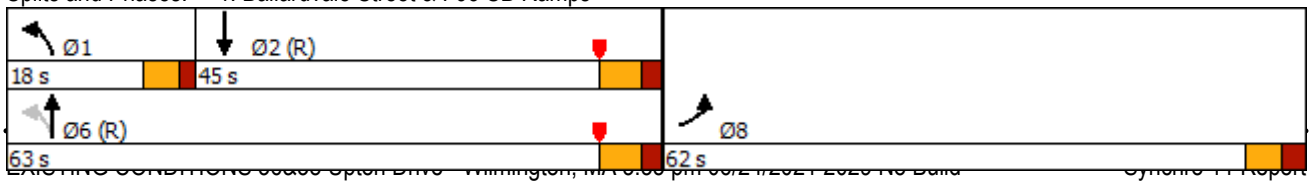
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1397	-	-	832	218	1282	-	-
HCM Lane V/C Ratio	0.013	-	-	0.641	0.086	0.001	-	-
HCM Control Delay (s)	7.6	0	-	16.7	23.1	7.8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	4.7	0.3	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	565	74	78	384	164	866
Future Volume (vph)	565	74	78	384	164	866
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.950		0.612			
Satd. Flow (perm)	3433	1760	1124	1818	1727	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		44				875
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Adj. Flow (vph)	571	75	79	388	166	875
Shared Lane Traffic (%)						
Lane Group Flow (vph)	571	75	79	388	166	875
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	62.0		18.0	63.0	45.0	
Total Split (%)	49.6%		14.4%	50.4%	36.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 12 (10%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	571	75	79	388	166	875
v/c Ratio	0.79	0.04	0.10	0.31	0.16	0.59
Control Delay	55.2	0.0	6.9	8.8	12.4	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	0.0	6.9	8.8	12.4	1.7
Queue Length 50th (ft)	227	0	18	110	56	0
Queue Length 95th (ft)	273	0	40	189	107	0
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1537	1760	854	1262	1063	1482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.04	0.09	0.31	0.16	0.59

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	565	74	78	384	164	866
Future Volume (vph)	565	74	78	384	164	866
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	3433	1760	1124	1818	1727	1482
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	571	75	79	388	166	875
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	571	75	79	388	166	875
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	26.2	125.0	86.8	86.8	75.9	125.0
Effective Green, g (s)	26.2	125.0	86.8	86.8	75.9	125.0
Actuated g/C Ratio	0.21	1.00	0.69	0.69	0.61	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	719	1760	809	1262	1048	1482
v/s Ratio Prot	c0.17		0.00	0.21	0.10	
v/s Ratio Perm		0.04	0.06			c0.59
v/c Ratio	0.79	0.04	0.10	0.31	0.16	0.59
Uniform Delay, d1	46.8	0.0	6.2	7.4	10.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.6	0.0	0.0	0.6	0.3	1.7
Delay (s)	52.5	0.0	6.2	8.1	11.0	1.7
Level of Service	D	A	A	A	B	A
Approach Delay (s)	46.4			7.7	3.2	
Approach LOS	D			A	A	

Intersection Summary

HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

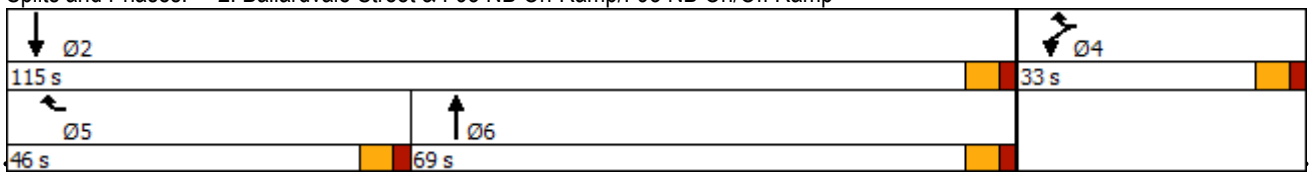
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	0	898	0	904	45	0	1013	267
Future Volume (vph)	0	0	0	17	0	898	0	904	45	0	1013	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									111			217
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Adj. Flow (vph)	0	0	0	18	0	926	0	932	46	0	1044	275
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	18	0	926	0	932	46	0	1044	275
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				33.0				69.0			115.0	
Total Split (%)				22.3%				46.6%			77.7%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				Min			Min	

Intersection Summary

Area Type: Other
Cycle Length: 148
Actuated Cycle Length: 98.9
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.0
Total Split (s)	46.0
Total Split (%)	31%
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	18	926	932	46	1044	275
v/c Ratio	0.04	0.69	0.81	0.03	0.50	0.21
Control Delay	36.2	22.3	35.7	0.0	11.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	22.3	35.7	0.0	11.1	0.4
Queue Length 50th (ft)	8	239	253	0	182	0
Queue Length 95th (ft)	36	422	442	0	220	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	488	1878	2224	1830	3267	1301
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.49	0.42	0.03	0.32	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	0	898	0	904	45	0	1013	267
Future Volume (vph)	0	0	0	17	0	898	0	904	45	0	1013	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1703		2544		3323	1830		3406	1301
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1703		2544		3323	1830		3406	1301
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	18	0	926	0	932	46	0	1044	275
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	18	0	926	0	932	46	0	1044	275
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				25.8		51.6		34.7	98.3		60.5	98.3
Effective Green, g (s)				25.8		51.6		34.7	98.3		60.5	98.3
Actuated g/C Ratio				0.26		0.52		0.35	1.00		0.62	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				446		1335		1173	1830		2096	1301
v/s Ratio Prot				0.01		c0.36		c0.28			0.31	
v/s Ratio Perm									0.03			0.21
v/c Ratio				0.04		0.69		0.79	0.03		0.50	0.21
Uniform Delay, d1				27.0		17.4		28.6	0.0		10.5	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.0		1.6		3.5	0.0		0.1	0.4
Delay (s)				27.1		19.0		32.1	0.0		10.5	0.4
Level of Service				C		B		C	A		B	A
Approach Delay (s)		0.0			19.2			30.6			8.4	
Approach LOS		A			B			C			A	

Intersection Summary

HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	98.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

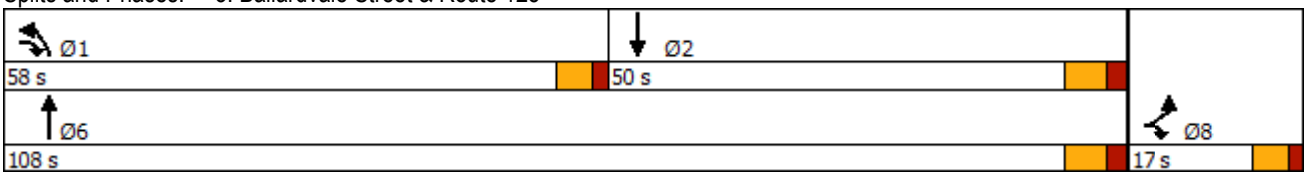
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	314	1193	609	966	488
Future Volume (vph)	63	314	1193	609	966	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.950	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	2311	3303	1759	3287	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	2311	3303	1759	3287	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		40			78	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Adj. Flow (vph)	66	327	1243	634	1006	508
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	327	1243	634	1514	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	17.0		58.0	108.0	50.0	
Total Split (%)	13.6%		46.4%	86.4%	40.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 119.3
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	66	327	1243	634	1514
v/c Ratio	0.46	0.26	0.94	0.44	1.20
Control Delay	64.1	13.2	47.9	4.3	128.9
Queue Delay	0.0	0.0	0.0	0.4	0.0
Total Delay	64.1	13.2	47.9	4.7	128.9
Queue Length 50th (ft)	51	63	471	117	~783
Queue Length 95th (ft)	100	93	573	162	#927
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	156	1337	1473	1510	1266
Starvation Cap Reductn	0	0	0	381	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.24	0.84	0.56	1.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	314	1193	609	966	488
Future Volume (vph)	63	314	1193	609	966	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1543	2311	3303	1759	3286	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1543	2311	3303	1759	3286	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	66	327	1243	634	1006	508
RTOR Reduction (vph)	0	19	0	0	49	0
Lane Group Flow (vph)	66	308	1243	634	1465	0
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Actuated Green, G (s)	11.1	64.1	48.0	97.2	44.2	
Effective Green, g (s)	11.1	64.1	48.0	97.2	44.2	
Actuated g/C Ratio	0.09	0.54	0.40	0.81	0.37	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	143	1241	1328	1433	1217	
v/s Ratio Prot	c0.04	0.13	c0.38	0.36	c0.45	
v/s Ratio Perm						
v/c Ratio	0.46	0.25	0.94	0.44	1.20	
Uniform Delay, d1	51.3	14.7	34.2	3.2	37.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0	12.2	0.1	99.7	
Delay (s)	52.1	14.8	46.4	3.3	137.2	
Level of Service	D	B	D	A	F	
Approach Delay (s)	21.1			31.8	137.2	
Approach LOS	C			C	F	

Intersection Summary

HCM 2000 Control Delay	72.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	119.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		

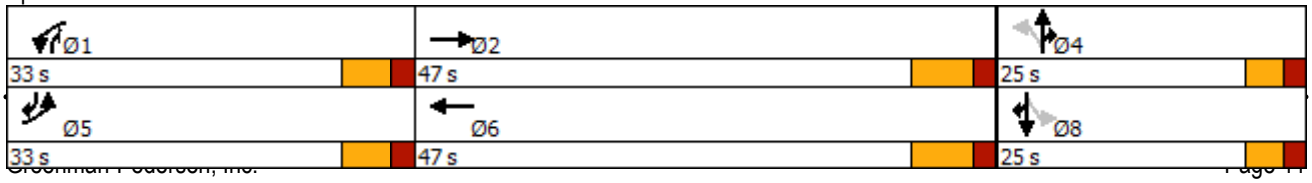
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	379	269	24	315	1154	160	103	190	91	21	81	197
Future Volume (vph)	379	269	24	315	1154	160	103	190	91	21	81	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt		0.988			0.982				0.850			0.850
Flt Protected	0.950			0.950				0.983			0.990	
Satd. Flow (prot)	1687	3334	0	1805	3470	0	0	1824	1583	0	1744	1404
Flt Permitted	0.950			0.950				0.827			0.594	
Satd. Flow (perm)	1687	3334	0	1805	3470	0	0	1534	1583	0	1047	1404
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		10										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			229	
Travel Time (s)		18.9			8.3			12.1			5.2	
Confl. Bikes (#/hr)						4						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Adj. Flow (vph)	399	283	25	332	1215	168	108	200	96	22	85	207
Shared Lane Traffic (%)												
Lane Group Flow (vph)	399	308	0	332	1383	0	0	308	96	0	107	207
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 104.3
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	399	308	332	1383	308	96	107	207
v/c Ratio	0.94	0.22	0.83	1.04	1.05	0.13	0.54	0.29
Control Delay	70.4	20.4	56.2	68.1	107.8	15.2	49.3	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.4	20.4	56.2	68.1	107.8	15.2	49.3	16.6
Queue Length 50th (ft)	261	67	211	~533	~227	35	65	78
Queue Length 95th (ft)	#442	103	306	#669	#397	61	124	128
Internal Link Dist (ft)		890		526	540		149	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	436	1384	467	1330	294	805	200	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.22	0.71	1.04	1.05	0.12	0.54	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	379	269	24	315	1154	160	103	190	91	21	81	197
Future Volume (vph)	379	269	24	315	1154	160	103	190	91	21	81	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1687	3334		1805	3469			1823	1583		1744	1404
Flt Permitted	0.95	1.00		0.95	1.00			0.83	1.00		0.59	1.00
Satd. Flow (perm)	1687	3334		1805	3469			1534	1583		1046	1404
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	399	283	25	332	1215	168	108	200	96	22	85	207
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	399	302	0	332	1383	0	0	308	96	0	107	207
Confl. Bikes (#/hr)						4						
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	26.3	43.1		23.2	40.0			20.0	48.2		20.0	51.3
Effective Green, g (s)	26.3	43.1		23.2	40.0			20.0	48.2		20.0	51.3
Actuated g/C Ratio	0.25	0.41		0.22	0.38			0.19	0.46		0.19	0.49
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	425	1377		401	1330			294	731		200	690
v/s Ratio Prot	c0.24	c0.09		0.18	c0.40				0.06			0.15
v/s Ratio Perm								c0.20			0.10	
v/c Ratio	0.94	0.22		0.83	1.04			1.05	0.13		0.54	0.30
Uniform Delay, d1	38.2	19.7		38.6	32.1			42.1	16.1		38.0	15.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	28.4	0.1		13.1	35.7			65.5	0.1		2.7	0.2
Delay (s)	66.6	19.9		51.8	67.8			107.6	16.1		40.7	16.0
Level of Service	E	B		D	E			F	B		D	B
Approach Delay (s)		46.2			64.7			85.9			24.4	
Approach LOS		D			E			F			C	

Intersection Summary

HCM 2000 Control Delay	59.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	104.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	34	192	537	265	13
Future Volume (vph)	3	34	192	537	265	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.994	
Flt Protected	0.950			0.987		
Satd. Flow (prot)	1925	1538	0	2039	1931	0
Flt Permitted	0.950			0.987		
Satd. Flow (perm)	1925	1538	0	2039	1931	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1258			229	1411	
Travel Time (s)	34.3			4.5	32.1	
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	12%	2%	5%	11%	8%
Adj. Flow (vph)	4	42	237	663	327	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	42	0	900	343	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	34	192	537	265	13
Future Vol, veh/h	3	34	192	537	265	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	12	2	5	11	8
Mvmt Flow	4	42	237	663	327	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1472	335	343	0	-	0
Stage 1	335	-	-	-	-	-
Stage 2	1137	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	141	685	1216	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	97	685	1216	-	-	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	309	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	2.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1216	-	97	685	-	-
HCM Lane V/C Ratio	0.195	-	0.038	0.061	-	-
HCM Control Delay (s)	8.7	0	43.6	10.6	-	-
HCM Lane LOS	A	A	E	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.1	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	28	5	0	0	365	84	13	0	205	68
Future Volume (vph)	2	1	28	5	0	0	365	84	13	0	205	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.878						0.996			0.966	
Flt Protected		0.996			0.950			0.962				
Satd. Flow (prot)	0	1464	0	0	1705	0	0	1994	0	0	2065	0
Flt Permitted		0.996			0.950			0.962				
Satd. Flow (perm)	0	1464	0	0	1705	0	0	1994	0	0	2065	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		518			544			1411			503	
Travel Time (s)		14.1			14.8			27.5			11.4	
Confl. Bikes (#/hr)						2						1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	0%	100%	29%	20%	0%	0%	2%	8%	15%	0%	1%	0%
Adj. Flow (vph)	3	1	36	6	0	0	474	109	17	0	266	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	6	0	0	600	0	0	354	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	1	28	5	0	0	365	84	13	0	205	68
Future Vol, veh/h	2	1	28	5	0	0	365	84	13	0	205	68
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	0	100	29	20	0	0	2	8	15	0	1	0
Mvmt Flow	3	1	36	6	0	0	474	109	17	0	266	88

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1376	1384	310	1395	1420	118	354	0	0	126	0	0
Stage 1	310	310	-	1066	1066	-	-	-	-	-	-	-
Stage 2	1066	1074	-	329	354	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.49	7.3	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.561	3.68	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	124	91	671	108	138	939	1205	-	-	1473	-	-
Stage 1	705	515	-	249	301	-	-	-	-	-	-	-
Stage 2	271	201	-	648	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	52	671	67	79	939	1205	-	-	1473	-	-
Mov Cap-2 Maneuver	83	52	-	67	79	-	-	-	-	-	-	-
Stage 1	406	515	-	143	173	-	-	-	-	-	-	-
Stage 2	156	116	-	611	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.1	64.4	7.8	0
HCM LOS	C	F		

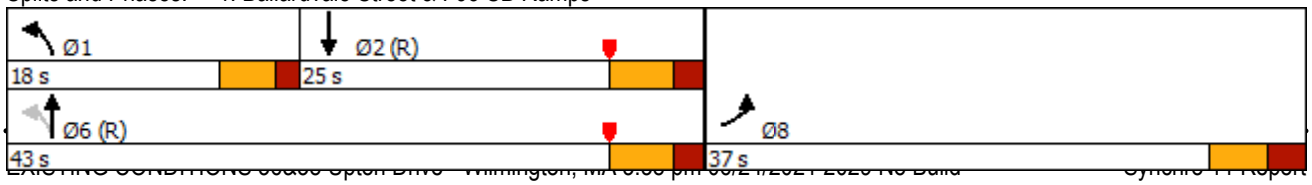
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1205	-	-	364	67	1473	-	-
HCM Lane V/C Ratio	0.393	-	-	0.111	0.097	-	-	-
HCM Control Delay (s)	9.9	0	-	16.1	64.4	0	-	-
HCM Lane LOS	A	A	-	C	F	A	-	-
HCM 95th %tile Q(veh)	1.9	-	-	0.4	0.3	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	184	114	31	259	673	1123
Future Volume (vph)	184	114	31	259	673	1123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.950		0.241			
Satd. Flow (perm)	3019	1830	414	1837	1881	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		124				826
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Adj. Flow (vph)	200	124	34	282	732	1221
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	124	34	282	732	1221
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	37.0		18.0	43.0	25.0	
Total Split (%)	46.3%		22.5%	53.8%	31.3%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 2 (3%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	200	124	34	282	732	1221
v/c Ratio	0.53	0.07	0.08	0.21	0.61	0.77
Control Delay	37.7	0.1	3.7	4.3	12.9	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	0.1	3.7	4.3	12.9	10.4
Queue Length 50th (ft)	49	0	4	36	188	433
Queue Length 95th (ft)	78	0	12	72	m226	m518
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1169	1830	502	1331	1193	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.07	0.07	0.21	0.61	0.77

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	184	114	31	259	673	1123
Future Volume (vph)	184	114	31	259	673	1123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	3019	1830	413	1837	1881	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	200	124	34	282	732	1221
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	200	124	34	282	732	1221
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	10.0	80.0	58.0	58.0	48.8	80.0
Effective Green, g (s)	10.0	80.0	58.0	58.0	48.8	80.0
Actuated g/C Ratio	0.12	1.00	0.72	0.72	0.61	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	377	1830	363	1331	1147	1583
v/s Ratio Prot	0.07		0.00	0.15	0.39	
v/s Ratio Perm		0.07	0.06			c0.77
v/c Ratio	0.53	0.07	0.09	0.21	0.64	0.77
Uniform Delay, d1	32.8	0.0	5.8	3.6	10.0	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.05	1.00
Incremental Delay, d2	0.7	0.1	0.0	0.4	1.3	1.8
Delay (s)	33.5	0.1	5.9	3.9	11.8	1.8
Level of Service	C	A	A	A	B	A
Approach Delay (s)	20.7			4.1	5.5	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

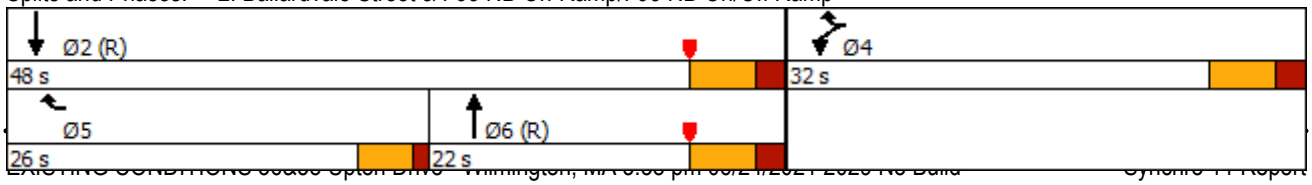
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	192	0	956	0	404	39	0	1604	744
Future Volume (vph)	0	0	0	192	0	956	0	404	39	0	1604	744
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1787	0	2617	0	3261	1830	0	3574	1546
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1787	0	2617	0	3261	1830	0	3574	1546
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									184			707
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	7%	0%	0%	1%	1%
Adj. Flow (vph)	0	0	0	209	0	1039	0	439	42	0	1743	809
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	209	0	1039	0	439	42	0	1743	809
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				32.0				22.0			48.0	
Total Split (%)				40.0%				27.5%			60.0%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				C-Min			C-Min	

Intersection Summary

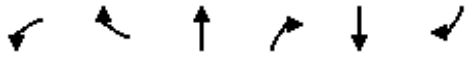
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow, Master Intersection
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	9.5
Total Split (s)	26.0
Total Split (%)	33%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary



Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	209	1039	439	42	1743	809
v/c Ratio	0.36	0.72	0.45	0.02	0.93	0.52
Control Delay	22.8	16.1	26.0	0.0	28.7	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	16.1	26.0	0.0	28.7	1.3
Queue Length 50th (ft)	79	218	106	0	398	0
Queue Length 95th (ft)	136	209	166	0	#581	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	583	1705	971	1830	1876	1546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.61	0.45	0.02	0.93	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	192	0	956	0	404	39	0	1604	744
Future Volume (vph)	0	0	0	192	0	956	0	404	39	0	1604	744
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1787		2617		3261	1830		3574	1546
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1787		2617		3261	1830		3574	1546
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	209	0	1039	0	439	42	0	1743	809
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	209	0	1039	0	439	42	0	1743	809
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	7%	0%	0%	1%	1%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				26.1		45.7		23.8	80.0		41.9	80.0
Effective Green, g (s)				26.1		45.7		23.8	80.0		41.9	80.0
Actuated g/C Ratio				0.33		0.57		0.30	1.00		0.52	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				583		1494		970	1830		1871	1546
v/s Ratio Prot				0.12		c0.40		0.13			c0.49	
v/s Ratio Perm									0.02			0.52
v/c Ratio				0.36		0.70		0.45	0.02		0.93	0.52
Uniform Delay, d1				20.6		12.2		22.8	0.0		17.7	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.4		1.4		1.5	0.0		9.9	1.3
Delay (s)				20.9		13.6		24.4	0.0		27.6	1.3
Level of Service				C		B		C	A		C	A
Approach Delay (s)		0.0			14.9			22.3			19.3	
Approach LOS		A			B			C			B	

Intersection Summary

HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

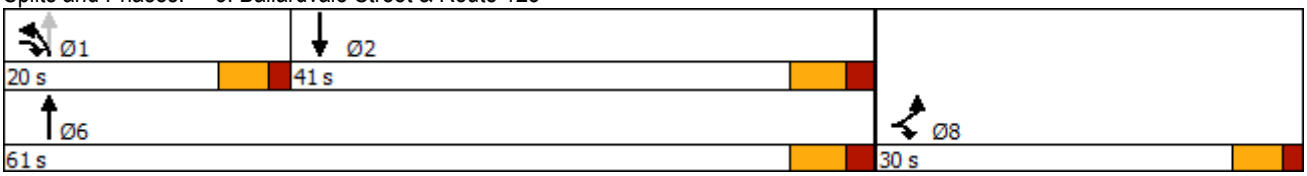
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	424	1409	289	1071	939	94
Future Volume (vph)	424	1409	289	1071	939	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.986	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	2787	2870	1863	3502	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	2787	2870	1863	3502	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		55			13	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Adj. Flow (vph)	456	1515	311	1152	1010	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	456	1515	311	1152	1111	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	30.0		20.0	61.0	41.0	
Total Split (%)	33.0%		22.0%	67.0%	45.1%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 91
Actuated Cycle Length: 91
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	456	1515	311	1152	1111
v/c Ratio	0.94	1.08	0.66	1.02	0.82
Control Delay	62.1	71.7	43.0	53.0	31.1
Queue Delay	0.0	0.0	0.0	1.8	0.0
Total Delay	62.1	71.7	43.0	54.7	31.1
Queue Length 50th (ft)	256	~549	87	~668	293
Queue Length 95th (ft)	#442	#697	131	#955	378
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	486	1405	473	1125	1354
Starvation Cap Reductn	0	0	0	6	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	1.08	0.66	1.03	0.82

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	424	1409	289	1071	939	94
Future Volume (vph)	424	1409	289	1071	939	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	2870	1863	3503	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	2870	1863	3503	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	456	1515	311	1152	1010	101
RTOR Reduction (vph)	0	28	0	0	8	0
Lane Group Flow (vph)	456	1487	311	1152	1103	0
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Actuated Green, G (s)	25.0	45.0	15.0	55.0	35.0	
Effective Green, g (s)	25.0	45.0	15.0	55.0	35.0	
Actuated g/C Ratio	0.27	0.49	0.16	0.60	0.38	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	486	1378	473	1125	1347	
v/s Ratio Prot	0.26	c0.53	0.11	c0.62	0.31	
v/s Ratio Perm						
v/c Ratio	0.94	1.08	0.66	1.02	0.82	
Uniform Delay, d1	32.2	23.0	35.6	18.0	25.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	25.6	48.7	2.5	33.1	3.8	
Delay (s)	57.8	71.7	38.1	51.1	29.0	
Level of Service	E	E	D	D	C	
Approach Delay (s)	68.5			48.3	29.0	
Approach LOS	E			D	C	

Intersection Summary

HCM 2000 Control Delay	52.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

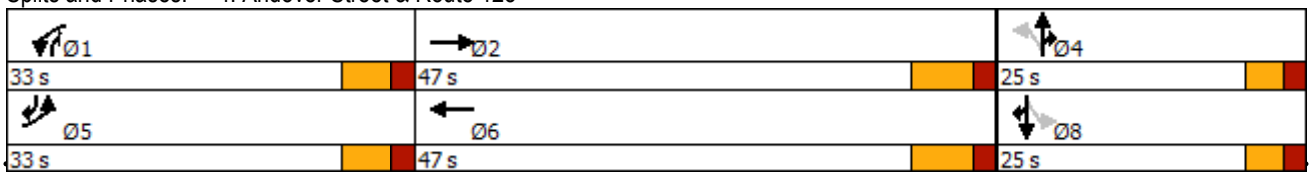
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	1250	73	56	474	33	32	144	409	129	120	527
Future Volume (vph)	172	1250	73	56	474	33	32	144	409	129	120	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.990				0.850			0.850
Flt Protected	0.950			0.950				0.991			0.975	
Satd. Flow (prot)	1641	3544	0	1770	3465	0	0	1858	1599	0	1772	1583
Flt Permitted	0.950			0.950				0.789			0.631	
Satd. Flow (perm)	1641	3544	0	1770	3465	0	0	1479	1599	0	1147	1583
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		7										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			192	
Travel Time (s)		18.9			8.3			12.1			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Adj. Flow (vph)	181	1316	77	59	499	35	34	152	431	136	126	555
Shared Lane Traffic (%)												
Lane Group Flow (vph)	181	1393	0	59	534	0	0	186	431	0	262	555
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	25.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 89.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	181	1393	59	534	186	431	262	555
v/c Ratio	0.62	0.87	0.27	0.39	0.56	0.65	1.02	0.75
Control Delay	42.5	30.7	37.6	21.5	39.5	25.9	99.2	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	30.7	37.6	21.5	39.5	25.9	99.2	26.0
Queue Length 50th (ft)	92	335	31	108	89	188	142	232
Queue Length 95th (ft)	156	#599	66	185	182	286	#347	354
Internal Link Dist (ft)		890		526	540		112	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	496	1593	535	1553	331	950	257	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.87	0.11	0.34	0.56	0.45	1.02	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	1250	73	56	474	33	32	144	409	129	120	527
Future Volume (vph)	172	1250	73	56	474	33	32	144	409	129	120	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1641	3543		1770	3466			1857	1599		1772	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.79	1.00		0.63	1.00
Satd. Flow (perm)	1641	3543		1770	3466			1479	1599		1147	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	181	1316	77	59	499	35	34	152	431	136	126	555
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	181	1389	0	59	534	0	0	186	431	0	262	555
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	16.0	40.1		11.2	35.3			20.1	36.3		20.1	41.1
Effective Green, g (s)	16.0	40.1		11.2	35.3			20.1	36.3		20.1	41.1
Actuated g/C Ratio	0.18	0.45		0.13	0.39			0.22	0.41		0.22	0.46
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	293	1589		221	1368			332	649		257	727
v/s Ratio Prot	0.11	c0.39		0.03	0.15				0.27			c0.35
v/s Ratio Perm								0.13			c0.23	
v/c Ratio	0.62	0.87		0.27	0.39			0.56	0.66		1.02	0.76
Uniform Delay, d1	33.9	22.4		35.4	19.4			30.7	21.6		34.7	20.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.8	5.8		0.7	0.3			2.2	2.6		61.2	4.8
Delay (s)	37.7	28.2		36.0	19.6			32.9	24.2		95.9	24.9
Level of Service	D	C		D	B			C	C		F	C
Approach Delay (s)		29.3			21.2			26.8			47.6	
Approach LOS		C			C			C			D	

Intersection Summary

HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	173	29	320	603	5
Future Volume (vph)	3	173	29	320	603	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.999	
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1925	1706	0	2039	2123	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1925	1706	0	2039	2123	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1277			192	1421	
Travel Time (s)	34.8			3.7	32.3	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	1%	7%	5%	1%	40%
Adj. Flow (vph)	4	211	35	390	735	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	211	0	425	741	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	173	29	320	603	5
Future Vol, veh/h	3	173	29	320	603	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	1	7	5	1	40
Mvmt Flow	4	211	35	390	735	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1198	738	741	0	-	0
Stage 1	738	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Critical Hdwy	6.4	6.21	4.17	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	2.263	-	-	-
Pot Cap-1 Maneuver	207	420	843	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	196	420	843	-	-	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	451	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.9	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	843	-	196	420	-	-
HCM Lane V/C Ratio	0.042	-	0.019	0.502	-	-
HCM Control Delay (s)	9.5	0	23.7	21.9	-	-
HCM Lane LOS	A	A	C	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	2.7	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	1	385	15	0	1	22	277	0	1	92	2
Future Volume (vph)	88	1	385	15	0	1	22	277	0	1	92	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.890			0.993						0.998	
Flt Protected		0.991			0.955			0.996				
Satd. Flow (prot)	0	1869	0	0	1915	0	0	2115	0	0	2070	0
Flt Permitted		0.991			0.955			0.996				
Satd. Flow (perm)	0	1869	0	0	1915	0	0	2115	0	0	2070	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		511			525			1421			503	
Travel Time (s)		13.9			14.3			27.7			11.4	
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	2%	2%	7%	0%	0%	19%	0%	0%	0%	3%	50%
Adj. Flow (vph)	104	1	453	18	0	1	26	326	0	1	108	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	558	0	0	19	0	0	352	0	0	111	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	10.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	1	385	15	0	1	22	277	0	1	92	2
Future Vol, veh/h	88	1	385	15	0	1	22	277	0	1	92	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	2	2	7	0	0	19	0	0	0	3	50
Mvmt Flow	104	1	453	18	0	1	26	326	0	1	108	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	490	489	109	716	490	326	110	0	0	326	0	0
Stage 1	111	111	-	378	378	-	-	-	-	-	-	-
Stage 2	379	378	-	338	112	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.22	7.17	6.5	6.2	4.29	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.318	3.563	4	3.3	2.371	-	-	2.2	-	-
Pot Cap-1 Maneuver	492	480	945	339	482	720	1381	-	-	1245	-	-
Stage 1	899	804	-	634	619	-	-	-	-	-	-	-
Stage 2	647	615	-	666	807	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	482	468	945	173	470	720	1381	-	-	1245	-	-
Mov Cap-2 Maneuver	482	468	-	173	470	-	-	-	-	-	-	-
Stage 1	878	803	-	619	605	-	-	-	-	-	-	-
Stage 2	631	601	-	346	806	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.1	27	0.6	0.1
HCM LOS	C	D		

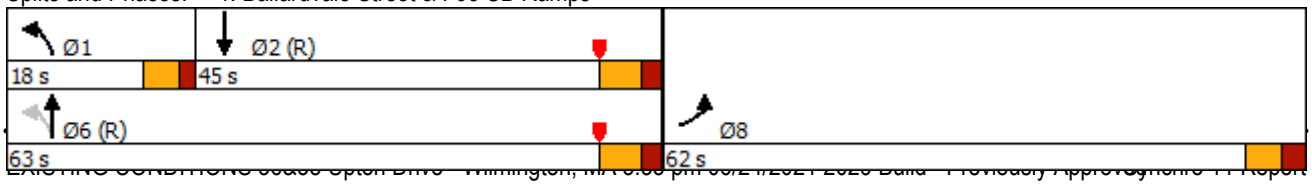
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1381	-	-	801	182	1245	-	-
HCM Lane V/C Ratio	0.019	-	-	0.696	0.103	0.001	-	-
HCM Control Delay (s)	7.7	0	-	19.1	27	7.9	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5.8	0.3	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	578	74	78	391	166	870
Future Volume (vph)	578	74	78	391	166	870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.950		0.610			
Satd. Flow (perm)	3433	1760	1120	1818	1727	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		43				879
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Adj. Flow (vph)	584	75	79	395	168	879
Shared Lane Traffic (%)						
Lane Group Flow (vph)	584	75	79	395	168	879
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	62.0		18.0	63.0	45.0	
Total Split (%)	49.6%		14.4%	50.4%	36.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 12 (10%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	584	75	79	395	168	879
v/c Ratio	0.80	0.04	0.10	0.31	0.16	0.59
Control Delay	54.9	0.0	7.1	9.1	12.6	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.9	0.0	7.1	9.1	12.6	1.8
Queue Length 50th (ft)	232	0	18	115	58	0
Queue Length 95th (ft)	278	0	41	195	109	0
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1537	1760	847	1255	1056	1482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.04	0.09	0.31	0.16	0.59

Intersection Summary



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	578	74	78	391	166	870
Future Volume (vph)	578	74	78	391	166	870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	3433	1760	1121	1818	1727	1482
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	584	75	79	395	168	879
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	584	75	79	395	168	879
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	26.7	125.0	86.3	86.3	75.4	125.0
Effective Green, g (s)	26.7	125.0	86.3	86.3	75.4	125.0
Actuated g/C Ratio	0.21	1.00	0.69	0.69	0.60	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	733	1760	803	1255	1041	1482
v/s Ratio Prot	c0.17		0.00	0.22	0.10	
v/s Ratio Perm		0.04	0.06			c0.59
v/c Ratio	0.80	0.04	0.10	0.31	0.16	0.59
Uniform Delay, d1	46.6	0.0	6.4	7.7	10.9	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.6	0.0	0.0	0.7	0.3	1.8
Delay (s)	52.2	0.0	6.4	8.3	11.2	1.8
Level of Service	D	A	A	A	B	A
Approach Delay (s)	46.3			8.0	3.3	
Approach LOS	D			A	A	

Intersection Summary

HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

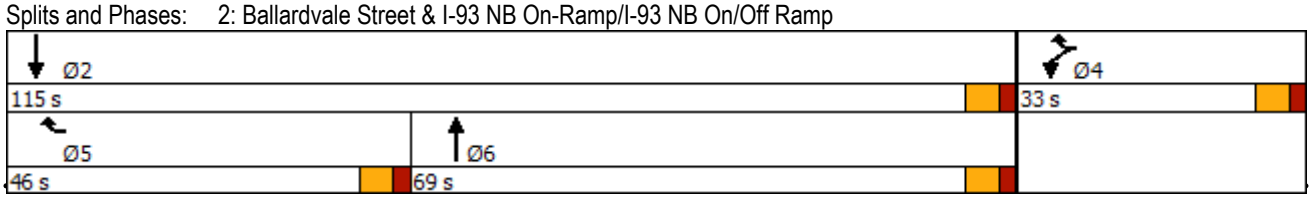
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	0	912	0	924	45	0	1019	271
Future Volume (vph)	0	0	0	17	0	912	0	924	45	0	1019	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									111			218
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Adj. Flow (vph)	0	0	0	18	0	940	0	953	46	0	1051	279
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	18	0	940	0	953	46	0	1051	279
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				33.0				69.0			115.0	
Total Split (%)				22.3%				46.6%			77.7%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				Min			Min	

Intersection Summary

Area Type: Other
Cycle Length: 148
Actuated Cycle Length: 101.8
Natural Cycle: 55
Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.0
Total Split (s)	46.0
Total Split (%)	31%
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	18	940	953	46	1051	279
v/c Ratio	0.04	0.70	0.82	0.03	0.50	0.21
Control Delay	37.8	23.2	36.8	0.0	11.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	23.2	36.8	0.0	11.0	0.4
Queue Length 50th (ft)	8	253	267	0	183	0
Queue Length 95th (ft)	37	439	468	0	221	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	475	1866	2163	1830	3230	1301
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.50	0.44	0.03	0.33	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	0	912	0	924	45	0	1019	271
Future Volume (vph)	0	0	0	17	0	912	0	924	45	0	1019	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1703		2544		3323	1830		3406	1301
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1703		2544		3323	1830		3406	1301
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	18	0	940	0	953	46	0	1051	279
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	18	0	940	0	953	46	0	1051	279
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				26.3		53.1		36.1	101.2		62.9	101.2
Effective Green, g (s)				26.3		53.1		36.1	101.2		62.9	101.2
Actuated g/C Ratio				0.26		0.52		0.36	1.00		0.62	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				442		1334		1185	1830		2116	1301
v/s Ratio Prot				0.01		c0.37		c0.29			0.31	
v/s Ratio Perm									0.03			0.21
v/c Ratio				0.04		0.70		0.80	0.03		0.50	0.21
Uniform Delay, d1				28.0		18.1		29.4	0.0		10.5	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.0		1.7		3.8	0.0		0.1	0.4
Delay (s)				28.1		19.9		33.2	0.0		10.6	0.4
Level of Service				C		B		C	A		B	A
Approach Delay (s)		0.0			20.0			31.7			8.4	
Approach LOS		A			C			C			A	

Intersection Summary

HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	101.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

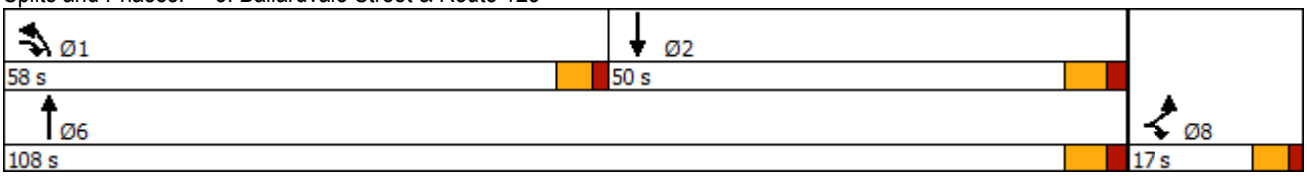
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	314	1193	643	976	488
Future Volume (vph)	63	314	1193	643	976	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.950	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	2311	3303	1759	3287	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	2311	3303	1759	3287	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		38			77	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Adj. Flow (vph)	66	327	1243	670	1017	508
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	327	1243	670	1525	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	17.0		58.0	108.0	50.0	
Total Split (%)	13.6%		46.4%	86.4%	40.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 119.3
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	66	327	1243	670	1525
v/c Ratio	0.46	0.26	0.94	0.47	1.21
Control Delay	64.0	13.3	47.9	4.6	133.1
Queue Delay	0.0	0.0	0.0	0.4	0.0
Total Delay	64.0	13.3	47.9	4.9	133.1
Queue Length 50th (ft)	51	64	471	128	~794
Queue Length 95th (ft)	100	94	573	177	#939
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	155	1335	1473	1509	1265
Starvation Cap Reductn	0	0	0	367	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.24	0.84	0.59	1.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	314	1193	643	976	488
Future Volume (vph)	63	314	1193	643	976	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1543	2311	3303	1759	3287	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1543	2311	3303	1759	3287	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	66	327	1243	670	1017	508
RTOR Reduction (vph)	0	18	0	0	48	0
Lane Group Flow (vph)	66	309	1243	670	1477	0
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Actuated Green, G (s)	11.1	64.1	48.0	97.2	44.2	
Effective Green, g (s)	11.1	64.1	48.0	97.2	44.2	
Actuated g/C Ratio	0.09	0.54	0.40	0.81	0.37	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	143	1241	1328	1433	1217	
v/s Ratio Prot	c0.04	0.13	c0.38	0.38	c0.45	
v/s Ratio Perm						
v/c Ratio	0.46	0.25	0.94	0.47	1.21	
Uniform Delay, d1	51.3	14.7	34.2	3.3	37.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0	12.2	0.1	103.7	
Delay (s)	52.1	14.8	46.4	3.4	141.3	
Level of Service	D	B	D	A	F	
Approach Delay (s)	21.1			31.3	141.3	
Approach LOS	C			C	F	

Intersection Summary

HCM 2000 Control Delay	74.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	119.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		

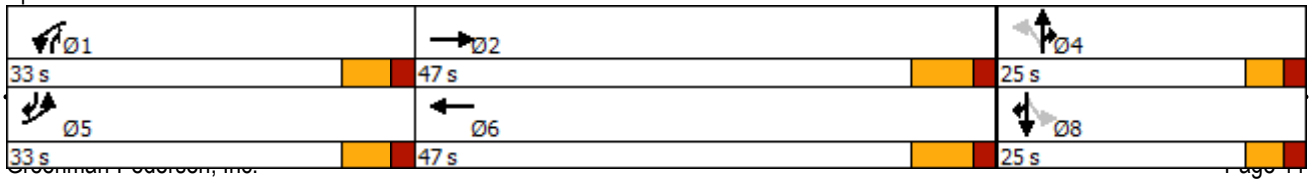
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	269	24	315	1154	164	103	194	91	22	82	207
Future Volume (vph)	413	269	24	315	1154	164	103	194	91	22	82	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt		0.988			0.981				0.850			0.850
Flt Protected	0.950			0.950				0.983			0.990	
Satd. Flow (prot)	1687	3334	0	1805	3466	0	0	1824	1583	0	1744	1404
Flt Permitted	0.950			0.950				0.821			0.564	
Satd. Flow (perm)	1687	3334	0	1805	3466	0	0	1524	1583	0	993	1404
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		10										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			229	
Travel Time (s)		18.9			8.3			12.1			5.2	
Confl. Bikes (#/hr)						4						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Adj. Flow (vph)	435	283	25	332	1215	173	108	204	96	23	86	218
Shared Lane Traffic (%)												
Lane Group Flow (vph)	435	308	0	332	1388	0	0	312	96	0	109	218
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	435	308	332	1388	312	96	109	218
v/c Ratio	1.00	0.22	0.83	1.05	1.08	0.13	0.58	0.31
Control Delay	84.5	20.4	56.5	72.1	116.1	15.3	52.1	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.5	20.4	56.5	72.1	116.1	15.3	52.1	16.8
Queue Length 50th (ft)	~294	67	211	~537	~234	35	67	82
Queue Length 95th (ft)	#498	103	306	#673	#405	61	128	135
Internal Link Dist (ft)		890		526	540		149	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	433	1394	464	1320	290	799	189	708
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.22	0.72	1.05	1.08	0.12	0.58	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	413	269	24	315	1154	164	103	194	91	22	82	207
Future Volume (vph)	413	269	24	315	1154	164	103	194	91	22	82	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1687	3334		1805	3467			1824	1583		1743	1404
Flt Permitted	0.95	1.00		0.95	1.00			0.82	1.00		0.56	1.00
Satd. Flow (perm)	1687	3334		1805	3467			1524	1583		993	1404
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	435	283	25	332	1215	173	108	204	96	23	86	218
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	435	302	0	332	1388	0	0	312	96	0	109	218
Confl. Bikes (#/hr)						4						
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	27.0	43.7		23.3	40.0			20.0	48.3		20.0	52.0
Effective Green, g (s)	27.0	43.7		23.3	40.0			20.0	48.3		20.0	52.0
Actuated g/C Ratio	0.26	0.42		0.22	0.38			0.19	0.46		0.19	0.50
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	433	1387		400	1320			290	728		189	695
v/s Ratio Prot	c0.26	c0.09		0.18	c0.40				0.06			0.16
v/s Ratio Perm								c0.20			0.11	
v/c Ratio	1.00	0.22		0.83	1.05			1.08	0.13		0.58	0.31
Uniform Delay, d1	39.0	19.7		39.0	32.5			42.5	16.3		38.7	15.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	44.4	0.1		13.3	39.5			74.5	0.1		4.2	0.3
Delay (s)	83.4	19.8		52.3	72.0			117.0	16.4		42.9	16.1
Level of Service	F	B		D	E			F	B		D	B
Approach Delay (s)		57.0			68.2			93.3			25.0	
Approach LOS		E			E			F			C	

Intersection Summary

HCM 2000 Control Delay	64.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	46	234	537	265	13
Future Volume (vph)	3	46	234	537	265	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.994	
Flt Protected	0.950			0.985		
Satd. Flow (prot)	1925	1538	0	2038	1931	0
Flt Permitted	0.950			0.985		
Satd. Flow (perm)	1925	1538	0	2038	1931	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1258			229	1411	
Travel Time (s)	34.3			4.5	32.1	
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	12%	2%	5%	11%	8%
Adj. Flow (vph)	4	57	289	663	327	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	57	0	952	343	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	46	234	537	265	13
Future Vol, veh/h	3	46	234	537	265	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	12	2	5	11	8
Mvmt Flow	4	57	289	663	327	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1576	335	343	0	-	0
Stage 1	335	-	-	-	-	-
Stage 2	1241	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	122	685	1216	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	685	1216	-	-	-
Mov Cap-2 Maneuver	76	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	275	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1216	-	76	685	-	-
HCM Lane V/C Ratio	0.238	-	0.049	0.083	-	-
HCM Control Delay (s)	8.9	0	54.8	10.7	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.2	0.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	28	5	0	0	365	84	13	0	205	70
Future Volume (vph)	3	1	28	5	0	0	365	84	13	0	205	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.881						0.996			0.966	
Flt Protected		0.995			0.950			0.962				
Satd. Flow (prot)	0	1476	0	0	1705	0	0	1994	0	0	2065	0
Flt Permitted		0.995			0.950			0.962				
Satd. Flow (perm)	0	1476	0	0	1705	0	0	1994	0	0	2065	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		518			544			1411			503	
Travel Time (s)		14.1			14.8			27.5			11.4	
Confl. Bikes (#/hr)						2						1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	0%	100%	29%	20%	0%	0%	2%	8%	15%	0%	1%	0%
Adj. Flow (vph)	4	1	36	6	0	0	474	109	17	0	266	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	6	0	0	600	0	0	357	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	28	5	0	0	365	84	13	0	205	70
Future Vol, veh/h	3	1	28	5	0	0	365	84	13	0	205	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	0	100	29	20	0	0	2	8	15	0	1	0
Mvmt Flow	4	1	36	6	0	0	474	109	17	0	266	91

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1378	1386	312	1396	1423	118	357	0	0	126	0	0
Stage 1	312	312	-	1066	1066	-	-	-	-	-	-	-
Stage 2	1066	1074	-	330	357	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.49	7.3	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.561	3.68	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	123	91	669	108	137	939	1202	-	-	1473	-	-
Stage 1	703	513	-	249	301	-	-	-	-	-	-	-
Stage 2	271	201	-	647	632	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	52	669	67	79	939	1202	-	-	1473	-	-
Mov Cap-2 Maneuver	82	52	-	67	79	-	-	-	-	-	-	-
Stage 1	404	513	-	143	173	-	-	-	-	-	-	-
Stage 2	156	116	-	610	632	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.6	64.4	7.8	0
HCM LOS	C	F		

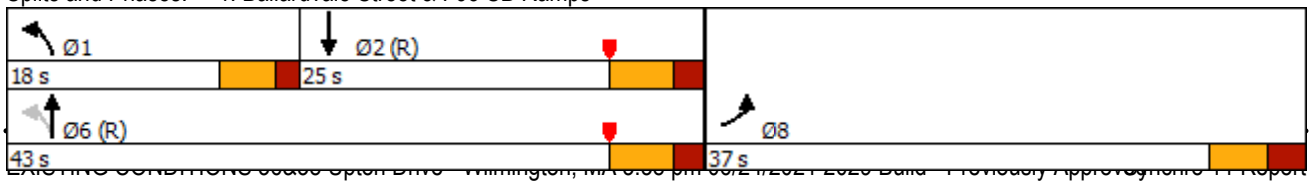
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1202	-	-	328	67	1473	-	-
HCM Lane V/C Ratio	0.394	-	-	0.127	0.097	-	-	-
HCM Control Delay (s)	9.9	0	-	17.6	64.4	0	-	-
HCM Lane LOS	A	A	-	C	F	A	-	-
HCM 95th %tile Q(veh)	1.9	-	-	0.4	0.3	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	189	114	31	261	679	1137
Future Volume (vph)	189	114	31	261	679	1137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.950		0.235			
Satd. Flow (perm)	3019	1830	403	1837	1881	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		124				829
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Adj. Flow (vph)	205	124	34	284	738	1236
Shared Lane Traffic (%)						
Lane Group Flow (vph)	205	124	34	284	738	1236
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	37.0		18.0	43.0	25.0	
Total Split (%)	46.3%		22.5%	53.8%	31.3%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 2 (3%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	205	124	34	284	738	1236
v/c Ratio	0.54	0.07	0.08	0.21	0.62	0.78
Control Delay	37.7	0.1	3.8	4.4	13.1	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	0.1	3.8	4.4	13.1	10.7
Queue Length 50th (ft)	50	0	4	37	192	462
Queue Length 95th (ft)	79	0	12	73	m225	m519
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1169	1830	495	1328	1190	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.07	0.21	0.62	0.78

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	189	114	31	261	679	1137
Future Volume (vph)	189	114	31	261	679	1137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	3019	1830	404	1837	1881	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	205	124	34	284	738	1236
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	205	124	34	284	738	1236
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	10.2	80.0	57.8	57.8	48.6	80.0
Effective Green, g (s)	10.2	80.0	57.8	57.8	48.6	80.0
Actuated g/C Ratio	0.13	1.00	0.72	0.72	0.61	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	384	1830	356	1327	1142	1583
v/s Ratio Prot	0.07		0.01	0.15	0.39	
v/s Ratio Perm		0.07	0.06			c0.78
v/c Ratio	0.53	0.07	0.10	0.21	0.65	0.78
Uniform Delay, d1	32.7	0.0	6.0	3.6	10.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.05	1.00
Incremental Delay, d2	0.7	0.1	0.0	0.4	1.3	1.8
Delay (s)	33.4	0.1	6.0	4.0	12.0	1.8
Level of Service	C	A	A	A	B	A
Approach Delay (s)	20.8			4.2	5.6	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

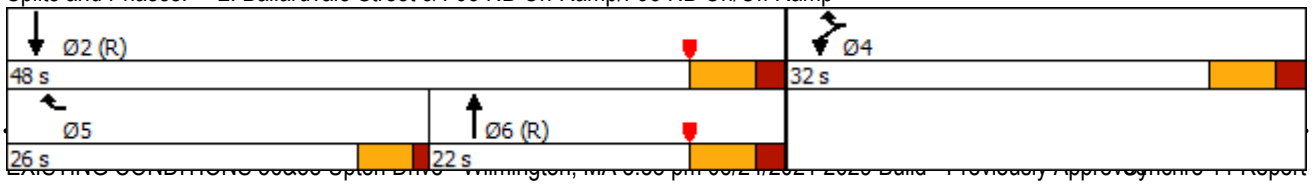
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	192	0	960	0	411	39	0	1624	757
Future Volume (vph)	0	0	0	192	0	960	0	411	39	0	1624	757
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1787	0	2617	0	3261	1830	0	3574	1546
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1787	0	2617	0	3261	1830	0	3574	1546
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									184			710
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	7%	0%	0%	1%	1%
Adj. Flow (vph)	0	0	0	209	0	1043	0	447	42	0	1765	823
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	209	0	1043	0	447	42	0	1765	823
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				32.0				22.0			48.0	
Total Split (%)				40.0%				27.5%			60.0%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				C-Min			C-Min	

Intersection Summary

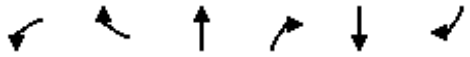
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow, Master Intersection
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	9.5
Total Split (s)	26.0
Total Split (%)	33%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary



Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	209	1043	447	42	1765	823
v/c Ratio	0.36	0.72	0.46	0.02	0.94	0.53
Control Delay	22.8	16.1	26.2	0.0	30.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	16.1	26.2	0.0	30.1	1.3
Queue Length 50th (ft)	79	219	109	0	407	0
Queue Length 95th (ft)	136	210	168	0	#593	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	582	1704	968	1830	1876	1546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.61	0.46	0.02	0.94	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	192	0	960	0	411	39	0	1624	757
Future Volume (vph)	0	0	0	192	0	960	0	411	39	0	1624	757
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1787		2617		3261	1830		3574	1546
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1787		2617		3261	1830		3574	1546
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	209	0	1043	0	447	42	0	1765	823
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	209	0	1043	0	447	42	0	1765	823
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	7%	0%	0%	1%	1%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				26.1		45.7		23.8	80.0		41.9	80.0
Effective Green, g (s)				26.1		45.7		23.8	80.0		41.9	80.0
Actuated g/C Ratio				0.33		0.57		0.30	1.00		0.52	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				583		1494		970	1830		1871	1546
v/s Ratio Prot				0.12		c0.40		0.14			c0.49	
v/s Ratio Perm									0.02			0.53
v/c Ratio				0.36		0.70		0.46	0.02		0.94	0.53
Uniform Delay, d1				20.6		12.2		22.9	0.0		17.9	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.4		1.4		1.6	0.0		11.1	1.3
Delay (s)				20.9		13.7		24.5	0.0		29.1	1.3
Level of Service				C		B		C	A		C	A
Approach Delay (s)		0.0			14.9			22.4			20.3	
Approach LOS		A			B			C			C	

Intersection Summary

HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

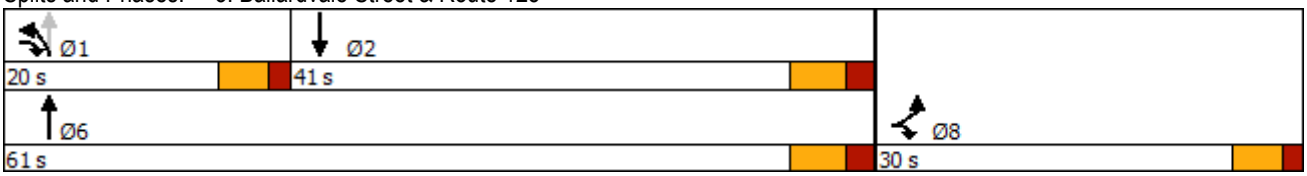
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	424	1409	289	1082	972	94
Future Volume (vph)	424	1409	289	1082	972	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.987	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	2787	2870	1863	3506	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	2787	2870	1863	3506	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		48			13	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Adj. Flow (vph)	456	1515	311	1163	1045	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	456	1515	311	1163	1146	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	30.0		20.0	61.0	41.0	
Total Split (%)	33.0%		22.0%	67.0%	45.1%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 91
Actuated Cycle Length: 91
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	456	1515	311	1163	1146
v/c Ratio	0.94	1.08	0.66	1.03	0.85
Control Delay	62.1	72.7	43.0	55.9	32.4
Queue Delay	0.0	0.0	0.0	1.9	0.0
Total Delay	62.1	72.7	43.0	57.8	32.4
Queue Length 50th (ft)	256	~552	87	~725	306
Queue Length 95th (ft)	#442	#700	131	#968	395
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	486	1402	473	1125	1356
Starvation Cap Reductn	0	0	0	6	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	1.08	0.66	1.04	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	424	1409	289	1082	972	94
Future Volume (vph)	424	1409	289	1082	972	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	2870	1863	3506	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	2870	1863	3506	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	456	1515	311	1163	1045	101
RTOR Reduction (vph)	0	24	0	0	8	0
Lane Group Flow (vph)	456	1491	311	1163	1138	0
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Actuated Green, G (s)	25.0	45.0	15.0	55.0	35.0	
Effective Green, g (s)	25.0	45.0	15.0	55.0	35.0	
Actuated g/C Ratio	0.27	0.49	0.16	0.60	0.38	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	486	1378	473	1125	1348	
v/s Ratio Prot	0.26	c0.53	0.11	c0.62	0.32	
v/s Ratio Perm						
v/c Ratio	0.94	1.08	0.66	1.03	0.84	
Uniform Delay, d1	32.2	23.0	35.6	18.0	25.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	25.6	49.6	2.5	35.9	4.8	
Delay (s)	57.8	72.6	38.1	53.9	30.3	
Level of Service	E	E	D	D	C	
Approach Delay (s)	69.2			50.6	30.3	
Approach LOS	E			D	C	

Intersection Summary

HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

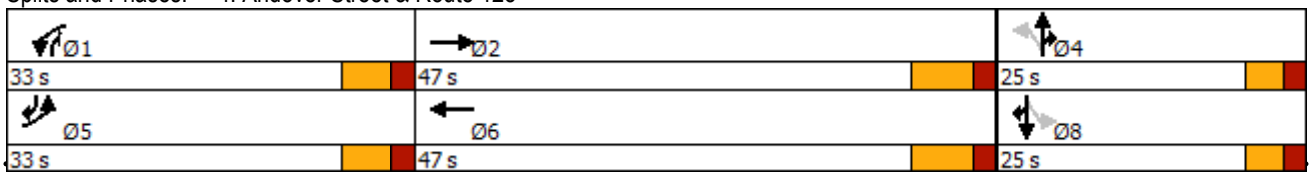
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	1250	73	56	474	35	32	146	409	133	124	560
Future Volume (vph)	183	1250	73	56	474	35	32	146	409	133	124	560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.990				0.850			0.850
Flt Protected	0.950			0.950				0.991			0.975	
Satd. Flow (prot)	1641	3544	0	1770	3465	0	0	1858	1599	0	1772	1583
Flt Permitted	0.950			0.950				0.768			0.627	
Satd. Flow (perm)	1641	3544	0	1770	3465	0	0	1440	1599	0	1140	1583
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		7										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			192	
Travel Time (s)		18.9			8.3			12.1			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Adj. Flow (vph)	193	1316	77	59	499	37	34	154	431	140	131	589
Shared Lane Traffic (%)												
Lane Group Flow (vph)	193	1393	0	59	536	0	0	188	431	0	271	589
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	25.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 89.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	193	1393	59	536	188	431	271	589
v/c Ratio	0.63	0.87	0.27	0.40	0.58	0.65	1.06	0.78
Control Delay	42.3	30.7	37.6	22.1	40.5	25.9	110.2	27.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	30.7	37.6	22.1	40.5	25.9	110.2	27.2
Queue Length 50th (ft)	99	335	31	109	90	188	~154	254
Queue Length 95th (ft)	166	#599	66	185	184	286	#363	388
Internal Link Dist (ft)		890		526	540		112	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	496	1593	535	1553	322	950	255	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.87	0.11	0.35	0.58	0.45	1.06	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	1250	73	56	474	35	32	146	409	133	124	560
Future Volume (vph)	183	1250	73	56	474	35	32	146	409	133	124	560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1641	3543		1770	3464			1858	1599		1772	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.77	1.00		0.63	1.00
Satd. Flow (perm)	1641	3543		1770	3464			1439	1599		1140	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	193	1316	77	59	499	37	34	154	431	140	131	589
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	193	1389	0	59	536	0	0	188	431	0	271	589
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	16.7	40.1		11.2	34.6			20.1	36.3		20.1	41.8
Effective Green, g (s)	16.7	40.1		11.2	34.6			20.1	36.3		20.1	41.8
Actuated g/C Ratio	0.19	0.45		0.13	0.39			0.22	0.41		0.22	0.47
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	306	1589		221	1340			323	649		256	740
v/s Ratio Prot	0.12	c0.39		0.03	0.15				0.27			c0.37
v/s Ratio Perm								0.13			c0.24	
v/c Ratio	0.63	0.87		0.27	0.40			0.58	0.66		1.06	0.80
Uniform Delay, d1	33.5	22.4		35.4	19.9			30.9	21.6		34.7	20.2
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	4.2	5.8		0.7	0.3			2.7	2.6		72.5	5.9
Delay (s)	37.7	28.2		36.0	20.1			33.6	24.2		107.2	26.1
Level of Service	D	C		D	C			C	C		F	C
Approach Delay (s)		29.4			21.7			27.0			51.7	
Approach LOS		C			C			C			D	

Intersection Summary

HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	214	44	320	603	5
Future Volume (vph)	3	214	44	320	603	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.999	
Flt Protected	0.950			0.994		
Satd. Flow (prot)	1925	1706	0	2034	2123	0
Flt Permitted	0.950			0.994		
Satd. Flow (perm)	1925	1706	0	2034	2123	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1277			192	1421	
Travel Time (s)	34.8			3.7	32.3	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	1%	7%	5%	1%	40%
Adj. Flow (vph)	4	261	54	390	735	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	261	0	444	741	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	214	44	320	603	5
Future Vol, veh/h	3	214	44	320	603	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	1	7	5	1	40
Mvmt Flow	4	261	54	390	735	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1236	738	741	0	-	0
Stage 1	738	-	-	-	-	-
Stage 2	498	-	-	-	-	-
Critical Hdwy	6.4	6.21	4.17	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	2.263	-	-	-
Pot Cap-1 Maneuver	196	420	843	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	180	420	843	-	-	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	437	-	-	-	-	-
Stage 2	615	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.6	1.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	843	-	180	420	-	-
HCM Lane V/C Ratio	0.064	-	0.02	0.621	-	-
HCM Control Delay (s)	9.6	0	25.4	26.6	-	-
HCM Lane LOS	A	A	D	D	-	-
HCM 95th %tile Q(veh)	0.2	-	0.1	4.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	1	385	15	0	1	22	277	0	1	92	3
Future Volume (vph)	90	1	385	15	0	1	22	277	0	1	92	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.891			0.993						0.995	
Flt Protected		0.991			0.955			0.996				
Satd. Flow (prot)	0	1871	0	0	1915	0	0	2115	0	0	2048	0
Flt Permitted		0.991			0.955			0.996				
Satd. Flow (perm)	0	1871	0	0	1915	0	0	2115	0	0	2048	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		511			525			1421			503	
Travel Time (s)		13.9			14.3			27.7			11.4	
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	2%	2%	7%	0%	0%	19%	0%	0%	0%	3%	50%
Adj. Flow (vph)	106	1	453	18	0	1	26	326	0	1	108	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	560	0	0	19	0	0	352	0	0	113	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection												
Int Delay, s/veh	11.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	90	1	385	15	0	1	22	277	0	1	92	3
Future Vol, veh/h	90	1	385	15	0	1	22	277	0	1	92	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	2	2	7	0	0	19	0	0	0	3	50
Mvmt Flow	106	1	453	18	0	1	26	326	0	1	108	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	491	490	110	717	492	326	112	0	0	326	0	0
Stage 1	112	112	-	378	378	-	-	-	-	-	-	-
Stage 2	379	378	-	339	114	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.22	7.17	6.5	6.2	4.29	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.318	3.563	4	3.3	2.371	-	-	2.2	-	-
Pot Cap-1 Maneuver	491	479	943	338	481	720	1378	-	-	1245	-	-
Stage 1	898	803	-	634	619	-	-	-	-	-	-	-
Stage 2	647	615	-	665	805	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	481	468	943	172	469	720	1378	-	-	1245	-	-
Mov Cap-2 Maneuver	481	468	-	172	469	-	-	-	-	-	-	-
Stage 1	877	802	-	619	605	-	-	-	-	-	-	-
Stage 2	631	601	-	345	804	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.5	27.2	0.6	0.1
HCM LOS	C	D		

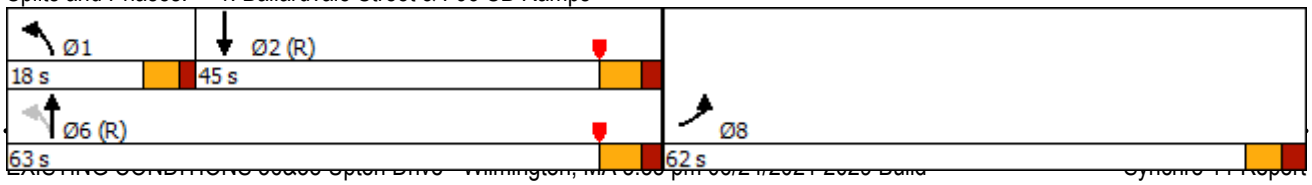
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1378	-	-	797	181	1245	-	-
HCM Lane V/C Ratio	0.019	-	-	0.703	0.104	0.001	-	-
HCM Control Delay (s)	7.7	0	-	19.5	27.2	7.9	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5.9	0.3	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	599	74	78	401	168	875
Future Volume (vph)	599	74	78	401	168	875
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.950		0.609			
Satd. Flow (perm)	3433	1760	1119	1818	1727	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		42				884
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Adj. Flow (vph)	605	75	79	405	170	884
Shared Lane Traffic (%)						
Lane Group Flow (vph)	605	75	79	405	170	884
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	62.0		18.0	63.0	45.0	
Total Split (%)	49.6%		14.4%	50.4%	36.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 12 (10%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	605	75	79	405	170	884
v/c Ratio	0.80	0.04	0.10	0.33	0.16	0.60
Control Delay	54.4	0.0	7.4	9.6	13.1	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	0.0	7.4	9.6	13.1	1.8
Queue Length 50th (ft)	240	0	19	121	60	0
Queue Length 95th (ft)	286	0	42	206	113	0
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1537	1760	839	1243	1044	1482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.04	0.09	0.33	0.16	0.60

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	599	74	78	401	168	875
Future Volume (vph)	599	74	78	401	168	875
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1760	1745	1818	1727	1482
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	3433	1760	1118	1818	1727	1482
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	605	75	79	405	170	884
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	605	75	79	405	170	884
Heavy Vehicles (%)	2%	4%	0%	1%	10%	9%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	27.5	125.0	85.5	85.5	74.6	125.0
Effective Green, g (s)	27.5	125.0	85.5	85.5	74.6	125.0
Actuated g/C Ratio	0.22	1.00	0.68	0.68	0.60	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	755	1760	794	1243	1030	1482
v/s Ratio Prot	c0.18		0.00	0.22	0.10	
v/s Ratio Perm		0.04	0.06			c0.60
v/c Ratio	0.80	0.04	0.10	0.33	0.17	0.60
Uniform Delay, d1	46.2	0.0	6.6	8.0	11.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.8	0.0	0.0	0.7	0.3	1.8
Delay (s)	51.9	0.0	6.7	8.7	11.6	1.8
Level of Service	D	A	A	A	B	A
Approach Delay (s)	46.2			8.4	3.4	
Approach LOS	D			A	A	

Intersection Summary

HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

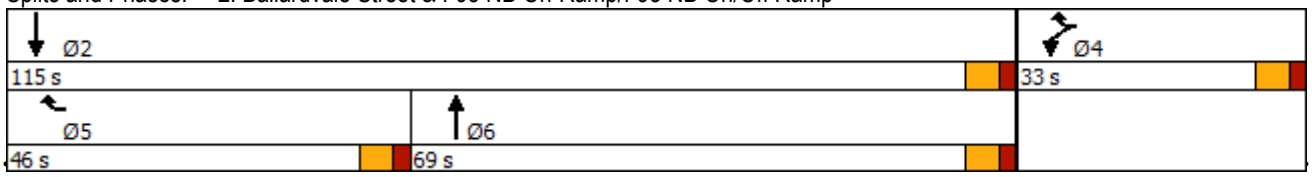
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	0	931	0	955	45	0	1026	276
Future Volume (vph)	0	0	0	17	0	931	0	955	45	0	1026	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1703	0	2544	0	3323	1830	0	3406	1301
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									111			222
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Adj. Flow (vph)	0	0	0	18	0	960	0	985	46	0	1058	285
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	18	0	960	0	985	46	0	1058	285
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				33.0				69.0			115.0	
Total Split (%)				22.3%				46.6%			77.7%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				Min			Min	

Intersection Summary

Area Type: Other
Cycle Length: 148
Actuated Cycle Length: 105.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.0
Total Split (s)	46.0
Total Split (%)	31%
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	18	960	985	46	1058	285
v/c Ratio	0.04	0.73	0.82	0.03	0.49	0.22
Control Delay	39.6	25.1	37.1	0.0	10.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	25.1	37.1	0.0	10.7	0.4
Queue Length 50th (ft)	9	274	292	0	185	0
Queue Length 95th (ft)	37	469	488	0	222	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	457	1806	2085	1830	3192	1301
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.53	0.47	0.03	0.33	0.22

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	17	0	931	0	955	45	0	1026	276
Future Volume (vph)	0	0	0	17	0	931	0	955	45	0	1026	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1703		2544		3323	1830		3406	1301
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1703		2544		3323	1830		3406	1301
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	18	0	960	0	985	46	0	1058	285
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	18	0	960	0	985	46	0	1058	285
Heavy Vehicles (%)	0%	0%	0%	6%	0%	8%	0%	5%	0%	0%	6%	20%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				26.6		54.3		38.6	104.9		66.3	104.9
Effective Green, g (s)				26.6		54.3		38.6	104.9		66.3	104.9
Actuated g/C Ratio				0.25		0.52		0.37	1.00		0.63	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				431		1316		1222	1830		2152	1301
v/s Ratio Prot				0.01		c0.38		c0.30			0.31	
v/s Ratio Perm									0.03			0.22
v/c Ratio				0.04		0.73		0.81	0.03		0.49	0.22
Uniform Delay, d1				29.5		19.6		29.8	0.0		10.3	0.0
Progression Factor				1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2				0.0		2.1		3.8	0.0		0.1	0.4
Delay (s)				29.6		21.7		33.5	0.0		10.4	0.4
Level of Service				C		C		C	A		B	A
Approach Delay (s)		0.0			21.8			32.0			8.3	
Approach LOS		A			C			C			A	

Intersection Summary

HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

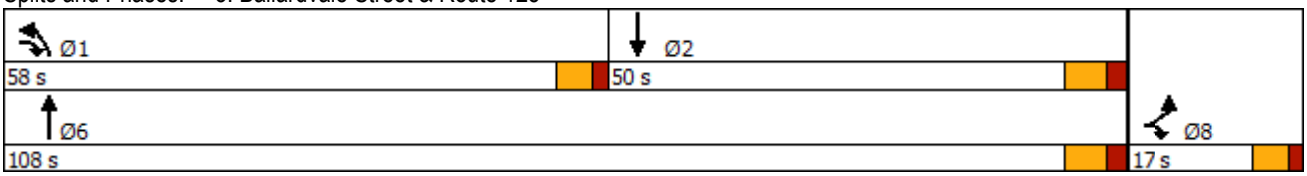
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	314	1193	693	988	488
Future Volume (vph)	63	314	1193	693	988	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.950	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1543	2311	3303	1759	3287	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1543	2311	3303	1759	3287	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		36			75	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Adj. Flow (vph)	66	327	1243	722	1029	508
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	327	1243	722	1537	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	17.0		58.0	108.0	50.0	
Total Split (%)	13.6%		46.4%	86.4%	40.0%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 119.3
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	66	327	1243	722	1537
v/c Ratio	0.46	0.26	0.94	0.50	1.22
Control Delay	64.0	13.4	47.9	4.9	137.4
Queue Delay	0.0	0.0	0.0	0.4	0.0
Total Delay	64.0	13.4	47.9	5.3	137.4
Queue Length 50th (ft)	51	64	471	145	~805
Queue Length 95th (ft)	100	94	573	200	#951
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	155	1335	1473	1509	1264
Starvation Cap Reductn	0	0	0	347	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.24	0.84	0.62	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	314	1193	693	988	488
Future Volume (vph)	63	314	1193	693	988	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1543	2311	3303	1759	3288	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1543	2311	3303	1759	3288	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	66	327	1243	722	1029	508
RTOR Reduction (vph)	0	17	0	0	47	0
Lane Group Flow (vph)	66	310	1243	722	1490	0
Heavy Vehicles (%)	17%	23%	6%	8%	5%	3%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases						
Actuated Green, G (s)	11.1	64.1	48.0	97.2	44.2	
Effective Green, g (s)	11.1	64.1	48.0	97.2	44.2	
Actuated g/C Ratio	0.09	0.54	0.40	0.81	0.37	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	143	1241	1328	1433	1218	
v/s Ratio Prot	c0.04	0.13	c0.38	0.41	c0.45	
v/s Ratio Perm						
v/c Ratio	0.46	0.25	0.94	0.50	1.22	
Uniform Delay, d1	51.3	14.8	34.2	3.5	37.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0	12.2	0.1	107.9	
Delay (s)	52.1	14.8	46.4	3.6	145.5	
Level of Service	D	B	D	A	F	
Approach Delay (s)	21.1			30.6	145.5	
Approach LOS	C			C	F	

Intersection Summary

HCM 2000 Control Delay	75.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	119.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

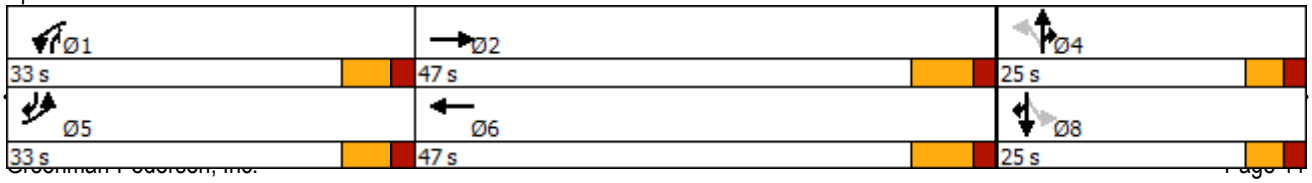
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	463	269	24	315	1154	171	103	201	91	24	84	219
Future Volume (vph)	463	269	24	315	1154	171	103	201	91	24	84	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt		0.988			0.981				0.850			0.850
Flt Protected	0.950			0.950				0.983			0.989	
Satd. Flow (prot)	1687	3334	0	1805	3466	0	0	1825	1583	0	1741	1404
Flt Permitted	0.950			0.950				0.814			0.519	
Satd. Flow (perm)	1687	3334	0	1805	3466	0	0	1511	1583	0	914	1404
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		10										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			229	
Travel Time (s)		18.9			8.3			12.1			5.2	
Confl. Bikes (#/hr)						4						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Adj. Flow (vph)	487	283	25	332	1215	180	108	212	96	25	88	231
Shared Lane Traffic (%)												
Lane Group Flow (vph)	487	308	0	332	1395	0	0	320	96	0	113	231
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	22.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	487	308	332	1395	320	96	113	231
v/c Ratio	1.12	0.22	0.83	1.06	1.11	0.13	0.65	0.33
Control Delay	119.1	20.4	56.5	73.8	128.1	15.3	58.2	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.1	20.4	56.5	73.8	128.1	15.3	58.2	17.0
Queue Length 50th (ft)	~379	67	211	~542	~247	35	71	88
Queue Length 95th (ft)	#580	103	306	#679	#420	61	#150	143
Internal Link Dist (ft)		890		526	540		149	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	433	1394	464	1320	287	799	174	708
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	0.22	0.72	1.06	1.11	0.12	0.65	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	463	269	24	315	1154	171	103	201	91	24	84	219
Future Volume (vph)	463	269	24	315	1154	171	103	201	91	24	84	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.98			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)	1687	3334		1805	3464			1826	1583		1741	1404
Flt Permitted	0.95	1.00		0.95	1.00			0.81	1.00		0.52	1.00
Satd. Flow (perm)	1687	3334		1805	3464			1511	1583		914	1404
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	487	283	25	332	1215	180	108	212	96	25	88	231
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	487	302	0	332	1395	0	0	320	96	0	113	231
Confl. Bikes (#/hr)						4						
Heavy Vehicles (%)	7%	6%	18%	0%	2%	1%	5%	1%	2%	9%	3%	15%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	27.0	43.7		23.3	40.0			20.0	48.3		20.0	52.0
Effective Green, g (s)	27.0	43.7		23.3	40.0			20.0	48.3		20.0	52.0
Actuated g/C Ratio	0.26	0.42		0.22	0.38			0.19	0.46		0.19	0.50
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	433	1387		400	1319			287	728		174	695
v/s Ratio Prot	c0.29	c0.09		0.18	c0.40				0.06			0.16
v/s Ratio Perm								c0.21			0.12	
v/c Ratio	1.12	0.22		0.83	1.06			1.11	0.13		0.65	0.33
Uniform Delay, d1	39.0	19.7		39.0	32.5			42.5	16.3		39.3	16.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	81.8	0.1		13.3	41.6			87.6	0.1		8.1	0.3
Delay (s)	120.8	19.8		52.3	74.1			130.1	16.4		47.4	16.3
Level of Service	F	B		D	E			F	B		D	B
Approach Delay (s)		81.7			69.9			103.9			26.5	
Approach LOS		F			E			F			C	

Intersection Summary

HCM 2000 Control Delay	72.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	62	298	537	265	13
Future Volume (vph)	3	62	298	537	265	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.994	
Flt Protected	0.950			0.982		
Satd. Flow (prot)	1925	1538	0	2035	1931	0
Flt Permitted	0.950			0.982		
Satd. Flow (perm)	1925	1538	0	2035	1931	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1258			229	1411	
Travel Time (s)	34.3			4.5	32.1	
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	12%	2%	5%	11%	8%
Adj. Flow (vph)	4	77	368	663	327	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	77	0	1031	343	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	62	298	537	265	13
Future Vol, veh/h	3	62	298	537	265	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	12	2	5	11	8
Mvmt Flow	4	77	368	663	327	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1734	335	343	0	-	0
Stage 1	335	-	-	-	-	-
Stage 2	1399	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.218	-	-	-
Pot Cap-1 Maneuver	98	685	1216	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	51	685	1216	-	-	-
Mov Cap-2 Maneuver	51	-	-	-	-	-
Stage 1	380	-	-	-	-	-
Stage 2	231	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	3.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1216	-	51	685	-	-
HCM Lane V/C Ratio	0.303	-	0.073	0.112	-	-
HCM Control Delay (s)	9.2	0	81	10.9	-	-
HCM Lane LOS	A	A	F	B	-	-
HCM 95th %tile Q(veh)	1.3	-	0.2	0.4	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1	28	5	0	0	365	84	13	0	205	74
Future Volume (vph)	3	1	28	5	0	0	365	84	13	0	205	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.881						0.996			0.964	
Flt Protected		0.995			0.950			0.962				
Satd. Flow (prot)	0	1476	0	0	1705	0	0	1994	0	0	2061	0
Flt Permitted		0.995			0.950			0.962				
Satd. Flow (perm)	0	1476	0	0	1705	0	0	1994	0	0	2061	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		518			544			1411			503	
Travel Time (s)		14.1			14.8			27.5			11.4	
Confl. Bikes (#/hr)						2						1
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	0%	100%	29%	20%	0%	0%	2%	8%	15%	0%	1%	0%
Adj. Flow (vph)	4	1	36	6	0	0	474	109	17	0	266	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	6	0	0	600	0	0	362	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	1	28	5	0	0	365	84	13	0	205	74
Future Vol, veh/h	3	1	28	5	0	0	365	84	13	0	205	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	0	100	29	20	0	0	2	8	15	0	1	0
Mvmt Flow	4	1	36	6	0	0	474	109	17	0	266	96

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1380	1388	314	1399	1428	118	362	0	0	126	0	0
Stage 1	314	314	-	1066	1066	-	-	-	-	-	-	-
Stage 2	1066	1074	-	333	362	-	-	-	-	-	-	-
Critical Hdwy	7.1	7.5	6.49	7.3	6.5	6.2	4.12	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	6.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.561	3.68	4	3.3	2.218	-	-	2.2	-	-
Pot Cap-1 Maneuver	123	91	668	108	136	939	1197	-	-	1473	-	-
Stage 1	701	512	-	249	301	-	-	-	-	-	-	-
Stage 2	271	201	-	644	629	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	82	52	668	67	78	939	1197	-	-	1473	-	-
Mov Cap-2 Maneuver	82	52	-	67	78	-	-	-	-	-	-	-
Stage 1	402	512	-	143	172	-	-	-	-	-	-	-
Stage 2	155	115	-	607	629	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.6	64.4	7.9	0
HCM LOS	C	F		

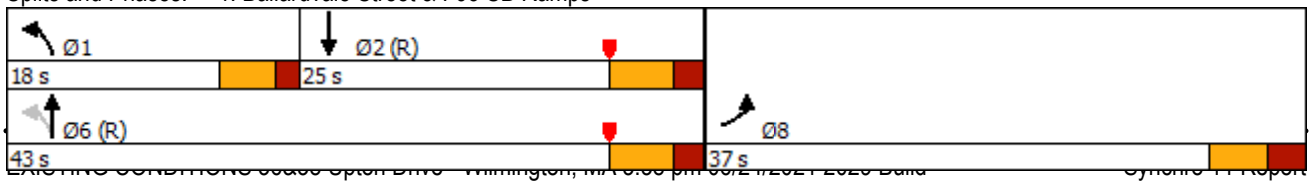
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1197	-	-	327	67	1473	-	-
HCM Lane V/C Ratio	0.396	-	-	0.127	0.097	-	-	-
HCM Control Delay (s)	10	0	-	17.6	64.4	0	-	-
HCM Lane LOS	A	A	-	C	F	A	-	-
HCM 95th %tile Q(veh)	1.9	-	-	0.4	0.3	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	195	114	31	265	689	1155
Future Volume (vph)	195	114	31	265	689	1155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	11	11	12	12
Storage Length (ft)	0	125	170			0
Storage Lanes	2	1	1			1
Taper Length (ft)	25		75			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.950		0.228			
Satd. Flow (perm)	3019	1830	391	1837	1881	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		124				829
Link Speed (mph)	30			35	35	
Link Distance (ft)	753			772	351	
Travel Time (s)	17.1			15.0	6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Adj. Flow (vph)	212	124	34	288	749	1255
Shared Lane Traffic (%)						
Lane Group Flow (vph)	212	124	34	288	749	1255
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	8.0		7.0	10.0	10.0	
Minimum Split (s)	15.0		12.0	16.0	16.0	
Total Split (s)	37.0		18.0	43.0	25.0	
Total Split (%)	46.3%		22.5%	53.8%	31.3%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 2 (3%), Referenced to phase 2:SBT and 6:NBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ballardvale Street & I-93 SB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	212	124	34	288	749	1255
v/c Ratio	0.55	0.07	0.09	0.22	0.63	0.79
Control Delay	37.7	0.1	3.8	4.5	13.3	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	0.1	3.8	4.5	13.3	11.1
Queue Length 50th (ft)	52	0	4	38	199	478
Queue Length 95th (ft)	81	0	12	75	m225	m519
Internal Link Dist (ft)	673			692	271	
Turn Bay Length (ft)		125	170			
Base Capacity (vph)	1169	1830	488	1324	1187	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.07	0.07	0.22	0.63	0.79

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	195	114	31	265	689	1155
Future Volume (vph)	195	114	31	265	689	1155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	16	11	11	12	12
Total Lost time (s)	6.0	4.0	5.0	6.0	6.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3019	1830	1631	1837	1881	1583
Flt Permitted	0.95	1.00	0.23	1.00	1.00	1.00
Satd. Flow (perm)	3019	1830	392	1837	1881	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	212	124	34	288	749	1255
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	212	124	34	288	749	1255
Heavy Vehicles (%)	16%	0%	7%	0%	1%	2%
Turn Type	Prot	Free	pm+pt	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free	6			Free
Actuated Green, G (s)	10.3	80.0	57.7	57.7	48.5	80.0
Effective Green, g (s)	10.3	80.0	57.7	57.7	48.5	80.0
Actuated g/C Ratio	0.13	1.00	0.72	0.72	0.61	1.00
Clearance Time (s)	6.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	388	1830	347	1324	1140	1583
v/s Ratio Prot	0.07		0.01	0.16	0.40	
v/s Ratio Perm		0.07	0.07			c0.79
v/c Ratio	0.55	0.07	0.10	0.22	0.66	0.79
Uniform Delay, d1	32.7	0.0	6.2	3.7	10.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.05	1.00
Incremental Delay, d2	0.8	0.1	0.0	0.4	1.3	1.8
Delay (s)	33.5	0.1	6.3	4.1	12.1	1.8
Level of Service	C	A	A	A	B	A
Approach Delay (s)	21.2			4.3	5.7	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

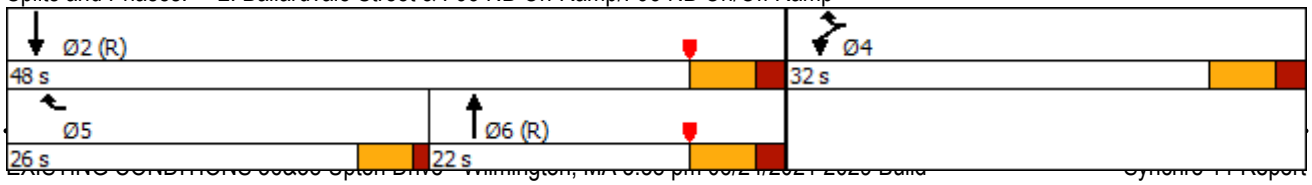
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	192	0	966	0	421	39	0	1652	776
Future Volume (vph)	0	0	0	192	0	966	0	421	39	0	1652	776
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	11	11	11	11	16	12	12	11
Storage Length (ft)	0		0	150		0	0		0	0		420
Storage Lanes	0		0	1		2	0		1	0		1
Taper Length (ft)	25			75			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Frt						0.850			0.850			0.850
Flt Protected				0.950								
Satd. Flow (prot)	0	0	0	1787	0	2617	0	3261	1830	0	3574	1546
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	0	1787	0	2617	0	3261	1830	0	3574	1546
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)									184			715
Link Speed (mph)		30			30			35			35	
Link Distance (ft)		499			1438			373			803	
Travel Time (s)		11.3			32.7			7.3			15.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	7%	0%	0%	1%	1%
Adj. Flow (vph)	0	0	0	209	0	1050	0	458	42	0	1796	843
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	209	0	1050	0	458	42	0	1796	843
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Detector Phase				4		4 5		6			2	
Switch Phase												
Minimum Initial (s)				6.0				8.0			15.0	
Minimum Split (s)				12.0				14.0			21.0	
Total Split (s)				32.0				22.0			48.0	
Total Split (%)				40.0%				27.5%			60.0%	
Yellow Time (s)				4.0				4.0			4.0	
All-Red Time (s)				2.0				2.0			2.0	
Lost Time Adjust (s)				0.0				0.0			0.0	
Total Lost Time (s)				6.0				6.0			6.0	
Lead/Lag								Lag				
Lead-Lag Optimize?								Yes				
Recall Mode				None				C-Min			C-Min	

Intersection Summary

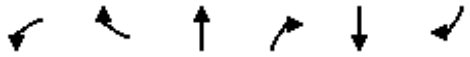
Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow, Master Intersection
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ballardvale Street & I-93 NB On-Ramp/I-93 NB On/Off Ramp



Lane Group	Ø5
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	5
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	9.5
Total Split (s)	26.0
Total Split (%)	33%
Yellow Time (s)	3.5
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Recall Mode	None

Intersection Summary



Lane Group	WBL	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	209	1050	458	42	1796	843
v/c Ratio	0.36	0.72	0.47	0.02	0.96	0.55
Control Delay	22.8	16.2	26.6	0.0	32.5	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.8	16.2	26.6	0.0	32.5	1.4
Queue Length 50th (ft)	79	220	112	0	422	0
Queue Length 95th (ft)	136	213	173	0	#611	0
Internal Link Dist (ft)			293		723	
Turn Bay Length (ft)	150					420
Base Capacity (vph)	581	1703	965	1830	1876	1546
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.62	0.47	0.02	0.96	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	192	0	966	0	421	39	0	1652	776
Future Volume (vph)	0	0	0	192	0	966	0	421	39	0	1652	776
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	11	11	11	11	16	12	12	11
Total Lost time (s)				6.0		6.0		6.0	4.0		6.0	4.0
Lane Util. Factor				1.00		0.88		0.95	1.00		0.95	1.00
Frt				1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				1787		2617		3261	1830		3574	1546
Flt Permitted				0.95		1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				1787		2617		3261	1830		3574	1546
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	209	0	1050	0	458	42	0	1796	843
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	209	0	1050	0	458	42	0	1796	843
Heavy Vehicles (%)	0%	0%	0%	1%	0%	5%	0%	7%	0%	0%	1%	1%
Turn Type				Prot		custom		NA	Free		NA	Free
Protected Phases				4		4 5		6			2	
Permitted Phases									Free			Free
Actuated Green, G (s)				26.1		45.9		23.6	80.0		41.9	80.0
Effective Green, g (s)				26.1		45.9		23.6	80.0		41.9	80.0
Actuated g/C Ratio				0.33		0.57		0.30	1.00		0.52	1.00
Clearance Time (s)				6.0				6.0			6.0	
Vehicle Extension (s)				3.0				2.0			2.0	
Lane Grp Cap (vph)				583		1501		961	1830		1871	1546
v/s Ratio Prot				0.12		c0.40		0.14			c0.50	
v/s Ratio Perm									0.02			0.55
v/c Ratio				0.36		0.70		0.48	0.02		0.96	0.55
Uniform Delay, d1				20.6		12.1		23.1	0.0		18.2	0.0
Progression Factor				1.00		1.00		1.01	1.00		1.00	1.00
Incremental Delay, d2				0.4		1.4		1.7	0.0		13.3	1.4
Delay (s)				20.9		13.6		25.0	0.0		31.5	1.4
Level of Service				C		B		C	A		C	A
Approach Delay (s)		0.0			14.8			22.9			21.9	
Approach LOS		A			B			C			C	

Intersection Summary

HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

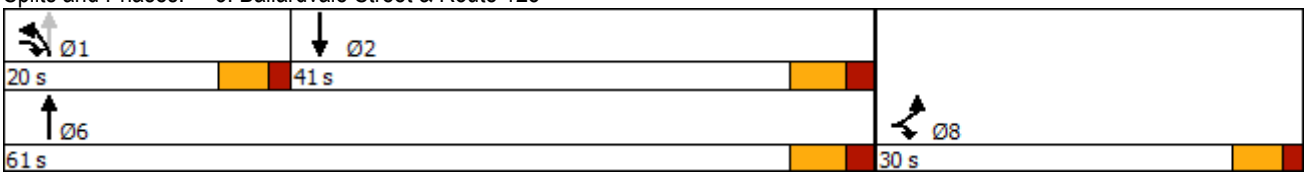
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	424	1409	289	1098	1019	94
Future Volume (vph)	424	1409	289	1098	1019	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		75			
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	0.95
Frt		0.850			0.987	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	2787	2870	1863	3507	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	2787	2870	1863	3507	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		40			12	
Link Speed (mph)	25			35	35	
Link Distance (ft)	1279			803	920	
Travel Time (s)	34.9			15.6	17.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Adj. Flow (vph)	456	1515	311	1181	1096	101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	456	1515	311	1181	1197	0
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Detector Phase	8	8 1	1	6	2	
Switch Phase						
Minimum Initial (s)	7.0		8.0	10.0	10.0	
Minimum Split (s)	12.0		13.0	16.0	16.0	
Total Split (s)	30.0		20.0	61.0	41.0	
Total Split (%)	33.0%		22.0%	67.0%	45.1%	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	1.5		1.5	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	6.0	6.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	Min	Min	

Intersection Summary

Area Type: Other
Cycle Length: 91
Actuated Cycle Length: 91
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Ballardvale Street & Route 125



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	456	1515	311	1181	1197
v/c Ratio	0.94	1.08	0.66	1.05	0.88
Control Delay	62.1	74.0	43.0	61.0	35.1
Queue Delay	0.0	0.0	0.0	2.1	0.0
Total Delay	62.1	74.0	43.0	63.1	35.1
Queue Length 50th (ft)	256	~555	87	~747	328
Queue Length 95th (ft)	#442	#703	131	#991	#457
Internal Link Dist (ft)	1199			723	840
Turn Bay Length (ft)		150	300		
Base Capacity (vph)	486	1398	473	1125	1356
Starvation Cap Reductn	0	0	0	6	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	1.08	0.66	1.06	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	424	1409	289	1098	1019	94
Future Volume (vph)	424	1409	289	1098	1019	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	6.0	6.0	
Lane Util. Factor	1.00	0.88	0.97	1.00	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	2787	2870	1863	3509	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	2787	2870	1863	3509	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	456	1515	311	1181	1096	101
RTOR Reduction (vph)	0	20	0	0	7	0
Lane Group Flow (vph)	456	1495	311	1181	1190	0
Heavy Vehicles (%)	2%	2%	22%	2%	1%	8%
Turn Type	Prot	pt+ov	Prot	NA	NA	
Protected Phases	8	8 1	1	6	2	
Permitted Phases				1		
Actuated Green, G (s)	25.0	45.0	15.0	55.0	35.0	
Effective Green, g (s)	25.0	45.0	15.0	55.0	35.0	
Actuated g/C Ratio	0.27	0.49	0.16	0.60	0.38	
Clearance Time (s)	5.0		5.0	6.0	6.0	
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)	486	1378	473	1125	1349	
v/s Ratio Prot	0.26	c0.54	0.11	c0.63	0.34	
v/s Ratio Perm						
v/c Ratio	0.94	1.08	0.66	1.05	0.88	
Uniform Delay, d1	32.2	23.0	35.6	18.0	26.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	25.6	50.7	2.5	40.9	6.9	
Delay (s)	57.8	73.7	38.1	58.9	33.0	
Level of Service	E	E	D	E	C	
Approach Delay (s)	70.0			54.6	33.0	
Approach LOS	E			D	C	

Intersection Summary

HCM 2000 Control Delay	55.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

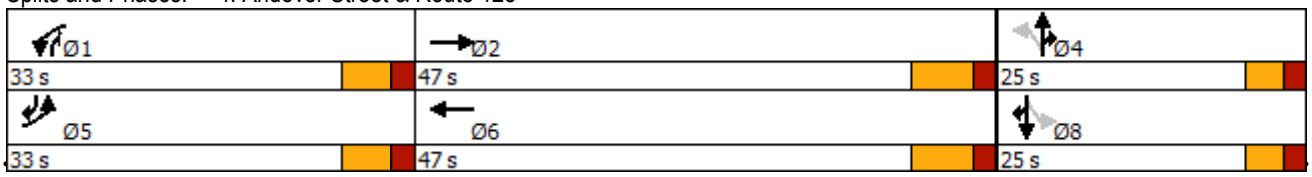
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Future Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.989				0.850			0.850
Flt Protected	0.950			0.950				0.991			0.975	
Satd. Flow (prot)	1641	3544	0	1770	3461	0	0	1858	1599	0	1772	1583
Flt Permitted	0.950			0.950				0.732			0.623	
Satd. Flow (perm)	1641	3544	0	1770	3461	0	0	1372	1599	0	1133	1583
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		7										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			192	
Travel Time (s)		18.9			8.3			12.1			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Adj. Flow (vph)	209	1316	77	59	499	39	34	156	431	147	138	639
Shared Lane Traffic (%)												
Lane Group Flow (vph)	209	1393	0	59	538	0	0	190	431	0	285	639
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	25.0		13.0	13.0		13.0	13.0	
Total Split (s)	33.0	47.0		33.0	47.0		25.0	25.0		25.0	25.0	
Total Split (%)	31.4%	44.8%		31.4%	44.8%		23.8%	23.8%		23.8%	23.8%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 89.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	209	1393	59	538	190	431	285	639
v/c Ratio	0.62	0.87	0.27	0.42	0.62	0.65	1.12	0.82
Control Delay	40.2	30.7	37.6	23.5	42.5	25.9	129.1	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	30.7	37.6	23.5	42.5	25.9	129.1	28.3
Queue Length 50th (ft)	108	335	31	110	92	188	~175	288
Queue Length 95th (ft)	179	#599	66	186	#203	286	#385	445
Internal Link Dist (ft)		890		526	540		112	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	496	1593	535	1551	307	950	254	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.87	0.11	0.35	0.62	0.45	1.12	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Future Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1641	3543		1770	3462			1858	1599		1772	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.73	1.00		0.62	1.00
Satd. Flow (perm)	1641	3543		1770	3462			1373	1599		1132	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	209	1316	77	59	499	39	34	156	431	147	138	639
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	209	1389	0	59	538	0	0	190	431	0	285	639
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	18.3	40.2		11.2	33.1			20.1	36.3		20.1	43.4
Effective Green, g (s)	18.3	40.2		11.2	33.1			20.1	36.3		20.1	43.4
Actuated g/C Ratio	0.20	0.45		0.13	0.37			0.22	0.41		0.22	0.48
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	335	1591		221	1280			308	648		254	767
v/s Ratio Prot	0.13	c0.39		0.03	0.16				0.27			c0.40
v/s Ratio Perm								0.14			c0.25	
v/c Ratio	0.62	0.87		0.27	0.42			0.62	0.67		1.12	0.83
Uniform Delay, d1	32.5	22.3		35.4	21.0			31.2	21.7		34.7	19.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.6	5.8		0.7	0.3			3.6	2.6		93.3	7.7
Delay (s)	36.1	28.1		36.1	21.3			34.9	24.2		128.0	27.7
Level of Service	D	C		D	C			C	C		F	C
Approach Delay (s)		29.2			22.8			27.5			58.6	
Approach LOS		C			C			C			E	

Intersection Summary

HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	89.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	275	64	320	603	5
Future Volume (vph)	3	275	64	320	603	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	16	16	16	16
Storage Length (ft)	0	300	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850			0.999	
Flt Protected	0.950			0.992		
Satd. Flow (prot)	1925	1706	0	2028	2123	0
Flt Permitted	0.950			0.992		
Satd. Flow (perm)	1925	1706	0	2028	2123	0
Link Speed (mph)	25			35	30	
Link Distance (ft)	1277			192	1421	
Travel Time (s)	34.8			3.7	32.3	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	1%	7%	5%	1%	40%
Adj. Flow (vph)	4	335	78	390	735	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	335	0	468	741	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	275	64	320	603	5
Future Vol, veh/h	3	275	64	320	603	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	300	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	1	7	5	1	40
Mvmt Flow	4	335	78	390	735	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1284	738	741	0	-	0
Stage 1	738	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Critical Hdwy	6.4	6.21	4.17	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	2.263	-	-	-
Pot Cap-1 Maneuver	184	420	843	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	162	420	843	-	-	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	39.8	1.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	843	-	162	420	-	-
HCM Lane V/C Ratio	0.093	-	0.023	0.798	-	-
HCM Control Delay (s)	9.7	0	27.7	39.9	-	-
HCM Lane LOS	A	A	D	E	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	7.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	1	385	15	0	1	22	277	0	1	92	4
Future Volume (vph)	93	1	385	15	0	1	22	277	0	1	92	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.891			0.993						0.994	
Flt Protected		0.990			0.955			0.996				
Satd. Flow (prot)	0	1869	0	0	1915	0	0	2115	0	0	2038	0
Flt Permitted		0.990			0.955			0.996				
Satd. Flow (perm)	0	1869	0	0	1915	0	0	2115	0	0	2038	0
Link Speed (mph)		25			25			35			30	
Link Distance (ft)		511			525			1421			503	
Travel Time (s)		13.9			14.3			27.7			11.4	
Confl. Bikes (#/hr)						1						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	2%	2%	7%	0%	0%	19%	0%	0%	0%	3%	50%
Adj. Flow (vph)	109	1	453	18	0	1	26	326	0	1	108	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	563	0	0	19	0	0	352	0	0	114	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	11.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	93	1	385	15	0	1	22	277	0	1	92	4
Future Vol, veh/h	93	1	385	15	0	1	22	277	0	1	92	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	2	2	7	0	0	19	0	0	0	3	50
Mvmt Flow	109	1	453	18	0	1	26	326	0	1	108	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	492	491	111	718	493	326	113	0	0	326	0	0
Stage 1	113	113	-	378	378	-	-	-	-	-	-	-
Stage 2	379	378	-	340	115	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.52	6.22	7.17	6.5	6.2	4.29	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.52	-	6.17	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.018	3.318	3.563	4	3.3	2.371	-	-	2.2	-	-
Pot Cap-1 Maneuver	490	478	942	338	480	720	1377	-	-	1245	-	-
Stage 1	897	802	-	634	619	-	-	-	-	-	-	-
Stage 2	647	615	-	664	804	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	480	467	942	172	468	720	1377	-	-	1245	-	-
Mov Cap-2 Maneuver	480	467	-	172	468	-	-	-	-	-	-	-
Stage 1	876	801	-	619	605	-	-	-	-	-	-	-
Stage 2	631	601	-	344	803	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.9	27.2	0.6	0.1
HCM LOS	C	D		

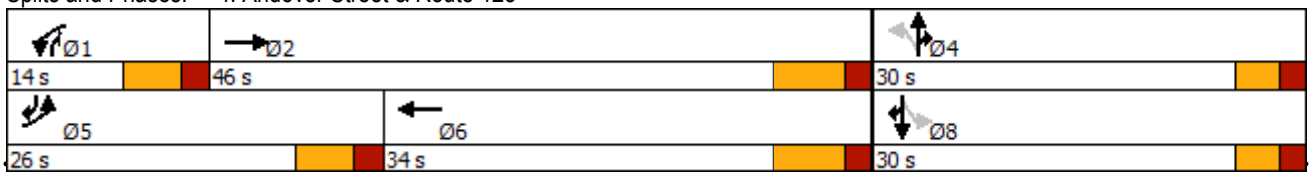
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1377	-	-	792	181	1245	-	-
HCM Lane V/C Ratio	0.019	-	-	0.712	0.104	0.001	-	-
HCM Control Delay (s)	7.7	0	-	19.9	27.2	7.9	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	6.1	0.3	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Future Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	11	11	12
Storage Length (ft)	500		0	365		600	0		140	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.989				0.850			0.850
Flt Protected	0.950			0.950				0.991			0.975	
Satd. Flow (prot)	1641	3544	0	1770	3461	0	0	1858	1599	0	1772	1583
Flt Permitted	0.950			0.950				0.877			0.662	
Satd. Flow (perm)	1641	3544	0	1770	3461	0	0	1644	1599	0	1203	1583
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		8										
Link Speed (mph)		35			50			35			30	
Link Distance (ft)		970			606			620			192	
Travel Time (s)		18.9			8.3			12.1			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Adj. Flow (vph)	209	1316	77	59	499	39	34	156	431	147	138	639
Shared Lane Traffic (%)												
Lane Group Flow (vph)	209	1393	0	59	538	0	0	190	431	0	285	639
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Detector Phase	5	2		1	6		4	4	4 1	8	8	8 5
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	14.0	22.0		14.0	25.0		13.0	13.0		13.0	13.0	
Total Split (s)	26.0	46.0		14.0	34.0		30.0	30.0		30.0	30.0	
Total Split (%)	28.9%	51.1%		15.6%	37.8%		33.3%	33.3%		33.3%	33.3%	
Yellow Time (s)	4.0	5.0		4.0	5.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 89.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Andover Street & Route 125



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	209	1393	59	538	190	431	285	639
v/c Ratio	0.69	0.91	0.37	0.46	0.42	0.62	0.85	0.76
Control Delay	46.0	33.9	46.0	25.8	29.9	24.6	56.0	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	33.9	46.0	25.8	29.9	24.6	56.0	23.2
Queue Length 50th (ft)	111	375	32	126	88	185	153	264
Queue Length 95th (ft)	179	#523	71	183	151	286	#296	383
Internal Link Dist (ft)		890		526	540		112	
Turn Bay Length (ft)	500		365			140		
Base Capacity (vph)	367	1551	158	1165	459	678	336	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.90	0.37	0.46	0.41	0.64	0.85	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Future Volume (vph)	199	1250	73	56	474	37	32	148	409	140	131	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	11	11	12
Total Lost time (s)	6.0	7.0		6.0	7.0			5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1641	3543		1770	3462			1858	1599		1772	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.88	1.00		0.66	1.00
Satd. Flow (perm)	1641	3543		1770	3462			1645	1599		1203	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	209	1316	77	59	499	39	34	156	431	147	138	639
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	209	1388	0	59	538	0	0	190	431	0	285	639
Heavy Vehicles (%)	10%	1%	2%	2%	3%	5%	3%	1%	1%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA		Perm	NA	pt+ov	Perm	NA	pt+ov
Protected Phases	5	2		1	6			4	4 1		8	8 5
Permitted Phases							4			8		
Actuated Green, G (s)	16.5	38.6		8.0	30.1			24.8	37.8		24.8	46.3
Effective Green, g (s)	16.5	38.6		8.0	30.1			24.8	37.8		24.8	46.3
Actuated g/C Ratio	0.18	0.43		0.09	0.34			0.28	0.42		0.28	0.52
Clearance Time (s)	6.0	7.0		6.0	7.0			5.0			5.0	
Vehicle Extension (s)	3.0	4.0		3.0	4.0			3.0			3.0	
Lane Grp Cap (vph)	302	1529		158	1165			456	676		333	819
v/s Ratio Prot	0.13	c0.39		0.03	0.16				0.27			c0.40
v/s Ratio Perm								0.12			0.24	
v/c Ratio	0.69	0.91		0.37	0.46			0.42	0.64		0.86	0.78
Uniform Delay, d1	34.1	23.7		38.3	23.3			26.4	20.4		30.6	17.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	6.7	8.3		1.5	0.4			0.6	2.0		18.9	4.8
Delay (s)	40.8	32.1		39.8	23.7			27.0	22.4		49.5	22.3
Level of Service	D	C		D	C			C	C		D	C
Approach Delay (s)		33.2			25.3			23.8			30.7	
Approach LOS		C			C			C			C	

Intersection Summary

HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Appendix E: Site Plan



LEGEND

- : PASSENGER CARS
- : MINIBUS
- : BUS
- : BUS CIRCULATION
- : CAR CIRCULATION

terraink
landscape architecture

WILMINGTON ELEMENTARY SCHOOL | VEHICULAR CIRCULATION - OPTION B

N.T.S. CONCEPT DESIGN PREPARED FOR TEAM COORDINATION . NOT FOR CONSTRUCTION

NORTH

Wilmington . Massachusetts
Schematic Design Phase
February 2025



Appendix F: C.A.R.E.S. Enrollment Data

Morning Arrival Data when CARES is Offered

	Total Students	AM Bus Riders	AM Minibus Riders	# of Potential Car Riders
Wildwood Pre-K	22	0	0	22
Wildwood K & Strides	129	97	6	26
Woburn St	367	260	4	103
North Int	243	184	5	54
			Total Car Riders w/o CARES	**205**
			# of 5-day AM CARES Students	**72**
			Total # of Cars	**133**

- Siblings are not accounted for in the total # of cars, this would take more time to calculate when CARES is considered. Siblings will not make a major impact, they will reduce the total # of cars by a minimal amount.

PM Dismissal Data when CARES is Offered

	Total Students	PM Bus Riders	PM Minibus Riders	# of Potential Car Riders
Wildwood Pre-K	21	0	0	21
Wildwood K & Strides	129	80	7	42
Woburn St	367	261	4	102
North Int	243	194	4	45
			Total Car Riders w/o CARES	**210**
			# of 5-day PM CARES students	**99**
			Total # of Cars	**111**

- Siblings are not accounted for in the total # of cars, this would take more time to calculate when CARES is considered. Siblings will not make a major impact, they will reduce the total # of cars by a minimal amount.

Appendix G: Trip and Parking Generation Worksheets

Elementary School
(520)

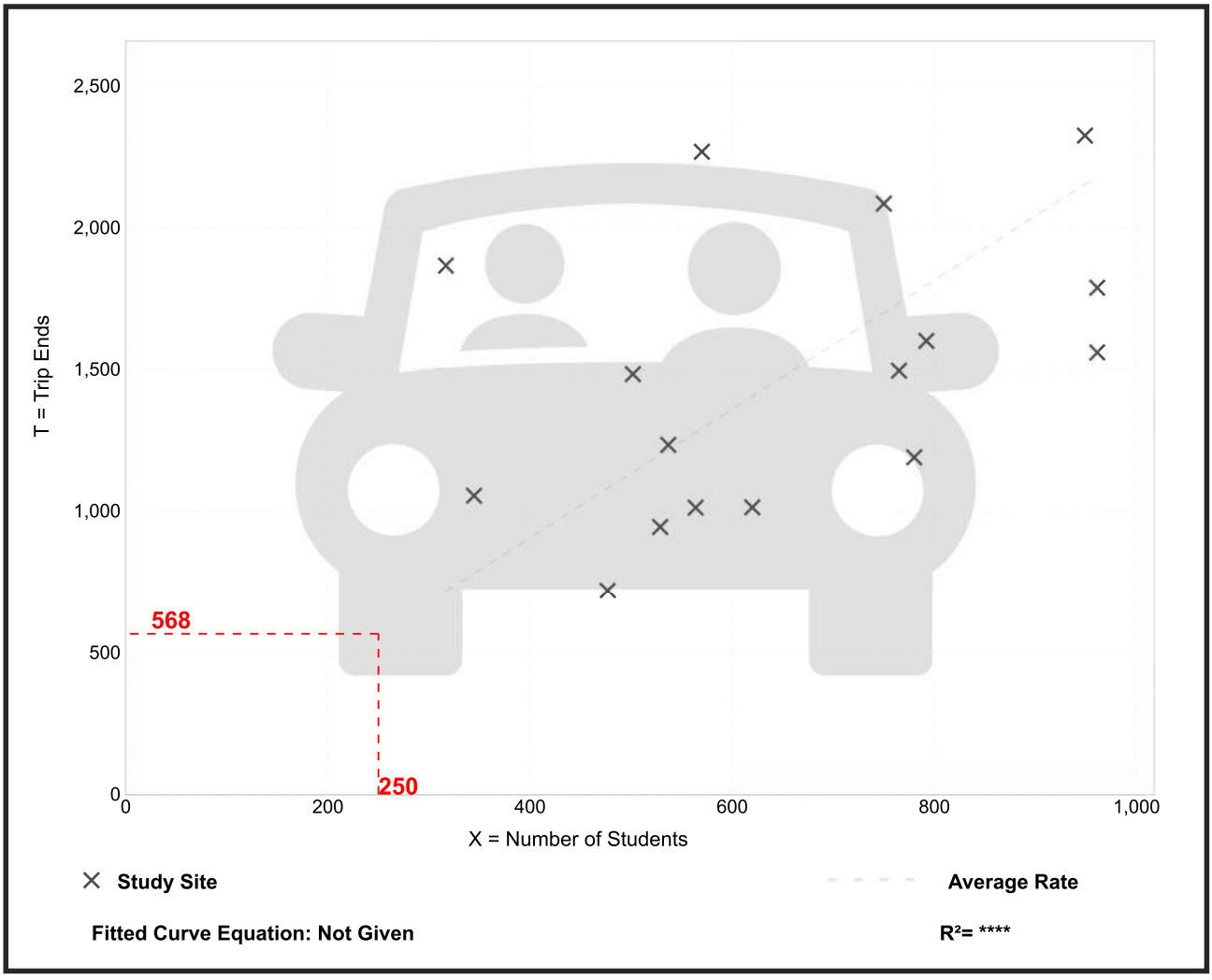
Vehicle Trip Ends vs: **Students**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 16
Avg. Num. of Students: 651
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
2.27	1.51 - 5.89	0.93

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Elementary School
(520)

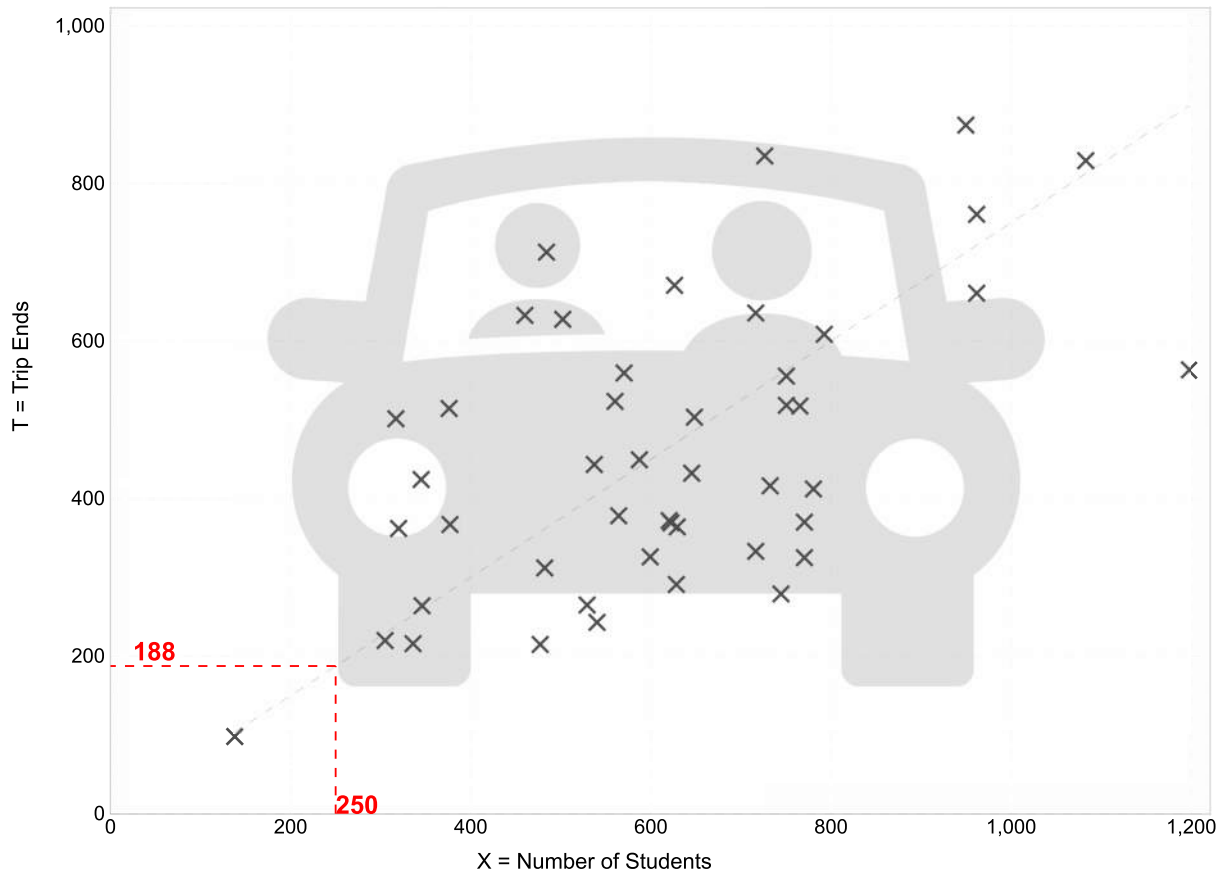
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 46
Avg. Num. of Students: 616
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.75	0.38 - 1.58	0.27

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ****

Elementary School
(520)

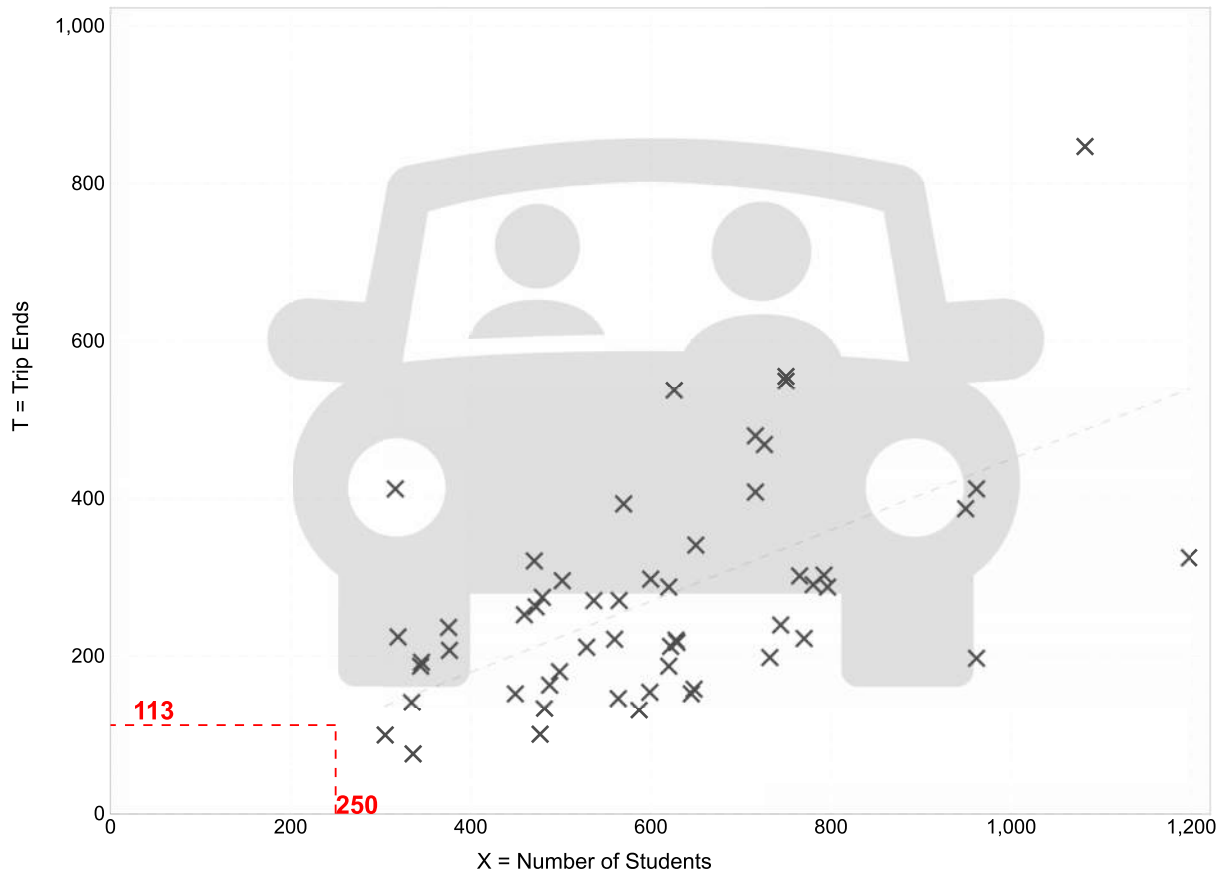
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 54
Avg. Num. of Students: 608
Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.45	0.21 - 1.30	0.19

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

Elementary School
(520)

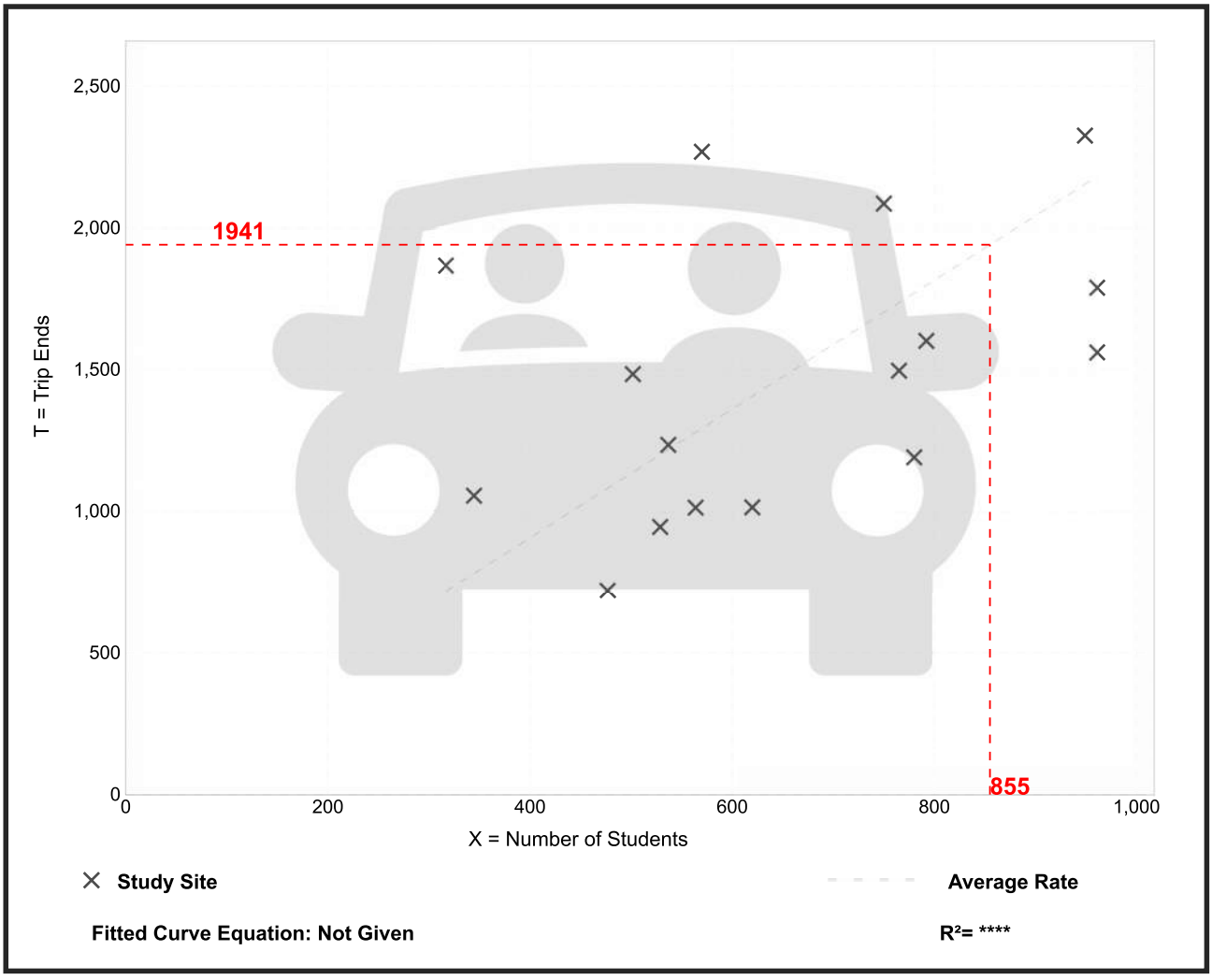
Vehicle Trip Ends vs: **Students**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 16
Avg. Num. of Students: 651
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
2.27	1.51 - 5.89	0.93

Data Plot and Equation



Elementary School
(520)

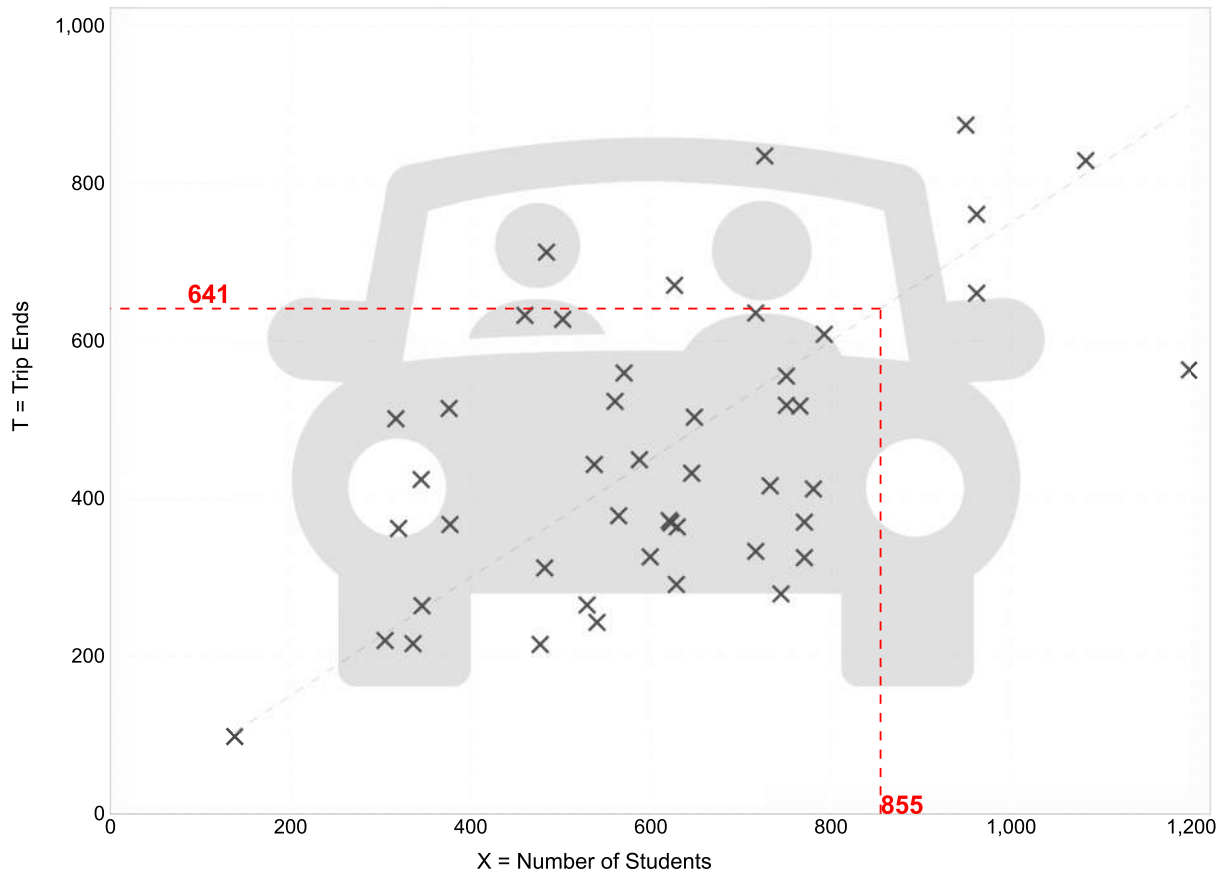
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 46
Avg. Num. of Students: 616
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.75	0.38 - 1.58	0.27

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

Elementary School
(520)

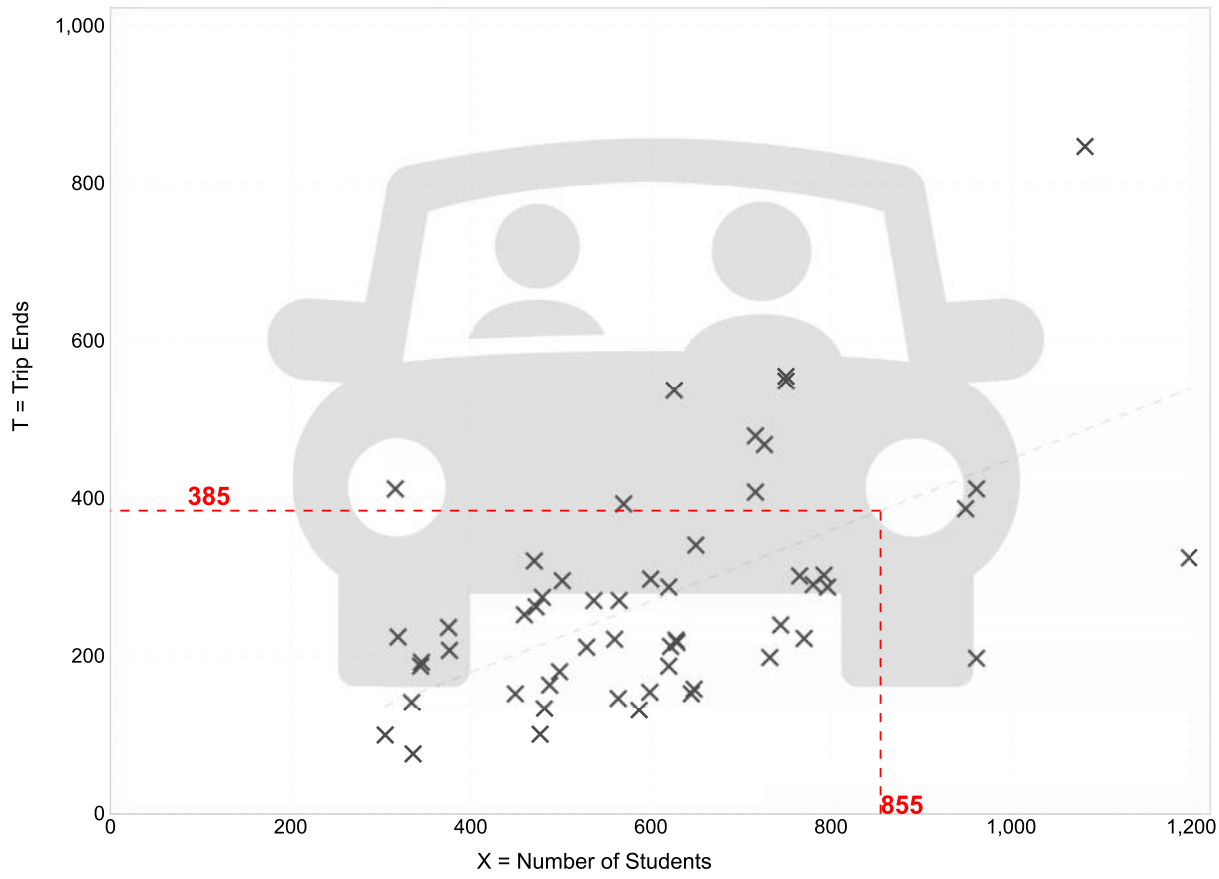
Vehicle Trip Ends vs: **Students**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 54
Avg. Num. of Students: 608
Directional Distribution: 46% entering, 54% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.45	0.21 - 1.30	0.19

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

Trip Gen Manual, 11th Edition • Institute of Transportation Engineers

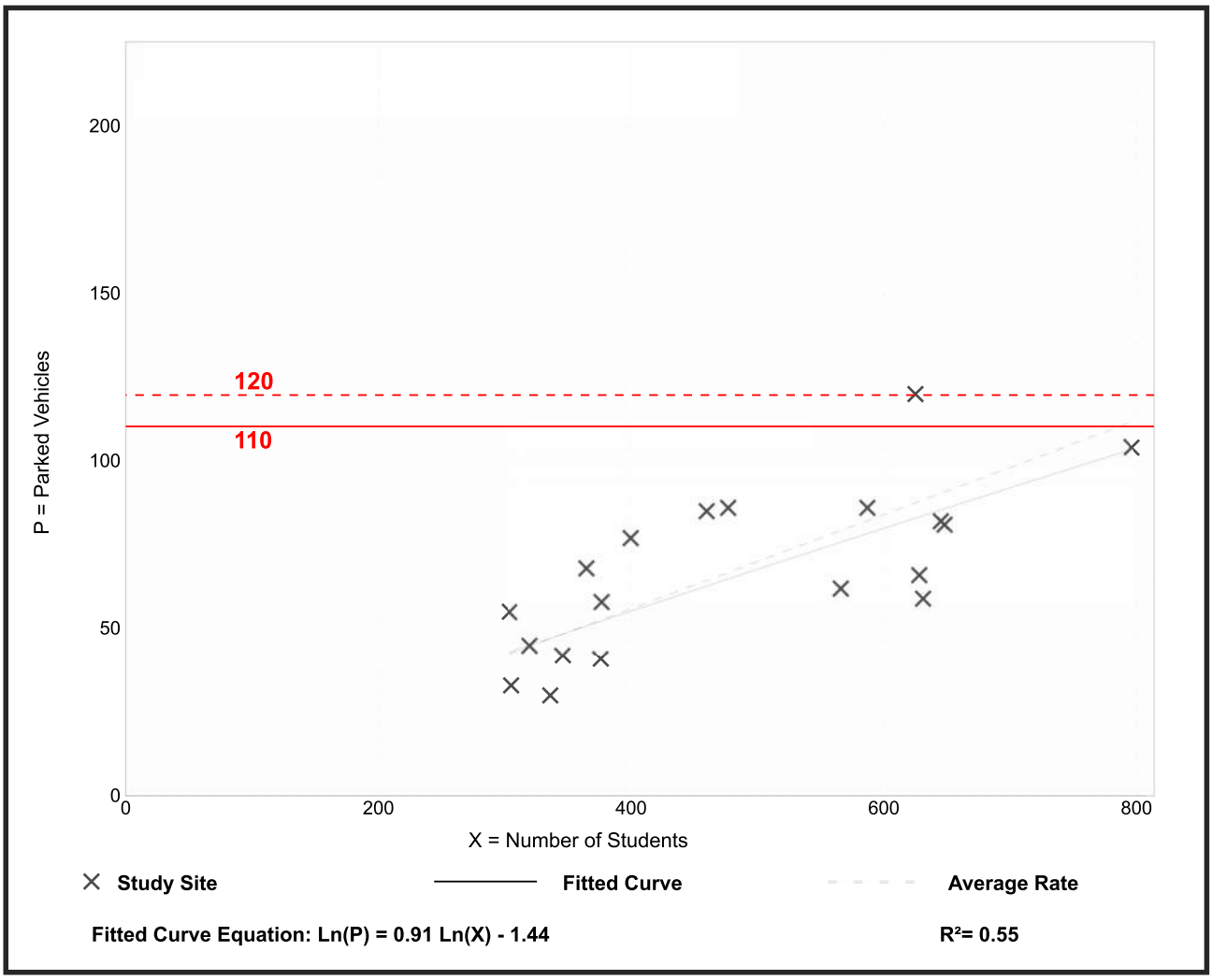
Elementary School
(520)

Peak Period Parking Demand vs: **Students**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban**
Number of Studies: 19
Avg. Num. of Students: 484

Peak Period Parking Demand per Student

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.14	0.09 - 0.19	0.12 / 0.19	***	0.03 (21%)

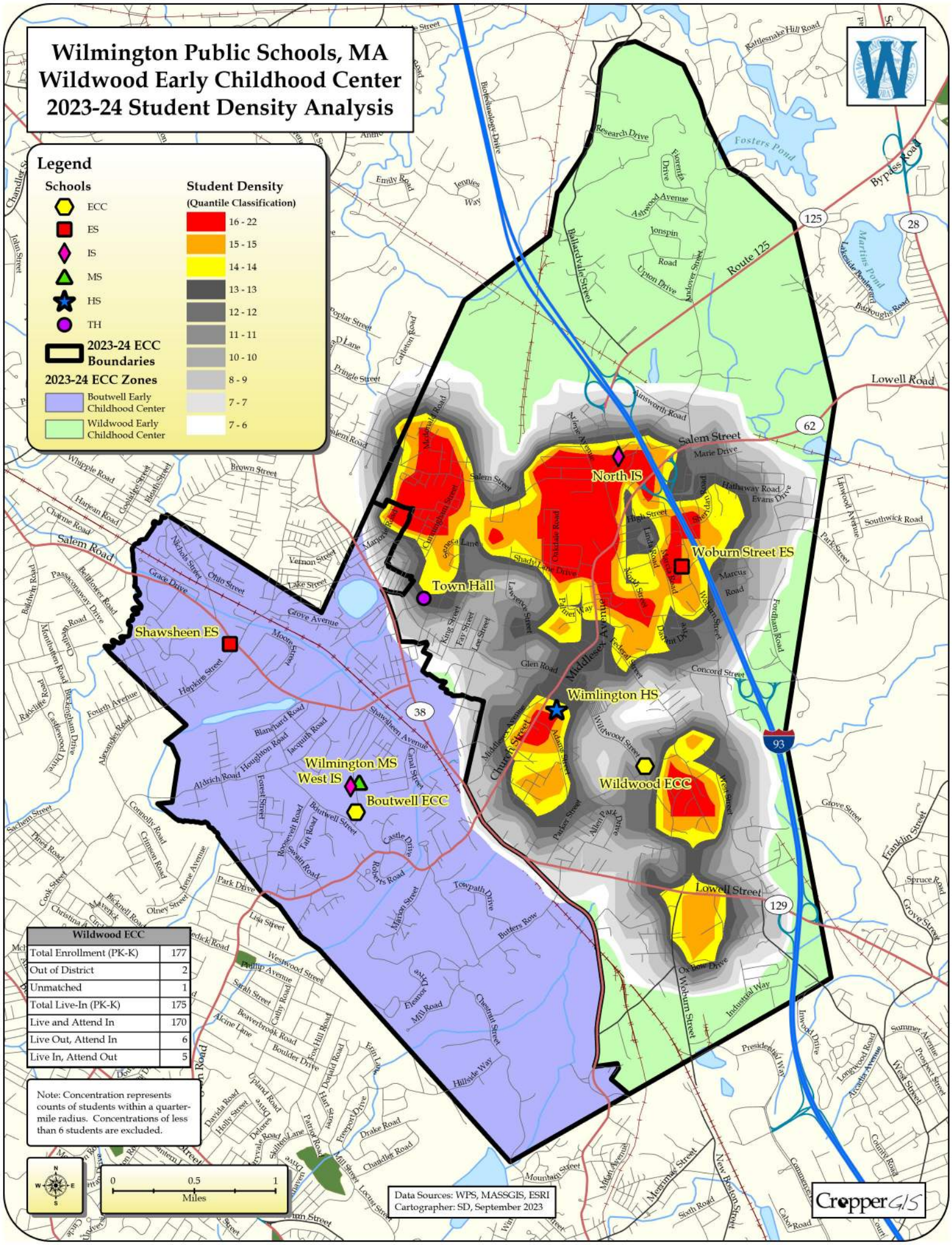
Data Plot and Equation

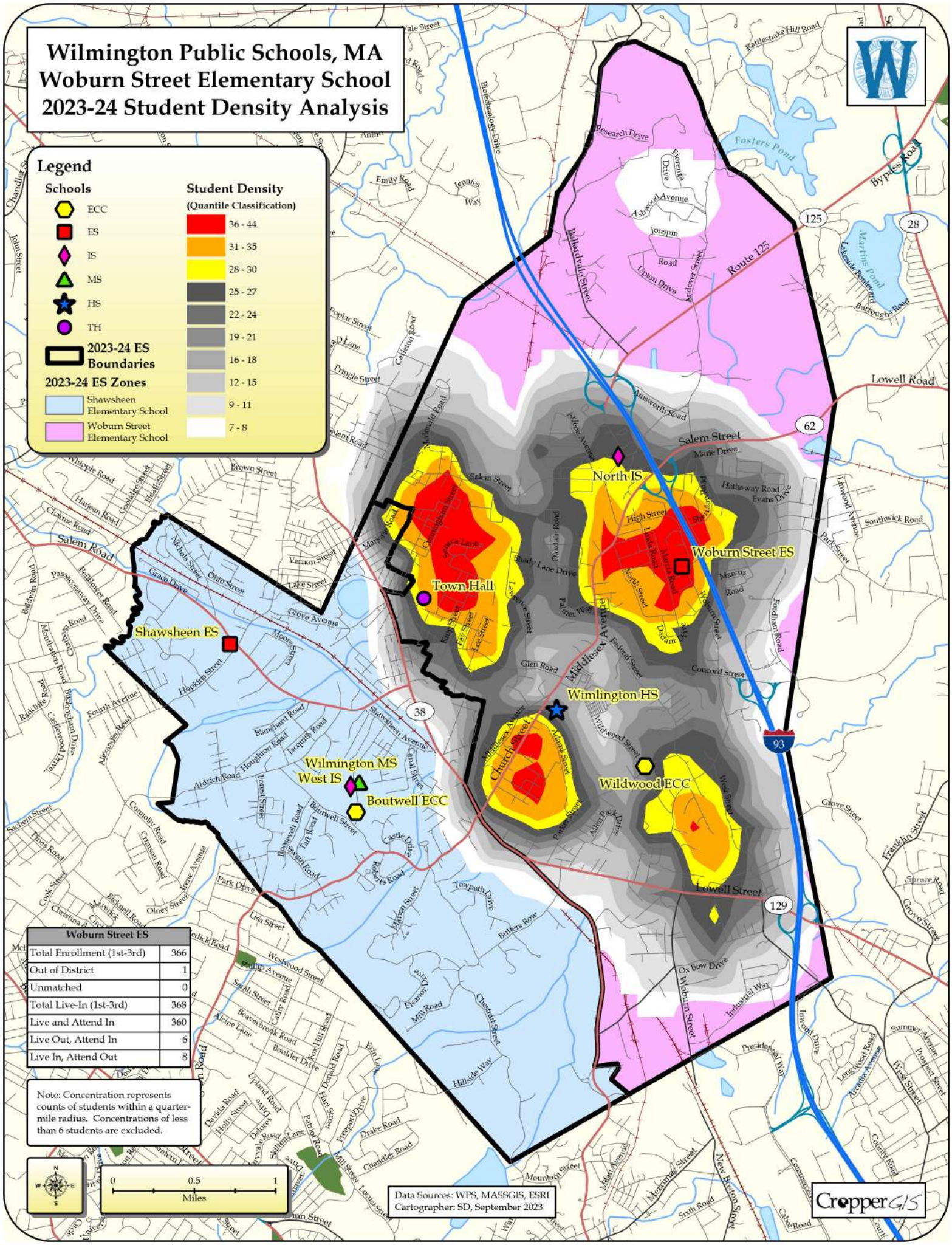


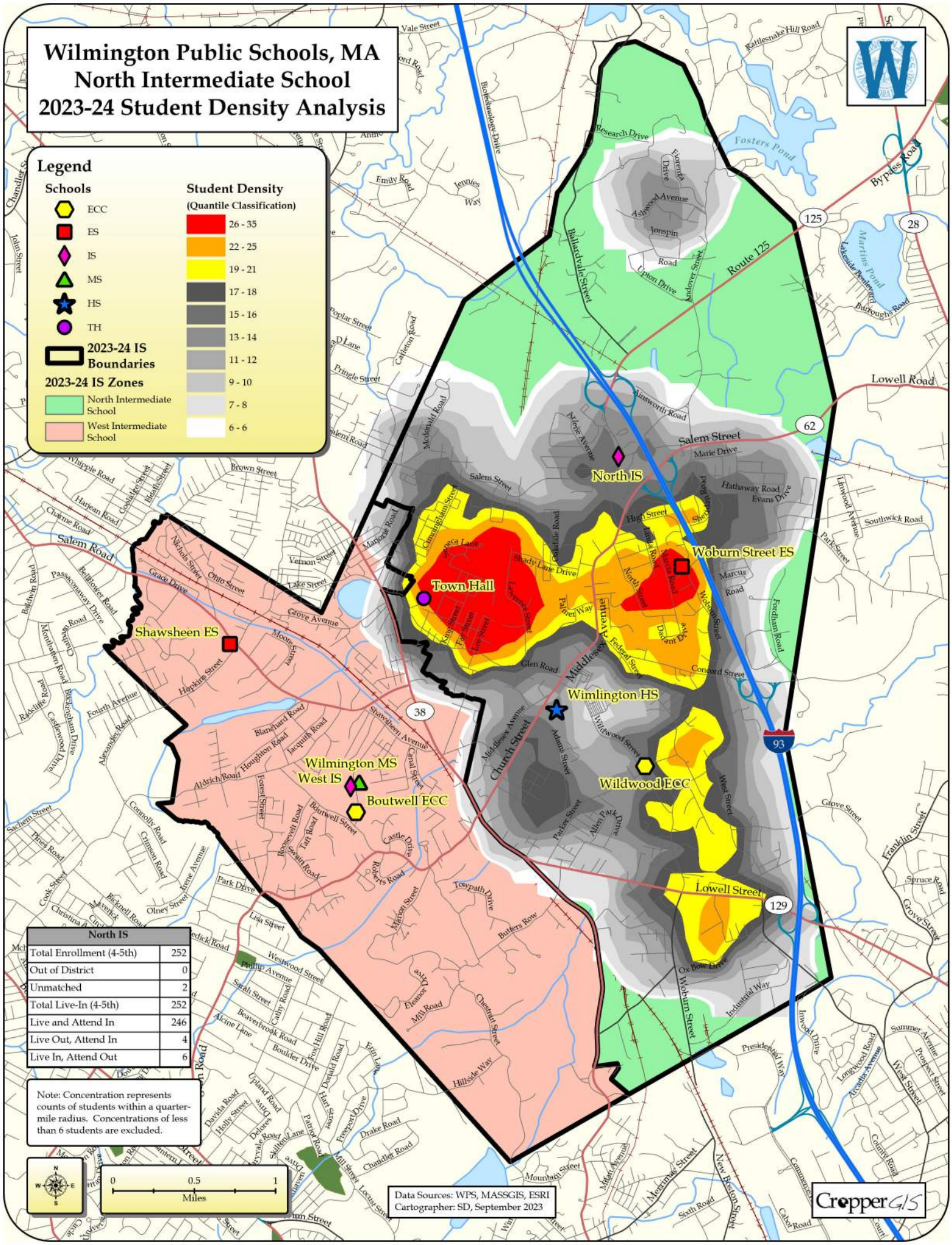
Fitted Curve Equation: Ln(P) = 0.91 Ln(X) - 1.44

R^2= 0.55

Appendix H: School Catchment Map


Wilmington Public Schools, MA
Wildwood Early Childhood Center
2023-24 Student Density Analysis
Legend
Schools
ECC
ES
IS
MS
HS
TH
2023-24 ECC Boundaries
2023-24 ECC Zones
Boutwell Early Childhood Center
Wildwood Early Childhood Center
Student Density
(Quantile Classification)
16 - 22
15 - 15
14 - 14
13 - 13
12 - 12
11 - 11
10 - 10
8 - 9
7 - 7
7 - 6
North IS
Woburn Street ES
Town Hall
Shawsheen ES
Wimlington HS
Wildwood ECC
Wilmington MS
West IS
Boutwell ECC
Wildwood ECC
Total Enrollment (PK-K) 177
Out of District 2
Unmatched 1
Total Live-In (PK-K) 175
Live and Attend In 170
Live Out, Attend In 6
Live In, Attend Out 5
Note: Concentration represents counts of students within a quarter-mile radius. Concentrations of less than 6 students are excluded.
0 0.5 1
Miles
Data Sources: WPS, MASSGIS, ESRI
Cartographer: SD, September 2023
CropperGIS


Wilmington Public Schools, MA
Woburn Street Elementary School
2023-24 Student Density Analysis
Legend
Schools
ECC
ES
IS
MS
HS
TH
2023-24 ES Boundaries
2023-24 ES Zones
Shawsheen Elementary School
Woburn Street Elementary School
Student Density
(Quantile Classification)
36 - 44
31 - 35
28 - 30
25 - 27
22 - 24
19 - 21
16 - 18
12 - 15
9 - 11
7 - 8
Shawsheen ES
Woburn Street ES
North IS
Town Hall
Wilmington MS
West IS
Boutwell ECC
Wimlington HS
Wildwood ECC
Route 125
Salem Road
Salem Street
Lowell Road
Lowell Street
Middlesex Avenue
Woburn Street
Church Street
Fosters Pond
Martins Pond
Bypass Road
Concord Street
Glen Road
Federal Street
Shawsheen Avenue
Grove Avenue
Boutwell Street
Roberts Road
Towpath Drive
Butters Row
Ox Bow Drive
Industrial Way
Research Drive
Ballardvale Street
Andover Street
Upton Drive
Ainsworth Road
Marie Drive
Hathaway Road
Evans Drive
Oakdale Road
Shady Lane Drive
Palmer Way
Lawrence Street
Fordham Road
Southwick Road
Park Street
Cunningham Street
Grace Lane
Kay Street
Fair Street
Lee Street
Nichols Street
Ohio Street
Grace Drive
Vernon Street
Lake Street
Moore Street
Hopkins Street
Fourth Avenue
Blanchard Road
Houghton Road
Jacquith Road
Aldrich Road
Forest Street
Canal Street
Roosevelt Road
Taft Road
Swain Road
Castle Drive
Allen Park Drive
Parkers Street
Atlantic Street
Wildwood Street
West Street
Grove Street
Franklin Street
Spruce Road
Eleanor Drive
Mill Road
Chestnut Street
Hillside Way
Woburn Street
Presidential Way
Irwood Drive
Longwood Road
Arcadia Avenue
Summer Avenue
Prospect Street
West Street
Colonial Road
Commerce Way
Mystic Avenue
Merrimac Street
New Boston Street
Sixth Road
Cabot Road
Mountain Street
Locust Street
Chandler Road
Drake Road
Freeport Drive
Hart Street
Dorfald Road
Fox Hill Road
Boulder Drive
Alcine Lane
Beaverbrook Road
Cathy Road
Sarah Street
Phillip Avenue
Westwood Street
Lisa Street
Park Drive
Olney Street
Irene Avenue
Connolly Road
Crimson Road
Pines Road
Cook Street
Sachem Street
Alexander Road
Buckingham Drive
Castlewood Drive
Radcliffe Road
Montbatten Road
Baldwin Road
Passaconaway Drive
Bellflower Road
Charme Road
Harjean Road
Coolidge Street
Heath Street
Whipple Road
Brown Street
Poplar Street
Carleton Road
Pringle Street
Nichols Road
Marjory Road
Nelson Avenue
Linwood Avenue
Whitehall Street
Kattlesnake Hill Road
Biotechnology Drive
Emily Road
Jeanne Way
John Street
Chandler Street
Davida Road
Holly Street
Upland Road
Delores Drive
Skillen Lane
Patriot Road
Mill Street
Data Sources: WPS, MASSGIS, ESRI
Cartographer: SD, September 2023
CropperGIS
Woburn Street ES
Total Enrollment (1st-3rd) 366
Out of District 1
Unmatched 0
Total Live-In (1st-3rd) 368
Live and Attend In 360
Live Out, Attend In 6
Live In, Attend Out 8
Note: Concentration represents counts of students within a quarter-mile radius. Concentrations of less than 6 students are excluded.
0
0.5
1
Miles


Wilmington Public Schools, MA
North Intermediate School
2023-24 Student Density Analysis
Legend
Schools
ECC
ES
IS
MS
HS
TH
2023-24 IS Boundaries
2023-24 IS Zones
North Intermediate School
West Intermediate School
Student Density
(Quantile Classification)
26 - 35
22 - 25
19 - 21
17 - 18
15 - 16
13 - 14
11 - 12
9 - 10
7 - 8
6 - 6
North IS
Town Hall
Woburn Street ES
Shawsheen ES
Wimlington HS
Wilmington MS
West IS
Boutwell ECC
Wildwood ECC
Lowell Street
North IS
Total Enrollment (4-5th) 252
Out of District 0
Unmatched 2
Total Live-In (4-5th) 252
Live and Attend In 246
Live Out, Attend In 4
Live In, Attend Out 6
Note: Concentration represents counts of students within a quarter-mile radius. Concentrations of less than 6 students are excluded.
0 0.5 1
Miles
Data Sources: WPS, MASSGIS, ESRI
Cartographer: SD, September 2023
CropperGIS
Route 125
Salem Street
Lowell Road
Middlesex Avenue
Church Street
Woburn Street
Salem Road
Shawsheen Avenue
Lowell Street
Fosters Pond
Martins Pond
Bypass Road
Research Drive
Ballardvale Street
Andover Street
Upton Drive
Ainsworth Road
Aldrich Road
Houghton Road
Boutwell Street
Roberts Road
Towpath Drive
Butters Row
Ox Bow Drive
Industrial Way
Glen Road
Concord Street
Federal Street
Wildwood Street
Parker Street
Allen Park Drive
Adams Street
West Street
Grove Street
Franklin Street
Spruce Road
Fordham Road
Southwick Road
Park Street
Marcus Road
Hathaway Road
Evans Drive
Marie Drive
Lakeside Boulevard
Burroughs Road
Mountain Street
Merrimack Street
New Boston Street
Sixth Road
Colonial Road
Calvary Road
Presidential Way
Irwood Drive
Longwood Road
Arcadia Avenue
Summer Avenue
Prospect Street
West Street
Eleanor Drive
Mill Road
Chestnut Street
Hillside Way
Beaverbrook Road
Boulder Drive
Fox Hill Road
Dorfald Road
Hart Street
Freeport Drive
Drake Road
Chandler Road
Mill Street
Locust Street
Upland Road
Davida Road
Holly Street
Delores Drive
Skillen Lane
Patriot Road
Acine Lane
Cathy Road
Philip Avenue
Westwood Street
Lisa Street
Park Drive
Olney Street
Irene Avenue
Cook Street
Christina Avenue
Bicknell Road
Pines Road
Connolly Road
Crimson Road
Sachem Street
Radcliffe Road
Buckingham Drive
Castlewood Drive
Alexander Road
Fourth Avenue
Montheathen Road
Baldwin Road
Passaconaway Drive
Bellflower Road
Grace Drive
Nichols Street
Ohio Street
Moore Street
Hopkins Street
Blanchard Road
Jacquith Road
Forest Street
Canal Street
Roosevelt Road
Taft Road
Swain Road
Castle Drive
Marion Street
Eleanor Drive
Mill Road
Chestnut Street
Hillside Way
Beaverbrook Road
Boulder Drive
Fox Hill Road
Dorfald Road
Hart Street
Freeport Drive
Drake Road
Chandler Road
Mill Street
Locust Street
Upland Road
Davida Road
Holly Street
Delores Drive
Skillen Lane
Patriot Road
Acine Lane
Cathy Road
Philip Avenue
Westwood Street
Lisa Street
Park Drive
Olney Street
Irene Avenue
Cook Street
Christina Avenue
Bicknell Road
Pines Road
Connolly Road
Crimson Road
Sachem Street
Radcliffe Road
Buckingham Drive
Castlewood Drive
Alexander Road
Fourth Avenue
Montheathen Road
Baldwin Road
Passaconaway Drive
Bellflower Road
Grace Drive
Nichols Street
Ohio Street
Moore Street
Hopkins Street
Blanchard Road
Jacquith Road
Forest Street
Canal Street
Roosevelt Road
Taft Road
Swain Road
Castle Drive
Marion Street
Towpath Drive
Butters Row
Ox Bow Drive
Industrial Way
Glen Road
Concord Street
Federal Street
Wildwood Street
Parker Street
Allen Park Drive
Adams Street
West Street
Grove Street
Franklin Street
Spruce Road
Fordham Road
Southwick Road
Park Street
Marcus Road
Hathaway Road
Evans Drive
Marie Drive
Lakeside Boulevard
Burroughs Road
Mountain Street
Merrimack Street
New Boston Street
Sixth Road
Colonial Road
Calvary Road
Presidential Way
Irwood Drive
Longwood Road
Arcadia Avenue
Summer Avenue
Prospect Street
West Street
Eleanor Drive
Mill Road
Chestnut Street
Hillside Way
Beaverbrook Road
Boulder Drive
Fox Hill Road
Dorfald Road
Hart Street
Freeport Drive
Drake Road
Chandler Road
Mill Street
Locust Street
Upland Road
Davida Road
Holly Street
Delores Drive
Skillen Lane
Patriot Road
Acine Lane
Cathy Road
Philip Avenue
Westwood Street
Lisa Street
Park Drive
Olney Street
Irene Avenue
Cook Street
Christina Avenue
Bicknell Road
Pines Road
Connolly Road
Crimson Road
Sachem Street
Radcliffe Road
Buckingham Drive
Castlewood Drive
Alexander Road
Fourth Avenue
Montheathen Road
Baldwin Road
Passaconaway Drive
Bellflower Road
Grace Drive
Nichols Street
Ohio Street
Moore Street
Hopkins Street
Blanchard Road
Jacquith Road
Forest Street
Canal Street
Roosevelt Road
Taft Road
Swain Road
Castle Drive
Marion Street
Towpath Drive
Butters Row
Ox Bow Drive
Industrial Way
Glen Road
Concord Street
Federal Street
Wildwood Street
Parker Street
Allen Park Drive
Adams Street
West Street
Grove Street
Franklin Street
Spruce Road
Fordham Road
Southwick Road
Park Street
Marcus Road
Hathaway Road
Evans Drive
Marie Drive
Lakeside Boulevard
Burroughs Road
Mountain Street
Merrimack Street
New Boston Street
Sixth Road
Colonial Road
Calvary Road
Presidential Way
Irwood Drive
Longwood Road
Arcadia Avenue
Summer Avenue
Prospect Street
West Street

Appendix I: Capacity Analysis



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	382	217	104	160	134
Future Volume (Veh/h)	199	382	217	104	160	134
Sign Control	Yield			Free	Free	
Grade	-3%			3%	-2%	
Peak Hour Factor	0.92	0.92	0.89	0.89	0.94	0.94
Hourly flow rate (vph)	216	415	244	117	170	143
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	847	242	313			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	847	242	313			
tC, single (s)	*2.1	*2.1	*7.3			
tC, 2 stage (s)						
tF (s)	*1.0	*1.0	*2.2			
p0 queue free %	88	87	74			
cM capacity (veh/h)	1834	3233	953			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	631	361	313
Volume Left	216	244	0
Volume Right	415	0	143
cSH	4916	953	1700
Volume to Capacity	0.13	0.26	0.18
Queue Length 95th (ft)	11	26	0
Control Delay (s/veh)	6.6	7.7	0.0
Lane LOS	A	A	
Approach Delay (s/veh)	6.6	7.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value
* Value less than 0.01.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	1	284	0	3	276
Future Volume (Veh/h)	3	1	284	0	3	276
Sign Control	Stop		Free			Free
Grade	0%		-6%			-1%
Peak Hour Factor	0.50	0.50	0.77	0.77	0.92	0.92
Hourly flow rate (vph)	6	2	369	0	3	300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	675	369			369	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	675	369			369	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	421	681			1201	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	369	303
Volume Left	6	0	3
Volume Right	2	0	0
cSH	466	1700	1201
Volume to Capacity	0.02	0.22	0.00*
Queue Length 95th (ft)	1	0	0
Control Delay (s/veh)	12.9	0.0	0.1
Lane LOS	B		A
Approach Delay (s/veh)	12.9	0.0	0.1
Approach LOS	B		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		26.9%	ICU Level of Service
Analysis Period (min)		15	

* Value less than 0.01.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	17	0	0	1	38	244	1	0	259	11
Future Volume (Veh/h)	5	0	17	0	0	1	38	244	1	0	259	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			2%			0%	
Peak Hour Factor	0.28	0.28	0.28	0.25	0.25	0.25	0.79	0.79	0.79	0.90	0.90	0.90
Hourly flow rate (vph)	18	0	61	0	0	4	48	309	1	0	288	12
Pedestrians		3										
Lane Width (ft)		16.0										
Walking Speed (ft/s)		3.5										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	707	703	297	761	709	310	303			310		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	707	703	297	761	709	310	303			310		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	92	100	100	99	96			100		
cM capacity (veh/h)	339	349	744	289	347	735	1265			1262		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	79	4	358	300
Volume Left	18	0	48	0
Volume Right	61	4	1	12
cSH	585	735	1265	1262
Volume to Capacity	0.14	0.00*	0.04	0.00
Queue Length 95th (ft)	12	0	3	0
Control Delay (s/veh)	12.1	9.9	1.4	0.0
Lane LOS	B	A	A	
Approach Delay (s/veh)	12.1	9.9	1.4	0.0
Approach LOS	B	A		

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

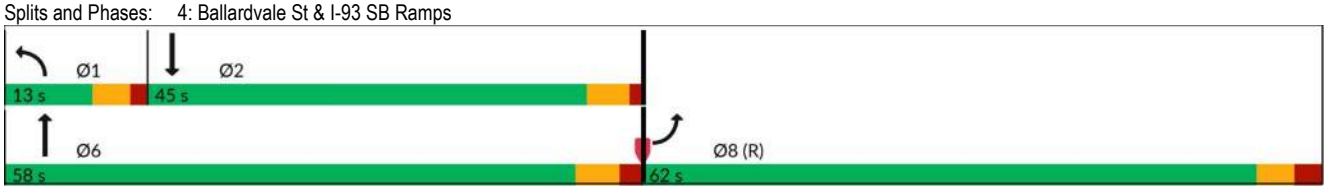


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	484	100	27	239	163	605
Future Volume (vph)	484	100	27	239	163	605
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	11	11	12	15
Grade (%)	-1%			3%	-3%	
Storage Length (ft)	75	0	175			0
Storage Lanes	2	1	1			1
Taper Length (ft)	200		100			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3093	1839	1653	1756	1819	1670
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3093	1839	1653	1756	1819	1670
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		108				617
Link Speed (mph)	45			35	35	
Link Distance (ft)	338			607	429	
Travel Time (s)	5.1			11.8	8.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.85	0.85	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	0%	4%	3%	6%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	520	108	32	281	166	617
Shared Lane Traffic (%)						
Lane Group Flow (vph)	520	108	32	281	166	617
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	9.0		7.0	10.0	10.0	
Minimum Split (s)	24.0		12.0	24.0	23.0	
Total Split (s)	62.0		13.0	58.0	45.0	
Total Split (%)	51.7%		10.8%	48.3%	37.5%	
Maximum Green (s)	56.0		8.0	52.0	40.0	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	Min	Min	
Walk Time (s)						
Flash Don't Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	82.7	120.0	7.4	25.3	18.8	120.0
Actuated g/C Ratio	0.69	1.00	0.06	0.21	0.16	1.00
v/c Ratio	0.24	0.06	0.32	0.76	0.58	0.37
Control Delay (s/veh)	8.1	0.1	62.3	57.1	55.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.1	0.1	62.3	57.1	55.9	0.6
LOS	A	A	E	E	E	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay (s/veh)	6.7			57.6	12.4	
Approach LOS	A			E	B	
Queue Length 50th (ft)	78	0	25	208	131	0
Queue Length 95th (ft)	126	0	56	265	198	0
Internal Link Dist (ft)	258			527	349	
Turn Bay Length (ft)	75		175			
Base Capacity (vph)	2130	1839	110	760	606	1670
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.06	0.29	0.37	0.27	0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 113 (94%), Referenced to phase 8:EBL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 18.5		Intersection LOS: B	
Intersection Capacity Utilization 41.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ballardvale St & I-93 SB Ramps



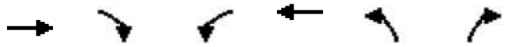
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	290	87	143	17	56	29	96	356	33	10	334	168	
Future Volume (vph)	290	87	143	17	56	29	96	356	33	10	334	168	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor													
Frt			0.850			0.850		0.987				0.850	
Flt Protected		0.963			0.988		0.950			0.950			
Satd. Flow (prot)	0	1734	1522	0	1742	1584	1693	1747	0	1745	1749	1531	
Flt Permitted		0.698			0.863		0.950			0.950			
Satd. Flow (perm)	0	1257	1522	0	1521	1584	1693	1747	0	1745	1749	1531	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			45			65		3				122	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.88	0.88	0.88	0.61	0.61	0.61	0.87	0.87	0.87	0.85	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	8%	4%	6%	5%	3%	5%	6%	3%	0%	5%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	330	99	163	28	92	48	110	409	38	12	393	198	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	429	163	0	120	48	110	447	0	12	393	198	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	48.0	48.0	40.0	48.0	48.0	48.0	40.0	55.0		40.0	55.0	55.0	26.0
Total Split (%)	28.4%	28.4%	23.7%	28.4%	28.4%	28.4%	23.7%	32.5%		23.7%	32.5%	32.5%	15%
Maximum Green (s)	43.0	43.0	35.0	43.0	43.0	43.0	35.0	50.0		35.0	50.0	50.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		45.0	60.9		45.0	45.0	11.4	41.9		4.7	26.8	26.8	
Actuated g/C Ratio		0.44	0.59		0.44	0.44	0.11	0.41		0.05	0.26	0.26	
v/c Ratio		0.78	0.18		0.18	0.07	0.59	0.62		0.15	0.86	0.40	
Control Delay (s/veh)		39.7	7.9		24.9	5.0	60.3	29.5		61.2	55.8	15.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		39.7	7.9		24.9	5.0	60.3	29.5		61.2	55.8	15.6	
LOS		D	A		C	A	E	C		E	E	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		30.9			19.2			35.6			42.7		
Approach LOS		C			B			D			D		
Queue Length 50th (ft)		212	26		41	0	65	204		7	228	35	
Queue Length 95th (ft)		#740	79		101	0	170	474		33	450	112	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		552	1285		668	732	605	916		623	893	841	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		0.78	0.13		0.18	0.07	0.18	0.49		0.02	0.44	0.24	

Intersection Summary			
Area Type:	Other		
Cycle Length: 169			
Actuated Cycle Length: 102.4			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 35.0		Intersection LOS: C	
Intersection Capacity Utilization 64.0%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Route 62 & Middlesex Ave/High St





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	460	290	395	415	105	225
Future Volume (Veh/h)	460	290	395	415	105	225
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.89	0.89
Hourly flow rate (vph)	505	319	434	456	118	253
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			505		1989	665
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			505		1989	665
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			58		0	43
cM capacity (veh/h)			1029		38	445

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	824	890	371
Volume Left	0	434	118
Volume Right	319	0	253
cSH	1700	1029	100
Volume to Capacity	0.48	0.42	3.72
Queue Length 95th (ft)	0	53	Err
Control Delay (s/veh)	0.0	8.6	Err
Lane LOS		A	F
Approach Delay (s/veh)	0.0	8.6	Err
Approach LOS			F

Intersection Summary			
Average Delay	1782.9		
Intersection Capacity Utilization	115.3%	ICU Level of Service	H
Analysis Period (min)	15		

* Value less than 0.01.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	186	323	460	105	178	416
Future Volume (Veh/h)	186	323	460	105	178	416
Sign Control	Yield			Free	Free	
Grade	-3%			3%	-2%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.94	0.94
Hourly flow rate (vph)	200	347	495	113	189	443
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1514	411	632			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1514	411	632			
tC, single (s)	*2.1	*2.1	*7.3			
tC, 2 stage (s)						
tF (s)	*1.0	*1.0	*2.2			
p0 queue free %	0	88	10			
cM capacity (veh/h)	175	2998	548			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	547	608	632
Volume Left	200	495	0
Volume Right	347	0	443
cSH	453	548	1700
Volume to Capacity	1.21	0.90	0.37
Queue Length 95th (ft)	534	268	0
Control Delay (s/veh)	140.5	45.7	0.0
Lane LOS	F	E	
Approach Delay (s/veh)	140.5	45.7	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	58.6		
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	2	271	3	2	562
Future Volume (Veh/h)	2	2	271	3	2	562
Sign Control	Stop		Free			Free
Grade	0%		-6%			-1%
Peak Hour Factor	0.50	0.50	0.83	0.83	0.90	0.90
Hourly flow rate (vph)	4	4	327	4	2	624
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	957	329			331	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	957	329			331	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	288	717			1240	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	331	626
Volume Left	4	0	2
Volume Right	4	4	0
cSH	411	1700	1240
Volume to Capacity	0.02	0.19	0.00*
Queue Length 95th (ft)	1	0	0
Control Delay (s/veh)	13.9	0.0	0.0
Lane LOS	B		A
Approach Delay (s/veh)	13.9	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		41.2%	ICU Level of Service
Analysis Period (min)		15	

* Value less than 0.01.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	0	55	4	0	1	31	239	2	0	514	8
Future Volume (Veh/h)	24	0	55	4	0	1	31	239	2	0	514	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			2%			0%	
Peak Hour Factor	0.53	0.53	0.53	0.63	0.63	0.63	0.80	0.80	0.80	0.86	0.86	0.86
Hourly flow rate (vph)	45	0	104	6	0	2	39	299	2	0	598	9
Pedestrians		8										
Lane Width (ft)		16.0										
Walking Speed (ft/s)		3.5										
Percent Blockage		1										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	991	990	611	1085	993	300	615			301		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	991	990	611	1085	993	300	615			301		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	100	79	96	100	100	96			100		
cM capacity (veh/h)	216	236	489	148	235	744	950			1272		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	149	8	340	607
Volume Left	45	6	39	0
Volume Right	104	2	2	9
cSH	354	185	950	1272
Volume to Capacity	0.42	0.04	0.04	0.00
Queue Length 95th (ft)	51	3	3	0
Control Delay (s/veh)	22.4	25.3	1.4	0.0
Lane LOS	C	D	A	
Approach Delay (s/veh)	22.4	25.3	1.4	0.0
Approach LOS	C	D		

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

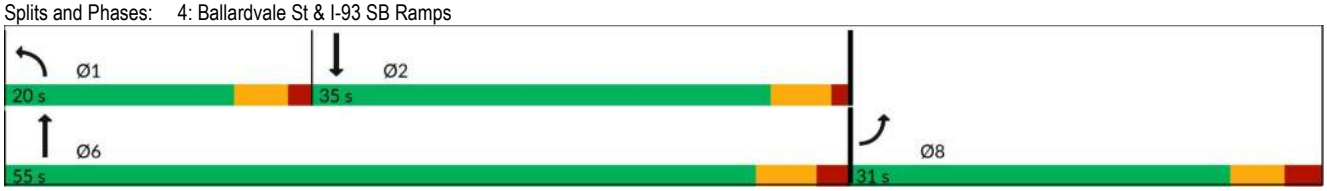


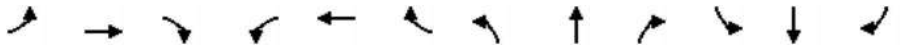
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	174	119	40	227	459	759
Future Volume (vph)	174	119	40	227	459	759
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	11	11	12	15
Grade (%)	-1%			3%	-3%	
Storage Length (ft)	75	0	175			0
Storage Lanes	2	1	1			1
Taper Length (ft)	200		100			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2984	1821	1637	1774	1891	1734
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	2984	1821	1637	1774	1891	1734
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		129				761
Link Speed (mph)	45			35	35	
Link Distance (ft)	338			607	429	
Travel Time (s)	5.1			11.8	8.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.85	0.85	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	1%	5%	2%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	189	129	47	267	516	853
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	129	47	267	516	853
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	9.0		7.0	10.0	10.0	
Minimum Split (s)	24.0		12.0	24.0	23.0	
Total Split (s)	31.0		20.0	55.0	35.0	
Total Split (%)	36.0%		23.3%	64.0%	40.7%	
Maximum Green (s)	25.0		15.0	49.0	30.0	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	None		None	Min	Min	
Walk Time (s)						
Flash Don't Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	9.9	46.9	7.7	24.2	21.2	46.9
Actuated g/C Ratio	0.21	1.00	0.16	0.52	0.45	1.00
v/c Ratio	0.30	0.07	0.18	0.29	0.60	0.49
Control Delay (s/veh)	19.6	0.1	22.8	6.7	14.5	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.6	0.1	22.8	6.7	14.5	1.0
LOS	B	A	C	A	B	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay (s/veh)	11.7			9.1	6.1	
Approach LOS	B			A	A	
Queue Length 50th (ft)	18	0	9	33	70	0
Queue Length 95th (ft)	68	0	43	62	236	0
Internal Link Dist (ft)	258			527	349	
Turn Bay Length (ft)	75		175			
Base Capacity (vph)	1691	1821	556	1655	1285	1734
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.07	0.08	0.16	0.40	0.49

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 46.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 7.5		Intersection LOS: A	
Intersection Capacity Utilization 50.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ballardvale St & I-93 SB Ramps



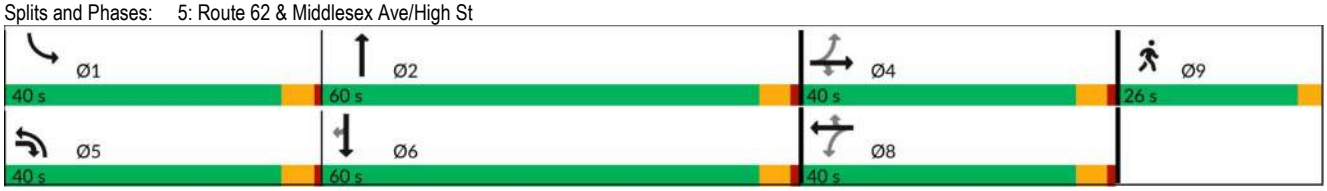


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	244	76	187	44	110	31	126	451	28	15	327	303	
Future Volume (vph)	244	76	187	44	110	31	126	451	28	15	327	303	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor												0.98	
Frt			0.850			0.850		0.991				0.850	
Flt Protected		0.963			0.986		0.950			0.950			
Satd. Flow (prot)	0	1734	1522	0	1806	1631	1743	1816	0	1631	1766	1561	
Flt Permitted		0.607			0.734		0.950			0.950			
Satd. Flow (perm)	0	1093	1522	0	1344	1631	1743	1816	0	1631	1766	1526	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			66			66		2				240	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)												2	
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.94	0.94	0.94	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	1%	11%	4%	2%	1%	0%	2%	2%	4%	7%	4%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	294	92	225	59	147	41	134	480	30	15	337	312	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	386	225	0	206	41	134	510	0	15	337	312	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	40.0	60.0		40.0	60.0	60.0	26.0
Total Split (%)	24.1%	24.1%	24.1%	24.1%	24.1%	24.1%	24.1%	36.1%		24.1%	36.1%	36.1%	16%
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	55.0		35.0	55.0	55.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		36.8	53.0		36.8	36.8	11.6	34.3		4.9	21.0	21.0	
Actuated g/C Ratio		0.41	0.60		0.41	0.41	0.13	0.39		0.06	0.24	0.24	
v/c Ratio		0.85	0.24		0.37	0.06	0.59	0.73		0.17	0.81	0.57	
Control Delay (s/veh)		46.8	7.0		26.5	3.3	50.7	32.0		53.1	48.6	12.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		46.8	7.0		26.5	3.3	50.7	32.0		53.1	48.6	12.9	
LOS		D	A		C	A	D	C		D	D	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		32.1			22.6			35.9			32.0		
Approach LOS		C			C			D			C		
Queue Length 50th (ft)		174	30		66	0	65	195		8	162	28	
Queue Length 95th (ft)		#616	80		195	4	181	524		39	381	138	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		453	1330		557	715	723	1185		676	1151	1078	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		0.85	0.17		0.37	0.06	0.19	0.43		0.02	0.29	0.29	

Intersection Summary			
Area Type:	Other		
Cycle Length: 166			
Actuated Cycle Length: 88.7			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay (s/veh): 32.1		Intersection LOS: C	
Intersection Capacity Utilization 65.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Route 62 & Middlesex Ave/High St





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	270	245	595	95	340
Future Volume (Veh/h)	605	270	245	595	95	340
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	630	281	253	613	98	351
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			630		1890	771
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			630		1890	771
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			73		0	12
cM capacity (veh/h)			952		57	400

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	911	866	449
Volume Left	0	253	98
Volume Right	281	0	351
cSH	1700	952	174
Volume to Capacity	0.54	0.27	2.58
Queue Length 95th (ft)	0	27	969
Control Delay (s/veh)	0.0	5.9	771.2
Lane LOS		A	F
Approach Delay (s/veh)	0.0	5.9	771.2
Approach LOS			F

Intersection Summary			
Average Delay	157.9		
Intersection Capacity Utilization	129.4%	ICU Level of Service	H
Analysis Period (min)	15		

* Value less than 0.01.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	219	389	221	114	166	138
Future Volume (Veh/h)	219	389	221	114	166	138
Sign Control	Yield			Free	Free	
Grade	-3%			3%	-2%	
Peak Hour Factor	0.92	0.92	0.89	0.89	0.94	0.94
Hourly flow rate (vph)	238	423	248	128	177	147
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	875	251	324			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	875	251	324			
tC, single (s)	*2.1	*2.1	*7.3			
tC, 2 stage (s)						
tF (s)	*1.0	*1.0	*2.2			
p0 queue free %	87	87	73			
cM capacity (veh/h)	1789	3220	935			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	661	376	324
Volume Left	238	248	0
Volume Right	423	0	147
cSH	4968	935	1700
Volume to Capacity	0.13	0.27	0.19
Queue Length 95th (ft)	11	27	0
Control Delay (s/veh)	6.7	7.7	0.0
Lane LOS	A	A	
Approach Delay (s/veh)	6.7	7.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	1	313	0	3	286
Future Volume (Veh/h)	3	1	313	0	3	286
Sign Control	Stop		Free			Free
Grade	0%		-6%			-1%
Peak Hour Factor	0.50	0.50	0.77	0.77	0.92	0.92
Hourly flow rate (vph)	6	2	406	0	3	311
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	723	406			406	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	723	406			406	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	395	649			1164	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	406	314
Volume Left	6	0	3
Volume Right	2	0	0
cSH	438	1700	1164
Volume to Capacity	0.02	0.24	0.00*
Queue Length 95th (ft)	1	0	0
Control Delay (s/veh)	13.4	0.0	0.1
Lane LOS	B		A
Approach Delay (s/veh)	13.4	0.0	0.1
Approach LOS	B		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	17	0	0	1	38	272	1	0	269	11
Future Volume (Veh/h)	5	0	17	0	0	1	38	272	1	0	269	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			2%			0%	
Peak Hour Factor	0.28	0.28	0.28	0.25	0.25	0.25	0.79	0.79	0.79	0.90	0.90	0.90
Hourly flow rate (vph)	18	0	61	0	0	4	48	344	1	0	299	12
Pedestrians		3										
Lane Width (ft)		16.0										
Walking Speed (ft/s)		3.5										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	753	749	308	807	755	345	314			345		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	753	749	308	807	755	345	314			345		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	92	100	100	99	96			100		
cM capacity (veh/h)	315	329	734	268	326	703	1253			1225		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	79	4	393	311
Volume Left	18	0	48	0
Volume Right	61	4	1	12
cSH	563	703	1253	1225
Volume to Capacity	0.14	0.00*	0.04	0.00
Queue Length 95th (ft)	12	0	3	0
Control Delay (s/veh)	12.4	10.2	1.3	0.0
Lane LOS	B	B	A	
Approach Delay (s/veh)	12.4	10.2	1.3	0.0
Approach LOS	B	B		

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	47.2%	ICU Level of Service	A	
Analysis Period (min)	15			

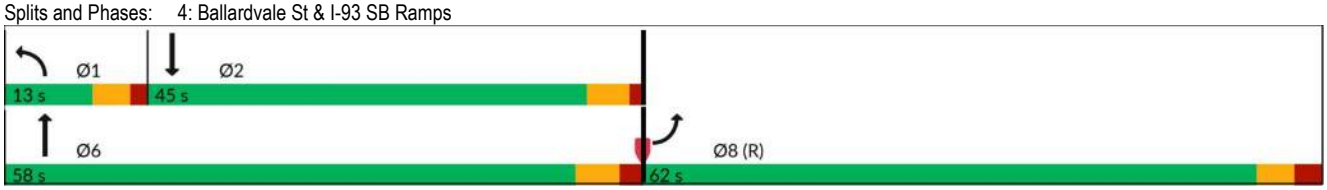
* Value less than 0.01.

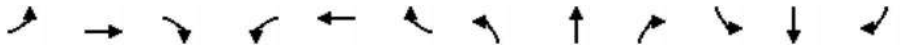
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	565	102	27	267	171	633
Future Volume (vph)	565	102	27	267	171	633
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	11	11	12	15
Grade (%)	-1%			3%	-3%	
Storage Length (ft)	75	0	175			0
Storage Lanes	2	1	1			1
Taper Length (ft)	200		100			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3093	1839	1653	1756	1819	1670
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3093	1839	1653	1756	1819	1670
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		110				646
Link Speed (mph)	45			35	35	
Link Distance (ft)	338			607	429	
Travel Time (s)	5.1			11.8	8.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.85	0.85	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	0%	4%	3%	6%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	608	110	32	314	174	646
Shared Lane Traffic (%)						
Lane Group Flow (vph)	608	110	32	314	174	646
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	9.0		7.0	10.0	10.0	
Minimum Split (s)	24.0		12.0	24.0	23.0	
Total Split (s)	62.0		13.0	58.0	45.0	
Total Split (%)	51.7%		10.8%	48.3%	37.5%	
Maximum Green (s)	56.0		8.0	52.0	40.0	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	Min	Min	
Walk Time (s)						
Flash Don't Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	81.3	120.0	7.4	26.7	20.1	120.0
Actuated g/C Ratio	0.68	1.00	0.06	0.22	0.17	1.00
v/c Ratio	0.29	0.06	0.32	0.81	0.57	0.39
Control Delay (s/veh)	8.9	0.1	62.3	59.5	54.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.9	0.1	62.3	59.5	54.1	0.7
LOS	A	A	E	E	D	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay (s/veh)	7.6			59.7	12.0	
Approach LOS	A			E	B	
Queue Length 50th (ft)	96	0	25	237	137	0
Queue Length 95th (ft)	156	0	56	294	205	0
Internal Link Dist (ft)	258			527	349	
Turn Bay Length (ft)	75		175			
Base Capacity (vph)	2096	1839	110	760	606	1670
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.06	0.29	0.41	0.29	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 113 (94%), Referenced to phase 8:EBL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay (s/veh): 19.1		Intersection LOS: B	
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ballardvale St & I-93 SB Ramps





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	295	89	149	17	57	30	106	388	34	10	359	171	
Future Volume (vph)	295	89	149	17	57	30	106	388	34	10	359	171	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor													
Frt			0.850			0.850		0.988				0.850	
Flt Protected		0.963			0.989		0.950			0.950			
Satd. Flow (prot)	0	1734	1522	0	1743	1584	1693	1748	0	1745	1749	1531	
Flt Permitted		0.698			0.836		0.950			0.950			
Satd. Flow (perm)	0	1257	1522	0	1474	1584	1693	1748	0	1745	1749	1531	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			46			65		3				115	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.88	0.88	0.88	0.61	0.61	0.61	0.87	0.87	0.87	0.85	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	8%	4%	6%	5%	3%	5%	6%	3%	0%	5%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	335	101	169	28	93	49	122	446	39	12	422	201	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	436	169	0	121	49	122	485	0	12	422	201	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	48.0	48.0	40.0	48.0	48.0	48.0	40.0	55.0		40.0	55.0	55.0	26.0
Total Split (%)	28.4%	28.4%	23.7%	28.4%	28.4%	28.4%	23.7%	32.5%		23.7%	32.5%	32.5%	15%
Maximum Green (s)	43.0	43.0	35.0	43.0	43.0	43.0	35.0	50.0		35.0	50.0	50.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		45.0	61.9		45.0	45.0	12.4	45.9		4.7	29.9	29.9	
Actuated g/C Ratio		0.42	0.58		0.42	0.42	0.12	0.43		0.04	0.28	0.28	
v/c Ratio		0.82	0.19		0.19	0.07	0.62	0.64		0.16	0.86	0.39	
Control Delay (s/veh)		45.2	8.7		27.1	5.3	62.9	29.4		63.4	55.1	16.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		45.2	8.7		27.1	5.3	62.9	29.4		63.4	55.1	16.5	
LOS		D	A		C	A	E	C		E	E	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		35.0			20.8			36.1			43.0		
Approach LOS		C			C			D			D		
Queue Length 50th (ft)		240	31		46	0	76	228		7	255	41	
Queue Length 95th (ft)		#789	86		106	0	190	522		34	494	122	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		530	1238		622	706	581	897		599	858	810	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		0.82	0.14		0.19	0.07	0.21	0.54		0.02	0.49	0.25	

Intersection Summary			
Area Type:	Other		
Cycle Length: 169			
Actuated Cycle Length: 106.5			
Natural Cycle: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 36.7		Intersection LOS: D	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Route 62 & Middlesex Ave/High St





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	482	295	446	436	107	261
Future Volume (Veh/h)	482	295	446	436	107	261
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.89	0.89
Hourly flow rate (vph)	530	324	490	479	120	293
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			530		2151	692
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			530		2151	692
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			51		0	32
cM capacity (veh/h)			1007		26	429

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	854	969	413
Volume Left	0	490	120
Volume Right	324	0	293
cSH	1700	1007	79
Volume to Capacity	0.50	0.49	5.25
Queue Length 95th (ft)	0	68	Err
Control Delay (s/veh)	0.0	10.0	Err
Lane LOS		B	F
Approach Delay (s/veh)	0.0	10.0	Err
Approach LOS			F

Intersection Summary			
Average Delay	1851.2		
Intersection Capacity Utilization	123.0%	ICU Level of Service	H
Analysis Period (min)	15		

* Value less than 0.01.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	194	329	468	110	188	438
Future Volume (Veh/h)	194	329	468	110	188	438
Sign Control	Yield			Free	Free	
Grade	-3%			3%	-2%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.94	0.94
Hourly flow rate (vph)	209	354	503	118	200	466
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1557	433	666			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1557	433	666			
tC, single (s)	*2.1	*2.1	*7.3			
tC, 2 stage (s)						
tF (s)	*1.0	*1.0	*2.2			
p0 queue free %	0	88	3			
cM capacity (veh/h)	45	2968	516			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	563	621	666
Volume Left	209	503	0
Volume Right	354	0	466
cSH	119	516	1700
Volume to Capacity	4.71	0.97	0.39
Queue Length 95th (ft)	Err	323	0
Control Delay (s/veh)	Err	61.9	0.0
Lane LOS	F	F	
Approach Delay (s/veh)	Err	61.9	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	3063.7		
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

* User Entered Value

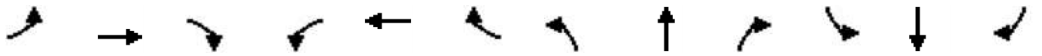


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	2	284	3	2	594
Future Volume (Veh/h)	2	2	284	3	2	594
Sign Control	Stop		Free			Free
Grade	0%		-6%			-1%
Peak Hour Factor	0.50	0.50	0.83	0.83	0.90	0.90
Hourly flow rate (vph)	4	4	342	4	2	660
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1008	344			346	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1008	344			346	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	268	703			1224	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	346	662
Volume Left	4	0	2
Volume Right	4	4	0
cSH	389	1700	1224
Volume to Capacity	0.02	0.20	0.00*
Queue Length 95th (ft)	2	0	0
Control Delay (s/veh)	14.5	0.0	0.0
Lane LOS	B		A
Approach Delay (s/veh)	14.5	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		42.9%	ICU Level of Service A
Analysis Period (min)		15	

* Value less than 0.01.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	0	55	4	0	1	31	251	2	0	545	8
Future Volume (Veh/h)	24	0	55	4	0	1	31	251	2	0	545	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			2%			0%	
Peak Hour Factor	0.53	0.53	0.53	0.63	0.63	0.63	0.80	0.80	0.80	0.86	0.86	0.86
Hourly flow rate (vph)	45	0	104	6	0	2	39	314	2	0	634	9
Pedestrians		8										
Lane Width (ft)		16.0										
Walking Speed (ft/s)		3.5										
Percent Blockage		1										
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1042	1041	647	1136	1044	315	651			316		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1042	1041	647	1136	1044	315	651			316		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	77	100	78	96	100	100	96			100		
cM capacity (veh/h)	199	220	467	135	219	730	921			1256		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	149	8	355	643
Volume Left	45	6	39	0
Volume Right	104	2	2	9
cSH	332	170	921	1256
Volume to Capacity	0.45	0.05	0.04	0.00
Queue Length 95th (ft)	56	4	3	0
Control Delay (s/veh)	24.4	27.3	1.4	0.0
Lane LOS	C	D	A	
Approach Delay (s/veh)	24.4	27.3	1.4	0.0
Approach LOS	C	D		

Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	50.5%	ICU Level of Service	A	
Analysis Period (min)	15			

* Value less than 0.01.

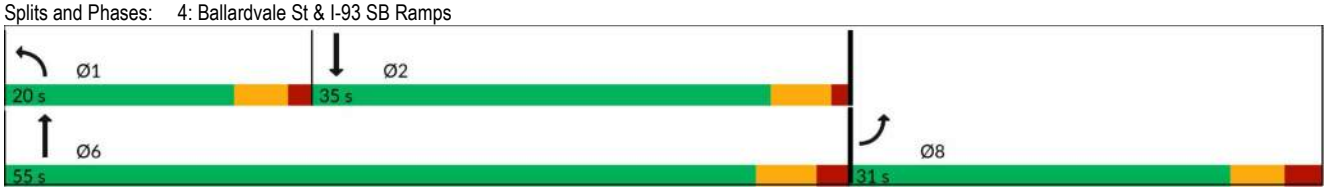


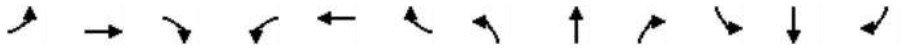
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	198	121	41	239	489	841
Future Volume (vph)	198	121	41	239	489	841
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	11	11	12	15
Grade (%)	-1%			3%	-3%	
Storage Length (ft)	75	0	175			0
Storage Lanes	2	1	1			1
Taper Length (ft)	200		100			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2984	1821	1637	1774	1891	1734
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	2984	1821	1637	1774	1891	1734
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		132				793
Link Speed (mph)	45			35	35	
Link Distance (ft)	338			607	429	
Travel Time (s)	5.1			11.8	8.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.85	0.85	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	1%	5%	2%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	215	132	48	281	549	945
Shared Lane Traffic (%)						
Lane Group Flow (vph)	215	132	48	281	549	945
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	9.0		7.0	10.0	10.0	
Minimum Split (s)	24.0		12.0	24.0	23.0	
Total Split (s)	31.0		20.0	55.0	35.0	
Total Split (%)	36.0%		23.3%	64.0%	40.7%	
Maximum Green (s)	25.0		15.0	49.0	30.0	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	None		None	Min	Min	
Walk Time (s)						
Flash Don't Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	10.1	50.1	7.7	27.2	21.8	50.1
Actuated g/C Ratio	0.20	1.00	0.15	0.54	0.44	1.00
v/c Ratio	0.36	0.07	0.19	0.29	0.67	0.54
Control Delay (s/veh)	22.0	0.1	25.3	6.4	17.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.0	0.1	25.3	6.4	17.3	1.2
LOS	C	A	C	A	B	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay (s/veh)	13.7			9.2	7.2	
Approach LOS	B			A	A	
Queue Length 50th (ft)	34	0	14	35	142	0
Queue Length 95th (ft)	77	0	45	67	262	0
Internal Link Dist (ft)	258			527	349	
Turn Bay Length (ft)	75		175			
Base Capacity (vph)	1581	1821	520	1608	1203	1734
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.07	0.09	0.17	0.46	0.54

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 50.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 8.5		Intersection LOS: A	
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ballardvale St & I-93 SB Ramps



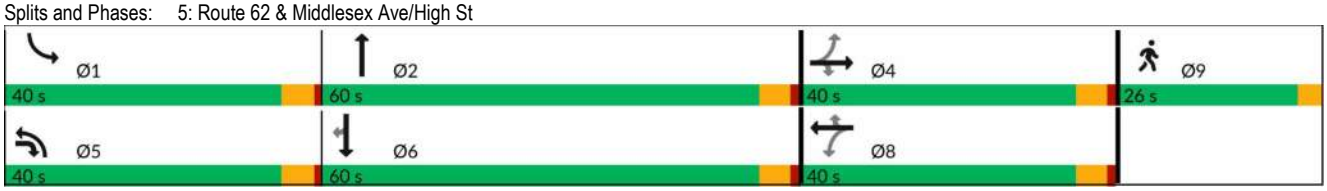


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	248	77	197	45	112	32	131	485	28	15	355	308	
Future Volume (vph)	248	77	197	45	112	32	131	485	28	15	355	308	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor												0.98	
Frt			0.850			0.850		0.992				0.850	
Flt Protected		0.963			0.986		0.950			0.950			
Satd. Flow (prot)	0	1735	1522	0	1806	1631	1743	1818	0	1631	1766	1561	
Flt Permitted		0.597			0.699		0.950			0.950			
Satd. Flow (perm)	0	1075	1522	0	1280	1631	1743	1818	0	1631	1766	1526	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			68			66		2				225	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)												2	
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.94	0.94	0.94	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	1%	11%	4%	2%	1%	0%	2%	2%	4%	7%	4%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	299	93	237	60	149	43	139	516	30	15	366	318	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	392	237	0	209	43	139	546	0	15	366	318	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	40.0	60.0		40.0	60.0	60.0	26.0
Total Split (%)	24.1%	24.1%	24.1%	24.1%	24.1%	24.1%	24.1%	36.1%		24.1%	36.1%	36.1%	16%
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	55.0		35.0	55.0	55.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		36.9	53.7		36.9	36.9	12.2	37.1		4.9	23.3	23.3	
Actuated g/C Ratio		0.40	0.59		0.40	0.40	0.13	0.40		0.05	0.25	0.25	
v/c Ratio		0.91	0.26		0.41	0.06	0.60	0.74		0.17	0.82	0.57	
Control Delay (s/veh)		56.1	7.8		29.1	3.8	52.5	31.9		55.3	48.4	14.1	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		56.1	7.8		29.1	3.8	52.5	31.9		55.3	48.4	14.1	
LOS		E	A		C	A	D	C		E	D	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		37.9			24.8			36.1			33.0		
Approach LOS		D			C			D			C		
Queue Length 50th (ft)		192	34		72	0	69	214		8	182	38	
Queue Length 95th (ft)		#662	92		208	5	192	572		40	420	157	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		432	1298		515	695	701	1150		656	1117	1047	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		0.91	0.18		0.41	0.06	0.20	0.47		0.02	0.33	0.30	

Intersection Summary			
Area Type:	Other		
Cycle Length: 166			
Actuated Cycle Length: 91.7			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay (s/veh): 34.4		Intersection LOS: C	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Route 62 & Middlesex Ave/High St





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	629	275	290	618	97	376
Future Volume (Veh/h)	629	275	290	618	97	376
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	655	286	299	637	100	388
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			655		2033	798
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			655		2033	798
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			68		0	0
cM capacity (veh/h)			932		43	386

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	941	936	488
Volume Left	0	299	100
Volume Right	286	0	388
cSH	1700	932	147
Volume to Capacity	0.55	0.32	3.32
Queue Length 95th (ft)	0	35	Err
Control Delay (s/veh)	0.0	7.1	Err
Lane LOS		A	F
Approach Delay (s/veh)	0.0	7.1	Err
Approach LOS			F

Intersection Summary			
Average Delay	2066.0		
Intersection Capacity Utilization	137.0%	ICU Level of Service	H
Analysis Period (min)	15		

* Value less than 0.01.

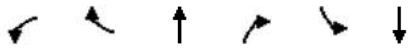


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	260	389	221	340	368	176
Future Volume (Veh/h)	260	389	221	340	368	176
Sign Control	Yield			Free	Free	
Grade	-3%			3%	-2%	
Peak Hour Factor	0.92	0.92	0.89	0.89	0.94	0.94
Hourly flow rate (vph)	283	423	248	382	391	187
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1363	485	578			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1363	485	578			
tC, single (s)	*2.1	*2.1	*7.3			
tC, 2 stage (s)						
tF (s)	*1.0	*1.0	2.2			
p0 queue free %	75	85	59			
cM capacity (veh/h)	1145	2900	600			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	706	630	578
Volume Left	283	248	0
Volume Right	423	0	187
cSH	2857	600	1700
Volume to Capacity	0.25	0.41	0.34
Queue Length 95th (ft)	25	51	0
Control Delay (s/veh)	7.5	10.9	0.0
Lane LOS	A	B	
Approach Delay (s/veh)	7.5	10.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	1	570	0	3	516
Future Volume (Veh/h)	3	1	570	0	3	516
Sign Control	Stop		Free			Free
Grade	0%		-6%			-1%
Peak Hour Factor	0.50	0.50	0.77	0.77	0.92	0.92
Hourly flow rate (vph)	6	2	740	0	3	561
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1307	740			740	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1307	740			740	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	100			100	
cM capacity (veh/h)	177	420			876	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	740	564
Volume Left	6	0	3
Volume Right	2	0	0
cSH	207	1700	876
Volume to Capacity	0.04	0.44	0.00*
Queue Length 95th (ft)	3	0	0
Control Delay (s/veh)	23.1	0.0	0.1
Lane LOS	C		A
Approach Delay (s/veh)	23.1	0.0	0.1
Approach LOS	C		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	1	568	1	0	516
Future Volume (Veh/h)	0	1	568	1	0	516
Sign Control	Stop		Free			Free
Grade	0%		2%			0%
Peak Hour Factor	0.25	0.25	0.79	0.79	0.90	0.90
Hourly flow rate (vph)	0	4	719	1	0	573
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1293	720			720	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1293	720			720	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	182	432			891	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	720	573
Volume Left	0	0	0
Volume Right	4	1	0
cSH	432	1700	891
Volume to Capacity	0.00*	0.42	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s/veh)	13.4	0.0	0.0
Lane LOS	B		
Approach Delay (s/veh)	13.4	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

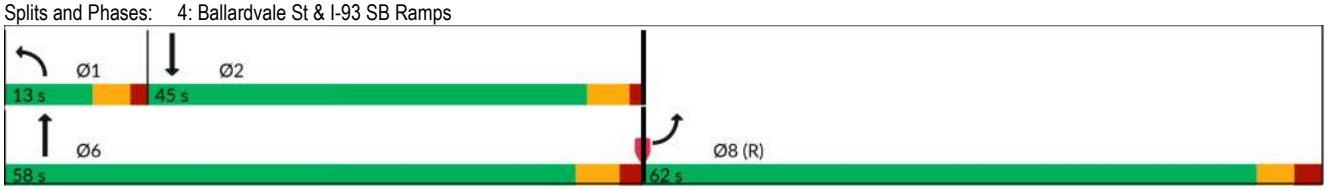
* Value less than 0.01.

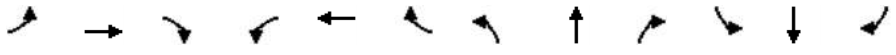
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	565	102	27	276	177	633
Future Volume (vph)	565	102	27	276	177	633
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	11	11	12	15
Grade (%)	-1%			3%	-3%	
Storage Length (ft)	75	0	175			0
Storage Lanes	2	1	1			1
Taper Length (ft)	200		100			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3093	1839	1653	1756	1819	1670
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3093	1839	1653	1756	1819	1670
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		110				646
Link Speed (mph)	45			35	35	
Link Distance (ft)	338			607	429	
Travel Time (s)	5.1			11.8	8.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.85	0.85	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	0%	4%	3%	6%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	608	110	32	325	181	646
Shared Lane Traffic (%)						
Lane Group Flow (vph)	608	110	32	325	181	646
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	9.0		7.0	10.0	10.0	
Minimum Split (s)	24.0		12.0	24.0	23.0	
Total Split (s)	62.0		13.0	58.0	45.0	
Total Split (%)	51.7%		10.8%	48.3%	37.5%	
Maximum Green (s)	56.0		8.0	52.0	40.0	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	Min	Min	
Walk Time (s)						
Flash Don't Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	80.7	120.0	7.4	27.3	20.8	120.0
Actuated g/C Ratio	0.67	1.00	0.06	0.23	0.17	1.00
v/c Ratio	0.29	0.06	0.32	0.81	0.58	0.39
Control Delay (s/veh)	9.3	0.1	62.3	59.5	53.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.3	0.1	62.3	59.5	53.5	0.7
LOS	A	A	E	E	D	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay (s/veh)	7.9			59.7	12.2	
Approach LOS	A			E	B	
Queue Length 50th (ft)	97	0	25	246	143	0
Queue Length 95th (ft)	160	0	56	300	209	0
Internal Link Dist (ft)	258			527	349	
Turn Bay Length (ft)	75		175			
Base Capacity (vph)	2079	1839	110	760	606	1670
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.06	0.29	0.43	0.30	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 113 (94%), Referenced to phase 8:EBL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay (s/veh): 19.5		Intersection LOS: B	
Intersection Capacity Utilization 44.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ballardvale St & I-93 SB Ramps



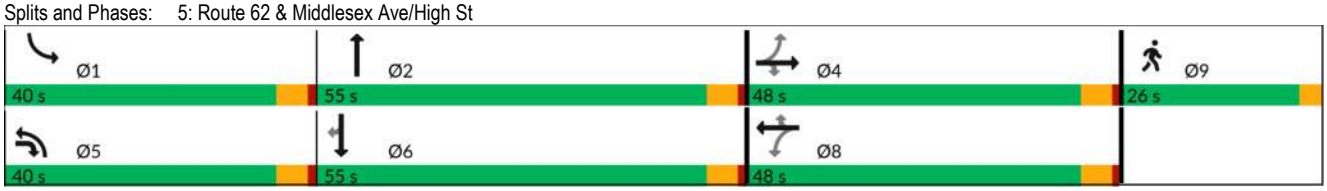


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	308	151	276	17	126	30	248	388	34	10	359	186	
Future Volume (vph)	308	151	276	17	126	30	248	388	34	10	359	186	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor													
Frt			0.850			0.850		0.988				0.850	
Flt Protected		0.968			0.994		0.950			0.950			
Satd. Flow (prot)	0	1733	1522	0	1754	1584	1693	1748	0	1745	1749	1531	
Flt Permitted		0.549			0.607		0.950			0.950			
Satd. Flow (perm)	0	983	1522	0	1071	1584	1693	1748	0	1745	1749	1531	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			71			65		3				126	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.88	0.88	0.88	0.61	0.61	0.61	0.87	0.87	0.87	0.85	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	8%	4%	6%	5%	3%	5%	6%	3%	0%	5%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	350	172	314	28	207	49	285	446	39	12	422	219	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	522	314	0	235	49	285	485	0	12	422	219	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	48.0	48.0	40.0	48.0	48.0	48.0	40.0	55.0		40.0	55.0	55.0	26.0
Total Split (%)	28.4%	28.4%	23.7%	28.4%	28.4%	28.4%	23.7%	32.5%		23.7%	32.5%	32.5%	15%
Maximum Green (s)	43.0	43.0	35.0	43.0	43.0	43.0	35.0	50.0		35.0	50.0	50.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		44.7	74.3		44.7	44.7	25.2	60.7		4.8	34.0	34.0	
Actuated g/C Ratio		0.36	0.60		0.36	0.36	0.20	0.49		0.04	0.28	0.28	
v/c Ratio		1.47	0.33		0.61	0.08	0.82	0.56		0.18	0.88	0.43	
Control Delay (s/veh)		255.6	10.2		45.7	5.7	68.7	26.1		73.8	63.5	19.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		255.6	10.2		45.7	5.7	68.7	26.1		73.8	63.5	19.2	
LOS		F	B		D	A	E	C		E	E	B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		163.4			38.8			41.9			48.9		
Approach LOS		F			D			D			D		
Queue Length 50th (ft)		~572	79		148	0	212	228		9	311	54	
Queue Length 95th (ft)		#1188	165		232	0	#438	513		35	557	145	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		356	1077		388	615	499	893		514	737	718	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		1.47	0.29		0.61	0.08	0.57	0.54		0.02	0.57	0.31	

Intersection Summary			
Area Type:	Other		
Cycle Length: 169			
Actuated Cycle Length: 123.2			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.47			
Intersection Signal Delay (s/veh): 83.3		Intersection LOS: F	
Intersection Capacity Utilization 81.9%		ICU Level of Service D	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Route 62 & Middlesex Ave/High St





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	607	1	535	1	11
Future Volume (Veh/h)	11	607	1	535	1	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.77	0.77	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	788	1	582	1	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	583				1108	292
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	583				1108	292
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	98
cM capacity (veh/h)	1001				231	752

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	802	583	13
Volume Left	14	0	1
Volume Right	0	582	12
cSH	1001	1700	641
Volume to Capacity	0.01	0.34	0.02
Queue Length 95th (ft)	1	0	2
Control Delay (s/veh)	0.4	0.0	10.7
Lane LOS	A		B
Approach Delay (s/veh)	0.4	0.0	10.7
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	246	294	275	270	16
Future Volume (Veh/h)	13	246	294	275	270	16
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.79	0.79	0.90	0.90
Hourly flow rate (vph)	14	267	372	348	300	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1401	309	318			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1401	309	318			
tC, single (s)	7.4	7.2	5.1			
tC, 2 stage (s)						
tF (s)	4.4	4.2	3.1			
p0 queue free %	74	51	56			
cM capacity (veh/h)	54	550	846			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	281	720	318
Volume Left	14	372	0
Volume Right	267	0	18
cSH	377	846	1700
Volume to Capacity	0.75	0.44	0.19
Queue Length 95th (ft)	147	57	0
Control Delay (s/veh)	37.8	9.8	0.0
Lane LOS	E	A	
Approach Delay (s/veh)	37.8	9.8	0.0
Approach LOS	E		

Intersection Summary			
Average Delay	13.4		
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	495	295	446	451	107	261
Future Volume (Veh/h)	495	295	446	451	107	261
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.89	0.89
Hourly flow rate (vph)	544	324	490	496	120	293
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			544		2182	706
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			544		2182	706
tC, single (s)			4.2		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.3		3.6	3.4
p0 queue free %			51		0	30
cM capacity (veh/h)			995		25	421

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	868	986	413
Volume Left	0	490	120
Volume Right	324	0	293
cSH	1700	995	75
Volume to Capacity	0.51	0.49	5.53
Queue Length 95th (ft)	0	70	Err
Control Delay (s/veh)	0.0	10.2	Err
Lane LOS		B	F
Approach Delay (s/veh)	0.0	10.2	Err
Approach LOS			F

Intersection Summary			
Average Delay	1826.1		
Intersection Capacity Utilization	124.5%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	210	329	468	198	281	454
Future Volume (Veh/h)	210	329	468	198	281	454
Sign Control	Yield			Free	Free	
Grade	-3%			3%	-2%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.94	0.94
Hourly flow rate (vph)	226	354	503	213	299	483
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1760	541	782			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1760	541	782			
tC, single (s)	*2.1	*2.1	*7.3			
tC, 2 stage (s)						
tF (s)	*1.0	*1.0	2.2			
p0 queue free %	0	87	0			
cM capacity (veh/h)	0	2829	422			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	580	716	782
Volume Left	226	503	0
Volume Right	354	0	483
cSH	0	422	1700
Volume to Capacity	Err	1.19	0.46
Queue Length 95th (ft)	Err	493	0
Control Delay (s/veh)	Err	137.5	0.0
Lane LOS	F	F	
Approach Delay (s/veh)	Err	137.5	0.0
Approach LOS	F		

Intersection Summary			
Average Delay		Err	
Intersection Capacity Utilization		100.6%	ICU Level of Service G
Analysis Period (min)		15	

* User Entered Value



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	2	380	3	2	695
Future Volume (Veh/h)	2	2	380	3	2	695
Sign Control	Stop		Free			Free
Grade	0%		-6%			-1%
Peak Hour Factor	0.50	0.50	0.83	0.83	0.90	0.90
Hourly flow rate (vph)	4	4	458	4	2	772
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1236	460			462	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1236	460			462	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			100	
cM capacity (veh/h)	196	605			1110	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	462	774
Volume Left	4	0	2
Volume Right	4	4	0
cSH	296	1700	1110
Volume to Capacity	0.03	0.27	0.00*
Queue Length 95th (ft)	2	0	0
Control Delay (s/veh)	17.5	0.0	0.0
Lane LOS	C		A
Approach Delay (s/veh)	17.5	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

* Value less than 0.01.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	1	567	2	0	701
Future Volume (Veh/h)	4	1	567	2	0	701
Sign Control	Stop		Free			Free
Grade	0%		2%			0%
Peak Hour Factor	0.63	0.63	0.80	0.80	0.86	0.86
Hourly flow rate (vph)	6	2	709	2	0	815
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1525	710			711	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1525	710			711	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	100			100	
cM capacity (veh/h)	131	437			898	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	711	815
Volume Left	6	0	0
Volume Right	2	2	0
cSH	159	1700	898
Volume to Capacity	0.05	0.42	0.00
Queue Length 95th (ft)	4	0	0
Control Delay (s/veh)	28.8	0.0	0.0
Lane LOS	D		
Approach Delay (s/veh)	28.8	0.0	0.0
Approach LOS	D		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		46.9%	ICU Level of Service A
Analysis Period (min)		15	

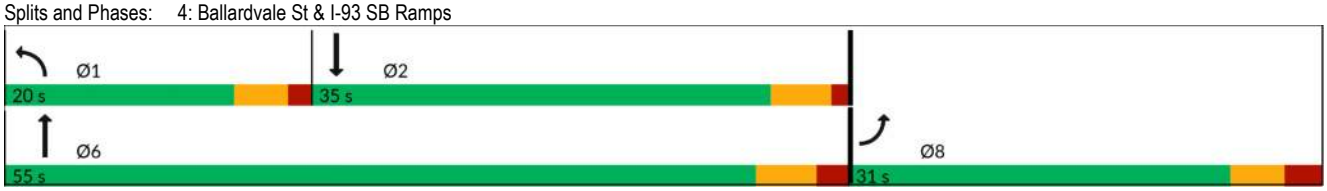
* Value less than 0.01.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	198	121	41	224	489	841
Future Volume (vph)	198	121	41	224	489	841
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	16	11	11	12	15
Grade (%)	-1%			3%	-3%	
Storage Length (ft)	75	0	175			0
Storage Lanes	2	1	1			1
Taper Length (ft)	200		100			
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	2984	1821	1637	1774	1891	1734
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	2984	1821	1637	1774	1891	1734
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		132				793
Link Speed (mph)	45			35	35	
Link Distance (ft)	338			607	429	
Travel Time (s)	5.1			11.8	8.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.85	0.85	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	1%	5%	2%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	215	132	48	264	549	945
Shared Lane Traffic (%)						
Lane Group Flow (vph)	215	132	48	264	549	945
Turn Type	Prot	Free	Prot	NA	NA	Free
Protected Phases	8		1	6	2	
Permitted Phases		Free				Free
Detector Phase	8		1	6	2	
Switch Phase						
Minimum Initial (s)	9.0		7.0	10.0	10.0	
Minimum Split (s)	24.0		12.0	24.0	23.0	
Total Split (s)	31.0		20.0	55.0	35.0	
Total Split (%)	36.0%		23.3%	64.0%	40.7%	
Maximum Green (s)	25.0		15.0	49.0	30.0	
Yellow Time (s)	3.5		3.5	4.0	4.0	
All-Red Time (s)	2.5		1.5	2.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		5.0	6.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0		2.0	2.0	2.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	None		None	Min	Min	
Walk Time (s)						
Flash Don't Walk (s)						
Pedestrian Calls (#/hr)						
Act Effct Green (s)	10.1	50.1	7.7	27.2	21.8	50.1
Actuated g/C Ratio	0.20	1.00	0.15	0.54	0.44	1.00
v/c Ratio	0.36	0.07	0.19	0.27	0.67	0.54
Control Delay (s/veh)	22.0	0.1	25.3	6.3	17.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.0	0.1	25.3	6.3	17.3	1.2
LOS	C	A	C	A	B	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay (s/veh)	13.7			9.2	7.2	
Approach LOS	B			A	A	
Queue Length 50th (ft)	34	0	14	33	142	0
Queue Length 95th (ft)	77	0	45	63	262	0
Internal Link Dist (ft)	258			527	349	
Turn Bay Length (ft)	75		175			
Base Capacity (vph)	1581	1821	520	1608	1203	1734
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.07	0.09	0.16	0.46	0.54

Intersection Summary			
Area Type:	Other		
Cycle Length: 86			
Actuated Cycle Length: 50.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 8.5		Intersection LOS: A	
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Ballardvale St & I-93 SB Ramps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	256	101	258	45	137	32	187	485	28	15	355	315	
Future Volume (vph)	256	101	258	45	137	32	187	485	28	15	355	315	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor												0.98	
Frt			0.850			0.850		0.992				0.850	
Flt Protected		0.965			0.988		0.950			0.950			
Satd. Flow (prot)	0	1730	1522	0	1810	1631	1743	1818	0	1631	1766	1561	
Flt Permitted		0.555			0.625		0.950			0.950			
Satd. Flow (perm)	0	995	1522	0	1145	1631	1743	1818	0	1631	1766	1526	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			81			66		2				230	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)												2	
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.94	0.94	0.94	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	1%	11%	4%	2%	1%	0%	2%	2%	4%	7%	4%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	308	122	311	60	183	43	199	516	30	15	366	325	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	430	311	0	243	43	199	546	0	15	366	325	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	40.0	40.0	40.0	40.0	40.0	40.0	40.0	60.0		40.0	60.0	60.0	26.0
Total Split (%)	24.1%	24.1%	24.1%	24.1%	24.1%	24.1%	24.1%	36.1%		24.1%	36.1%	36.1%	16%
Maximum Green (s)	35.0	35.0	35.0	35.0	35.0	35.0	35.0	55.0		35.0	55.0	55.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		37.1	57.3		37.1	37.1	15.5	41.7		5.0	24.5	24.5	
Actuated g/C Ratio		0.38	0.59		0.38	0.38	0.16	0.43		0.05	0.25	0.25	
v/c Ratio		1.13	0.33		0.55	0.06	0.71	0.69		0.18	0.82	0.58	
Control Delay (s/veh)		115.8	8.5		35.4	4.1	55.6	29.0		59.1	50.5	14.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		115.8	8.5		35.4	4.1	55.6	29.0		59.1	50.5	14.9	
LOS		F	A		D	A	E	C		E	D	B	

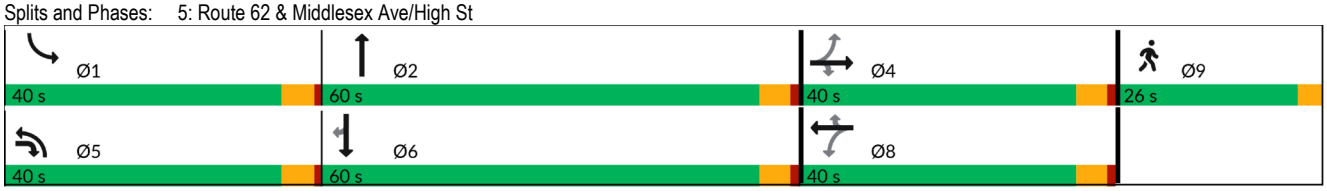
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		70.8			30.7			36.1			34.3		
Approach LOS		E			C			D			C		
Queue Length 50th (ft)		~289	52		100	0	106	214		9	193	41	
Queue Length 95th (ft)		#820	130		#285	4	271	564		42	447	170	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		382	1251		440	668	670	1122		627	1067	1013	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		1.13	0.25		0.55	0.06	0.30	0.49		0.02	0.34	0.32	

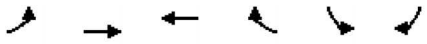
Intersection Summary			
Area Type:	Other		
Cycle Length: 166			
Actuated Cycle Length: 96.5			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay (s/veh): 45.3		Intersection LOS: D	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Route 62 & Middlesex Ave/High St





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	413	751	1	1	9
Future Volume (Veh/h)	9	413	751	1	1	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.83	0.83	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	11	498	834	1	1	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	835				1355	835
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	835				1355	835
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	97
cM capacity (veh/h)	807				164	371

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	509	835	11
Volume Left	11	0	1
Volume Right	0	1	10
cSH	807	1700	333
Volume to Capacity	0.01	0.49	0.03
Queue Length 95th (ft)	1	0	3
Control Delay (s/veh)	0.4	0.0	16.2
Lane LOS	A		C
Approach Delay (s/veh)	0.4	0.0	16.2
Approach LOS			C

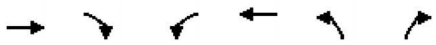
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	155	294	274	546	8
Future Volume (Veh/h)	8	155	294	274	546	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.80	0.80	0.86	0.86
Hourly flow rate (vph)	9	168	368	342	635	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1718	640	644			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1718	640	644			
tC, single (s)	7.4	7.2	5.1			
tC, 2 stage (s)						
tF (s)	4.4	4.2	3.1			
p0 queue free %	60	50	39			
cM capacity (veh/h)	23	339	608			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	177	710	644
Volume Left	9	368	0
Volume Right	168	0	9
cSH	198	608	1700
Volume to Capacity	0.89	0.61	0.38
Queue Length 95th (ft)	174	101	0
Control Delay (s/veh)	88.2	17.3	0.0
Lane LOS	F	C	
Approach Delay (s/veh)	88.2	17.3	0.0
Approach LOS	F		

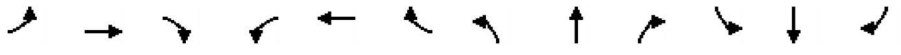
Intersection Summary			
Average Delay	18.2		
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	637	275	290	625	115	376
Future Volume (Veh/h)	637	275	290	625	115	376
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	664	286	299	644	119	388
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			664		2049	807
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			664		2049	807
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			68		0	0
cM capacity (veh/h)			925		42	381

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	950	943	507
Volume Left	0	299	119
Volume Right	286	0	388
cSH	1700	925	132
Volume to Capacity	0.56	0.32	3.85
Queue Length 95th (ft)	0	35	Err
Control Delay (s/veh)	0.0	7.2	Err
Lane LOS		A	F
Approach Delay (s/veh)	0.0	7.2	Err
Approach LOS			F

Intersection Summary			
Average Delay	2115.1		
Intersection Capacity Utilization	138.7%	ICU Level of Service	H
Analysis Period (min)	15		

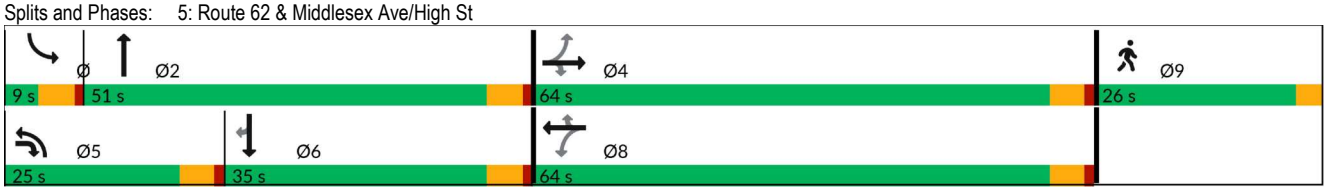


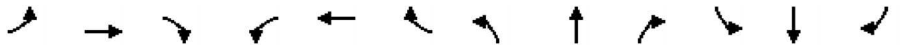
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	308	151	276	17	126	30	248	388	34	10	359	186	
Future Volume (vph)	308	151	276	17	126	30	248	388	34	10	359	186	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor													
Frt			0.850			0.850		0.988				0.850	
Flt Protected		0.968			0.994		0.950			0.950			
Satd. Flow (prot)	0	1733	1522	0	1754	1584	1693	1748	0	1745	1749	1531	
Flt Permitted		0.592			0.815		0.950			0.950			
Satd. Flow (perm)	0	1060	1522	0	1438	1584	1693	1748	0	1745	1749	1531	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			92			109		3				125	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.88	0.88	0.88	0.61	0.61	0.61	0.87	0.87	0.87	0.85	0.85	0.85	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	8%	4%	6%	5%	3%	5%	6%	3%	0%	5%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	350	172	314	28	207	49	285	446	39	12	422	219	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	522	314	0	235	49	285	485	0	12	422	219	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	64.0	64.0	25.0	64.0	64.0	64.0	25.0	51.0		9.0	35.0	35.0	26.0
Total Split (%)	42.7%	42.7%	16.7%	42.7%	42.7%	42.7%	16.7%	34.0%		6.0%	23.3%	23.3%	17%
Maximum Green (s)	59.0	59.0	20.0	59.0	59.0	59.0	20.0	46.0		4.0	30.0	30.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		59.3	83.6		59.3	59.3	20.1	51.9		4.0	30.2	30.2	
Actuated g/C Ratio		0.46	0.65		0.46	0.46	0.16	0.40		0.03	0.23	0.23	
v/c Ratio		1.07	0.31		0.36	0.06	1.08	0.69		0.22	1.03	0.48	
Control Delay (s/veh)		96.2	6.9		26.1	0.2	129.6	40.1		74.6	101.7	23.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		96.2	6.9		26.1	0.2	129.6	40.1		74.6	101.7	23.2	
LOS		F	A		C	A	F	D		E	F	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		62.7			21.7			73.2			74.9		
Approach LOS		E			C			E			E		
Queue Length 50th (ft)		~479	63		120	0	~257	306		10	353	62	
Queue Length 95th (ft)		#890	97		159	0	#534	#651		34	#686	154	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		486	1017		660	786	263	703		54	408	453	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		1.07	0.31		0.36	0.06	1.08	0.69		0.22	1.03	0.48	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 129.2			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay (s/veh): 64.4		Intersection LOS: E	
Intersection Capacity Utilization 81.9%		ICU Level of Service D	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Route 62 & Middlesex Ave/High St



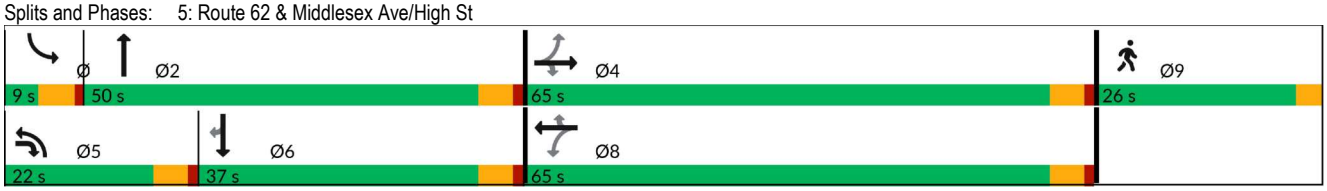


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Lane Configurations													
Traffic Volume (vph)	256	101	258	45	137	32	187	485	28	15	355	315	
Future Volume (vph)	256	101	258	45	137	32	187	485	28	15	355	315	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	11	12	12	12	12	11	11	11	
Grade (%)		4%			-2%			3%			0%		
Storage Length (ft)	0		50	0		25	115		0	115		175	
Storage Lanes	0		1	0		1	1		0	1		1	
Taper Length (ft)	25			25			25			80			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor												0.98	
Frt			0.850			0.850		0.992				0.850	
Flt Protected		0.965			0.988		0.950			0.950			
Satd. Flow (prot)	0	1730	1522	0	1810	1631	1743	1818	0	1631	1766	1561	
Flt Permitted		0.575			0.706		0.950			0.950			
Satd. Flow (perm)	0	1031	1522	0	1294	1631	1743	1818	0	1631	1766	1525	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			107			109		2				217	
Link Speed (mph)		30			30			45			45		
Link Distance (ft)		592			864			557			722		
Travel Time (s)		13.5			19.6			8.4			10.9		
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)												2	
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.94	0.94	0.94	0.97	0.97	0.97	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	1%	11%	4%	2%	1%	0%	2%	2%	4%	7%	4%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	308	122	311	60	183	43	199	516	30	15	366	325	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	430	311	0	243	43	199	546	0	15	366	325	
Turn Type	Perm	NA	pm+ov	Perm	NA	Perm	Prot	NA		Prot	NA	Perm	
Protected Phases		4	5		8		5	2		1	6		9
Permitted Phases	4		4	8		8						6	
Detector Phase	4	4	5	8	8	8	5	2		1	6	6	
Switch Phase													
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0		4.0	8.0	8.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0		9.0	13.0	13.0	26.0
Total Split (s)	65.0	65.0	22.0	65.0	65.0	65.0	22.0	50.0		9.0	37.0	37.0	26.0
Total Split (%)	43.3%	43.3%	14.7%	43.3%	43.3%	43.3%	14.7%	33.3%		6.0%	24.7%	24.7%	17%
Maximum Green (s)	60.0	60.0	17.0	60.0	60.0	60.0	17.0	45.0		4.0	32.0	32.0	23.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag	
Lead-Lag Optimize?													
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None		None	None	None	None
Walk Time (s)													7.0
Flash Don't Walk (s)													16.0
Pedestrian Calls (#/hr)													5
Act Effct Green (s)		60.4	81.7		60.4	60.4	17.1	49.7		4.0	30.9	30.9	
Actuated g/C Ratio		0.47	0.64		0.47	0.47	0.13	0.39		0.03	0.24	0.24	
v/c Ratio		0.88	0.31		0.40	0.05	0.86	0.77		0.29	0.86	0.61	
Control Delay (s/veh)		53.2	6.8		26.5	0.1	86.3	44.4		79.5	66.9	20.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	
Total Delay (s/veh)		53.2	6.8		26.5	0.1	86.3	44.4		79.5	66.9	20.4	
LOS		D	A		C	A	F	D		E	E	C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø9
Approach Delay (s/veh)		33.7			22.5			55.6			45.8		
Approach LOS		C			C			E			D		
Queue Length 50th (ft)		323	61		121	0	160	351		13	284	70	
Queue Length 95th (ft)		#640	86		207	0	#378	#801		43	#585	209	
Internal Link Dist (ft)		512			784			477			642		
Turn Bay Length (ft)			50			25	115			115		175	
Base Capacity (vph)		486	1010		610	827	232	706		51	444	546	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	0	
Reduced v/c Ratio		0.88	0.31		0.40	0.05	0.86	0.77		0.29	0.82	0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 128			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 42.4		Intersection LOS: D	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

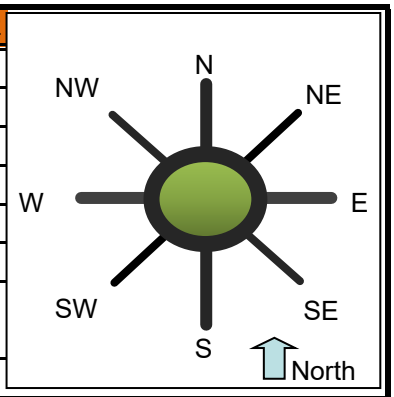
Splits and Phases: 5: Route 62 & Middlesex Ave/High St



General & Site Information

v 4.2

Analyst:	MAT
Agency/Co:	Nitsch
Date:	10/24/2025
Project or PI#:	15428
Year, Peak Hour:	Build AM - Mitigated
County/District:	Wilmington
Intersection Name:	Salem Street and Middlesex Avenue



Volumes		Entry Legs (FROM) N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
	N (1), vph					**341**		**261**	
Exit	NE (2), vph								
Legs	E (3), vph								
(TO)	SE (4), vph								
	S (5), vph	**368**						**389**	
	SW (6), vph								
	W (7), vph	**176**				**221**			
	NW (8), vph								
Output	Total Vehicles	544	0	0	0	562	0	650	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	97.0%	100.0%	100.0%	100.0%	96.0%	100.0%	95.0%	100.0%
% Heavy Vehicles	3.0%	0.0%	0.0%	0.0%	4.0%	0.0%	5.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.94*	*0.95*	*0.95*	*0.95*	*0.89*	*0.95*	*0.92*	*0.95*
F_{HV}	0.971	1.000	1.000	1.000	0.962	1.000	0.952	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	398	0	298	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	403	0	0	0	0	0	444	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	193	0	0	0	258	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	596	0	0	0	657	0	742	0
Conflicting flow, pcu/h	258	0	0	0	298	0	403	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1030	NA	NA	NA	979	NA	871	NA
Entry Flow Rates, vph	579	0	0	0	631	0	707	0
V/C ratio	**0.56**				**0.64**		**0.81**	
Control Delay, sec/pcu	**10.7**				**13.3**		**23.3**	
LOS	B				B		C	
Average Queue (ft)	43				58		114	
95th % Queue (ft)	**93**				**127**		**235**	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	16.2	Int LOS	C	Max Approach V/C	0.81

Notes: v 4.2

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

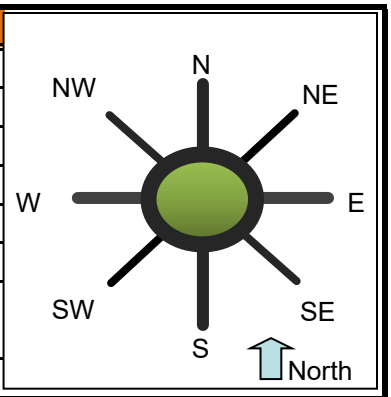
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information

v 4.2

Analyst:	MAT
Agency/Co:	Nitsch
Date:	10/24/2025
Project or PI#:	15428
Year, Peak Hour:	Build PM - Mitigated
County/District:	Wilmington
Intersection Name:	Salem Street and Middlesex Avenue



Volumes

		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
Exit Legs (TO)	N (1), vph					198		210	
	NE (2), vph								
	E (3), vph								
	SE (4), vph								
	S (5), vph	281						329	
	SW (6), vph								
	W (7), vph	452				468			
	NW (8), vph								
Output	Total Vehicles	733	0	0	0	666	0	539	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98.0%	100.0%	100.0%	100.0%	99.0%	100.0%	99.0%	100.0%
% Heavy Vehicles	2.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.94*	*0.95*	*0.95*	*0.95*	*0.93*	*0.95*	*0.93*	*0.95*
F_{HV}	0.980	1.000	1.000	1.000	0.990	1.000	0.990	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	215	0	228	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	305	0	0	0	0	0	357	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	490	0	0	0	508	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	795	0	0	0	723	0	585	0
Conflicting flow, pcu/h	508	0	0	0	228	0	305	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	806	NA	NA	NA	1083	NA	1001	NA
Entry Flow Rates, vph	780	0	0	0	716	0	580	0
V/C ratio	**0.97**				**0.66**		**0.58**	
Control Delay, sec/pcu	**46.8**				**12.9**		**11.3**	
LOS	E				B		B	
Average Queue (ft)	253				64		46	
95th % Queue (ft)	**397**				**133**		**97**	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	**25.2**	**Int LOS**	**D**	**Max Approach V/C**	**0.97**

Notes: v 4.2

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

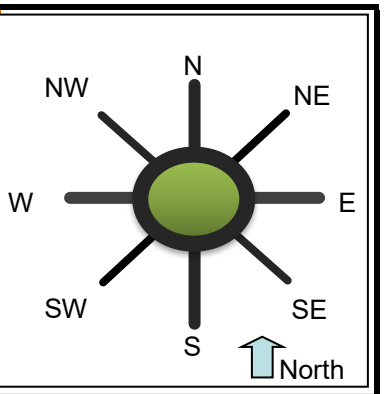
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
Volumes						
Right Turn Volume removed from Entry Leg						
Volume Characteristics (for entry leg)						
PHF						
F_{HV}						
F_{ped}						
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr						
Conflicting Flow, pcu/hr						
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph						
Flow Rates of Exiting Traffic, vph						
V/C ratio						
Control Delay, s/veh						
LOS						
95th % Queue (veh)						
95th % Queue (ft)						
Approach w/Bypass Delay, s/veh						
Approach w/Bypass LOS						

General & Site Information

v 4.2

Analyst:	MAT
Agency/Co:	Nitsch
Date:	10/24/2025
Project or PI#:	15428
Year, Peak Hour:	Build AM - Mitigated
County/District:	Wilmington
Intersection Name:	Salem Street and Middlesex Avenue



Volumes

		Entry Legs (FROM) N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
	N (1), vph					**341**		**261**	
Exit	NE (2), vph								
Legs	E (3), vph								
(TO)	SE (4), vph								
	S (5), vph	**368**						0	
	SW (6), vph								
	W (7), vph	0				**221**			
	NW (8), vph								
Output	Total Vehicles	368	0	0	0	562	0	261	0

Volume Characteristics

	N	NE	E	SE	S	SW	W	NW
% Cars	97.0%	100.0%	100.0%	100.0%	96.0%	100.0%	95.0%	100.0%
% Heavy Vehicles	3.0%	0.0%	0.0%	0.0%	4.0%	0.0%	5.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.94*	*0.95*	*0.95*	*0.95*	*0.89*	*0.95*	*0.92*	*0.95*
F_{HV}	0.971	1.000	1.000	1.000	0.962	1.000	0.952	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows

	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	398	0	298	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	403	0	0	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	258	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	403	0	0	0	657	0	298	0
Conflicting flow, pcu/h	258	0	0	0	298	0	403	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	1030	NA	NA	NA	979	NA	871	NA
Entry Flow Rates, vph	391	0	0	0	631	0	284	0
V/C ratio	**0.38**				**0.64**		**0.33**	
Control Delay, sec/pcu	**7.5**				**13.3**		**7.7**	
LOS	A				B		A	
Average Queue (ft)	20				58		15	
95th % Queue (ft)	**46**				**127**		**37**	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	10.4	Int LOS	B	Max Approach V/C	0.64

Notes: v 4.2

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

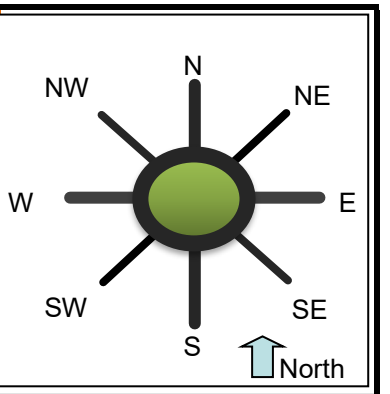
Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	**W (7)**	**N (1)**				
Select Exit Leg for Bypass (TO)	**S (5)**	**W (7)**				
Does the bypass have a dedicated receiving lane?	**No**	**No**				
Volumes						
Right Turn Volume removed from Entry Leg	**389**	**176**				
Volume Characteristics (for entry leg)						
PHF	0.92	0.94				
F_{HV}	0.95	0.97				
F_{ped}	1.00	1.00				
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr	444	193				
Conflicting Flow, pcu/hr	403	258				
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph	871	1030				
Flow Rates of Exiting Traffic, vph	423	187				
V/C ratio	**0.49**	**0.19**				
Control Delay, s/veh	**10.4**	**5.2**				
LOS	B	A				
95th % Queue (veh)	3	1				
95th % Queue (ft)	**71**	**18**				
Approach w/Bypass Delay, s/veh	***9.3***	***6.8***				
Approach w/Bypass LOS	*A*	*A*				

General & Site Information

v 4.2

Analyst:	MAT
Agency/Co:	Nitsch
Date:	10/24/2025
Project or PI#:	15428
Year, Peak Hour:	Build PM - Mitigated
County/District:	Wilmington
Intersection Name:	Salem Street and Middlesex Avenue



Volumes

		Entry Legs (FROM) N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
	N (1), vph					**198**		**210**	
Exit	NE (2), vph								
Legs	E (3), vph								
(TO)	SE (4), vph								
	S (5), vph	**281**						0	
	SW (6), vph								
	W (7), vph	0				**468**			
	NW (8), vph								
Output	Total Vehicles	281	0	0	0	666	0	210	0

Volume Characteristics

	N	NE	E	SE	S	SW	W	NW
% Cars	98.0%	100.0%	100.0%	100.0%	99.0%	100.0%	99.0%	100.0%
% Heavy Vehicles	2.0%	0.0%	0.0%	0.0%	1.0%	0.0%	1.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians **(ped/hr)**	0	0	0	0	0	0	0	0
PHF	*0.94*	*0.95*	*0.95*	*0.95*	*0.93*	*0.95*	*0.93*	*0.95*
F_{HV}	0.980	1.000	1.000	1.000	0.990	1.000	0.990	1.000
F_{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows

	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	0	0	215	0	228	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	0	0	0	0	0	0	0	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	305	0	0	0	0	0	0	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	0	0	508	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	305	0	0	0	723	0	228	0
Conflicting flow, pcu/h	508	0	0	0	228	0	305	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	806	NA	NA	NA	1083	NA	1001	NA
Entry Flow Rates, vph	299	0	0	0	716	0	226	0
V/C ratio	**0.37**				**0.66**		**0.23**	
Control Delay, sec/pcu	**8.9**				**12.9**		**5.8**	
LOS	A				B		A	
Average Queue (ft)	19				64		9	
95th % Queue (ft)	**44**				**133**		**22**	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	10.6	Int LOS	B	Max Approach V/C	0.66

Notes: v 4.2

Unit Legend:
vph = vehicles per hour
PHF = peak hour factor
F_{HV} = heavy vehicle factor
pcu = passenger car unit

Bypass Lane Merge Point Analysis (if applicable)

Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)	**N (1)**	**W (7)**				
Select Exit Leg for Bypass (TO)	**W (7)**	**S (5)**				
Does the bypass have a dedicated receiving lane?	**No**	**No**				
Volumes						
Right Turn Volume removed from Entry Leg	**452**	**329**				
Volume Characteristics (for entry leg)						
PHF	0.94	0.93				
F_{HV}	0.98	0.99				
F_{ped}	1.00	1.00				
NOTE: Volume Characteristics for Exit Leg are already taken into account						
Entry/Conflicting Flows						
Entry Flow, pcu/hr	489	357				
Conflicting Flow, pcu/hr	508	305				
Bypass Lane Results (HCM 6th Edition)						
Entry Capacity of Bypass, vph	806	1001				
Flow Rates of Exiting Traffic, vph	480	354				
V/C ratio	**0.60**	**0.36**				
Control Delay, s/veh	**13.8**	**7.4**				
LOS	B	A				
95th % Queue (veh)	4	2				
95th % Queue (ft)	**103**	**41**				
Approach w/Bypass Delay, s/veh	***12.0***	***6.7***				
Approach w/Bypass LOS	*B*	*A*				

LGCI
Lahlaf Geotechnical Consulting, Inc.

January 14, 2026

Ms. Rani Philip
Dore and Whittier Architects, Inc.
260 Merrimac Street, Building 7
Newburyport, MA 01950
Phone: (978) 778-5353
Fax: (978) 499-2944
E-mail: rphilip@DoreandWhittier.com

Re: **DD Phase Geotechnical Report**
Proposed Wildwood Early Childhood Center
North Intermediate School – 320 Salem Street Site
Wilmington, MA
LGCI Project No. 2437
Report No. 2437-DD-1.0

Dear Ms. Philip:

Lahlaf Geotechnical Consulting, Inc. (LGCI) has completed a Design Development (DD) Phase geotechnical study for the proposed Wildwood Early Childhood Center in Wilmington, Massachusetts. We are submitting our DD Phase geotechnical report electronically. Please notify us if you need a hard copy.

The soil samples from our explorations are currently stored at LGCI for further analysis, if requested. Unless notified otherwise, we will dispose of the soil samples after three (3) months.

Thank you for choosing LGCI as your geotechnical engineer.

Very truly yours,

Lahlaf Geotechnical Consulting, Inc.



Abdelmadjid M. Lahlaf, Ph.D., P.E.
Principal Engineer

LGCI
Lahlaf Geotechnical Consulting, Inc.

DD PHASE GEOTECHNICAL REPORT
PROPOSED WILDWOOD EARLY CHILDHOOD CENTER
NORTH INTERMEDIATE SCHOOL – 320 SALEM STREET SITE
WILMINGTON, MASSACHUSETTS

LGCI Project No. 2437
Report No. 2437-DD-1.0
January 14, 2026

Prepared for:

Dore and Whittier Architects, Inc.
260 Merrimac Street, Building 7
Newburyport, MA 01950
Phone: (978) 778-5353
Fax: (978) 499-2944

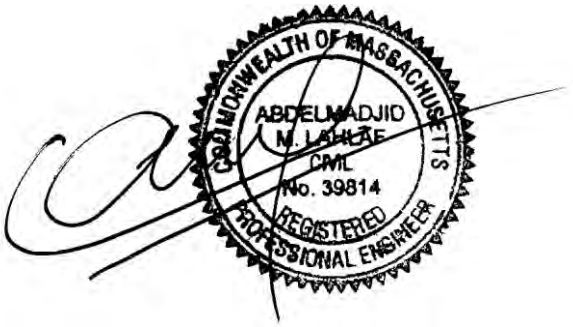
DD PHASE GEOTECHNICAL REPORT
PROPOSED WILDWOOD EARLY CHILDHOOD CENTER
NORTH INTERMEDIATE SCHOOL – 320 SALEM STREET SITE
WILMINGTON, MASSACHUSETTS
LGCI Project No. 2437
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Prepared for:

Dore and Whittier Architects, Inc.
260 Merrimac Street, Building 7
Newburyport, MA 01950
Phone: (978) 778-5353
Fax: (978) 499-2944

Prepared by:

LAHLAF GEOTECHNICAL CONSULTING, INC.
100 Chelmsford Road, Suite 2
Billerica, Massachusetts 01862
Phone: (978) 330-5912
Fax: (978) 330-5056



Abdelmadjid M. Lahlaf, Ph.D., P.E.
Principal Engineer

TABLE OF CONTENTS

1. PROJECT INFORMATION 2

1.1 Project Authorization 2
1.2 Purpose and Scope of Services 2
1.3 Site Description 3
1.4 Project Description 4
1.5 Elevation Datum 5

2. SITE AND SUBSURFACE CONDITIONS 6

2.1 Surficial Geology 6
2.2 LGCI's Explorations 6
2.2.1 General 6
2.2.2 LGCI's Soil Borings 7
2.2.3 LGCI's Test Pits 7
2.2.4 Exploration Logs and Locations 8
2.3 Subsurface Conditions 8
2.4 Groundwater 11
2.5 Laboratory Test Data 12
2.6 Double-ring Infiltrometer Tests 12

3. EVALUATION AND RECOMMENDATIONS 14

3.1.1 General 14
3.1.2 Topsoil, Asphalt, Fill, Buried Organic Soil, Buried Subsoil, and Swamp Deposits 14
3.1.3 Shallow Footings and Slabs-on-Grade 15
3.2 Foundation Recommendations 16
3.2.1 General 16
3.2.2 Option 1 - Remove and Replace Option 16
3.2.3 Option 2 - Ground Improvements by means of Aggregate Piers 16
3.2.4 Footing Design 17
3.2.5 Settlement 18
3.3 Concrete Slab Considerations 18
3.4 Under-slab Drainage 19
3.5 Seismic Design Criteria 19
3.6 Lateral Pressures for Wall Design 19
3.6.1 Lateral Earth Pressures 19
3.6.2 Seismic Pressures 20
3.6.3 Perimeter Drains 21
3.7 Pavement and Sidewalk Considerations 21
3.7.1 General 21
3.7.2 Pavement Sections 21
3.7.3 Sidewalks 22
3.8 Underground Utilities 22

4. CONSTRUCTION CONSIDERATIONS 24

4.1 Subgrade Preparation for the Remove and Replace Option 24
4.2 Subgrade Preparation for APs 25
4.3 Subgrade Preparation for Paved Areas, Sidewalks, and Exterior Pads 26
4.4 Subgrade Protection 26
4.5 Fill Materials 26
4.5.1 Structural Fill 27
4.5.2 Ordinary Fill 27
4.6 Reuse of Onsite Materials 27
4.7 Groundwater Control Procedures 28
4.8 Temporary Excavations 28

5. REPORT LIMITATIONS 30

6. REFERENCES..... 31

List of Tables and Figures

Table 1	Summary of LGCI's Borings
Table 2	Summary of LGCI's Test Pits
Figure 1	Site Location Map
Figure 2	Surficial Geologic Map
Figure 3A	Exploration Location Plan - North
Figure 3B	Exploration Location Plan - South

List of Appendices

Appendix A	LGCI's Boring Logs
Appendix B	LGCI's Test Pit Logs
Appendix C	Laboratory Test Results
Appendix D	Results of Double-ring Infiltrometer Tests

1. PROJECT INFORMATION

1.1 Project Authorization

This geotechnical report presents the results of the subsurface explorations and a geotechnical evaluation performed by Lahlaf Geotechnical Consulting, Inc. (LGCI) for the proposed Wildwood Early Childhood Center in Wilmington, Massachusetts. To date we have performed our services in two (2) phases as follows.

We performed our preliminary phase services in general accordance with our proposal No. 24084 dated August 9, 2024, and proposal No. 24107 dated October 15, 2024, and in accordance with the terms and conditions of the Standard Form of Agreement between Architect and Consultant (Agreement) dated October 17, 2024, and signed by Mr. Lee P. Dore of Dore and Whittier Architects, Inc. (Dore and Whittier).

We performed our DD phase services in general accordance with our proposal No. 25025 – Rev. 1 dated March 4, 2025, revised on September 22, 2025, and in general accordance with the terms and conditions located in the Amendment to the Consultant Services Agreement (Amendment) between LGCI and Dore and Whittier dated September 26, 2025. Mr. Donald M. Walter of Dore and Whittier authorized our DD phase services by signing the Agreement on October 21, 2025.

1.2 Purpose and Scope of Services

The purpose of our geotechnical services was to perform subsurface explorations at the site for the proposed Wildwood Early Childhood Center, and to provide foundation design and construction recommendations. LGCI performed the following services:

- Coordinated our exploration locations with Dore and Whittier and with school staff.

- Marked the exploration locations at the site and notified Dig Safe Systems Inc. (Dig Safe) and the Town of Wilmington for utility clearance.

- Engaged a drilling subcontractor for eight (8) days to advance thirty-four (34) soil borings at the site, including two (2) days to advance eight (8) soil borings as part of our preliminary phase services, and six (6) days to advance an additional twenty-six (26) soil borings as part of our DD phase services. Our drilling subcontractor installed four (4) groundwater observation wells in four (4) soil borings (one each) as part of our DD phase services.

- Coordinated with Dore and Whittier who arranged with the Town of Wilmington's Department of Public Works (DPW) to perform five (5) test pits as part of our preliminary phase services, as requested by the civil engineer. LGCI performed four (4) double-ring



infiltrometer tests in four (4) of the test pits (one each) as part of our preliminary phase services.

- Engaged an excavation subcontractor for four (4) days to advance an additional twelve (12) test pits at the site as part of our DD phase services, as requested by the civil engineer. LGCI performed an additional four (4) double-ring infiltrometer tests in four (4) of the test pits (one each) as part of our DD phase services.

- Provided an LGCI geotechnical field representative at the site to coordinate and observe the borings and test pits, perform the double-ring infiltrometer tests, collect and describe the soil samples, and prepare field logs.

- Submitted twelve (12) soil samples for laboratory tests, including two (2) soil samples from the borings, and four (4) samples from the test pits where double-ring infiltrometer tests were performed as part of our preliminary services; and an additional two (2) soil samples from the borings, and four (4) soil samples from the test pits where double-ring infiltrometer tests were performed as part of our DD phase services.

- Prepared this geotechnical report containing the results of our subsurface explorations and our recommendations for foundation design and construction.

Upon the completion of our preliminary phase services, LGCI submitted a preliminary geotechnical report dated December 10, 2024. This DD phase geotechnical report contains the results of our preliminary phase explorations and supersedes it.

Our scope includes preparing specifications, reviewing contract documents, and providing construction services. These services will be performed separately and are not included in this geotechnical report.

Recommendations for stormwater management, erosion control, pavement design, slope stability analyses, site specific seismic and liquefaction analyses, pile analysis and design, FEMA 100-year flood elevation, historic uses of site, contaminated soil and groundwater treatment and disposal requirements and techniques, and cost or quantity estimates are not included in our scope of work.

LGCI's scope of services does not include an environmental assessment for the presence or absence of wetlands or analytical testing for hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around this site, or mold in the soil or in any structure at the site. Any statements regarding odors, colors, or unusual or suspicious items or conditions are strictly for the information of the client.



1.3 Site Description

Our understanding of the site is based on our field observations, our discussions with Dore and Wittier, and on the following documents:

- Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier, dated April 24, 2025, and provided to LGCI by Dore and Whittier via e-mail on December 4, 2025.

- Drawings EX1.10 to EX1.12 titled: “Overall Plan – Existing, North Intermediate School, 320 Salem St., Wilmington, MA 01887,” (Existing School Architectural Drawings) prepared by Dore and Whittier, undated, and provided to LGCI by Dore and Whittier via e-mail on January 8, 2026.

The North Intermediate School site is located at 320 Salem Street in Wilmington, Massachusetts as shown in Figure 1. The site is bordered by private residential properties and Salem Street on the southern side, by Ballardvale Street on the eastern side, and by private properties on the western and northern sides. The site is occupied by the existing school building, a drop off loop, a paved parking lot, a playground, a basketball court and tennis courts, and athletic fields, including a baseball field and a soccer field. We understand that wetlands are located near the northwestern corner of the site.

Based on the Existing School Architectural Drawings and based on our conversations with Dore and Whittier, we understand that the existing school building consists of a one- to two-story building with a lower entrance located within the northern wing of the existing school. The existing lower entrance has a first finished floor elevation (FFE) at El. 94.92 feet, and the remainder of the existing school has an FFE ranging between El. 98.50 feet and El. 104.92 feet. Based on the drawings, the existing building does not have below-ground spaces. A crawl space is located within the southern wing of the existing school near the interface with the northern wing of the school. A boiler room is located near the southeastern corner of the existing building and several underground fuel tanks are located on the southern side of the existing building.

Based on the Existing Conditions Plan, the grades at the site generally range between El. 90 feet and El. 108 feet, generally rising in the north to south direction. The existing grades within the proposed athletic fields range between El. 91 feet and El. 96 feet. The existing grades around the perimeter of the existing school building range between El. 93 feet on the northern side of the building and El. 100 feet on the southern side of the building. The existing grades within the parking lot located to the east of the existing building range between El. 93 feet and El. 95 feet. The existing grades within the paved driveways and drop off loop on the southern side of the existing building range between El. 100 feet near the southern face of the existing building and El. 106 feet near Salem Street on the southern edge of the site.



1.4 Project Description

Our understanding of the proposed construction is based on our discussions with Dore and Whittier and on the following drawings:

- Schematic Design Drawing A1.30 titled: "Level 3 Overall Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Architectural Drawings), prepared by Dore and Whittier, dated April 24, 2025, and provided to LGCI by Dore and Whittier via e-mail on December 4, 2025.

- Schematic Design Drawing C3.00 titled: "Grading and Drainage Plan", Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Civil Drawings), prepared by Dore and Whittier, dated April 24, 2025, and provided to LGCI by Dore and Whittier via e-mail on December 4, 2025.

Based on the Architectural Drawings and the Civil Drawings, and our discussions with Dore and Whittier, we understand that the proposed school building will be three (3) stories high with a total gross floor area of approximately 165,000 square feet and will have an irregular footprint of about 80,500 square feet. The proposed building will be located within the existing athletic fields north of the existing school building. We understand that the proposed building will have a finished floor elevation (FFE) of El. 96.5 feet, requiring fills ranging between 2.5 and 4.5 feet to achieve the proposed FFE of the proposed building. We understand that the proposed building will not have a basement.

We understand that the proposed construction will include paved parking lots and driveways located to the south of the proposed building, in the area of the existing school building. A driveway is also proposed to loop around the perimeter of the proposed building and connect to the parking lots and driveways to the south. The parking lots and driveways will be accessible from Salem Street on the southern side of the site. We understand that the proposed grades within the proposed parking lots and driveways will range between El. 91 feet near the northwestern corner of the proposed building and El. 105 feet near Salem Street on the southern side of the site, requiring minor cuts and fills to achieve the proposed grades of the proposed parking lots and driveways.

We understand that the proposed construction will also include proposed athletic fields and basketball courts located to the south of the proposed building near the proposed parking lots and driveways. A proposed retaining wall approximately 4 feet high with a length of about 180 feet will separate the southern basketball court from the proposed parking lot located to its south. Grading information for the proposed retaining wall is not available at the time of this geotechnical report.

We understand that the existing building is slated for demolition to allow for the construction of the proposed parking lots, driveways, athletic fields, and retaining wall.



1.5 Elevation Datum

We understand that the elevations provided in the Existing Conditions Plan and Civil Drawings are referenced with respect to the North American Vertical Datum of 1988 (NAVD 1988).

2. SITE AND SUBSURFACE CONDITIONS

2.1 Surficial Geology

LGCI reviewed a surficial geologic map titled: "Surficial Materials Map of Wilmington Quadrangle, Massachusetts," prepared by Byron D. Stone, J.R. and DiGiacomo-Cohen, M.L., Scientific Investigation Map 3402, Quadrangle 113 – Wilmington, 2018.

The surficial geologic map of the site indicates that the natural soils in the general vicinity of the site consist of coarse deposits. The surficial geologic map also shows swamp deposits not far from the northeastern corner of the site.

Coarse Deposits – The coarse deposits consist of sand, sand and gravel, and gravel deposits as described below.

- Sand Deposits – The sand deposits are comprised mostly of fine to coarse sand. Coarser layers may contain up to 25 percent gravel. Finer layers may contain fine sand, silt, and clay.

- Sand and Gravel Deposits – The sand and gravel deposits occur as a mixture of gravel and sand within individual layers and as alternating layers of sand and gravel. The sand and gravel layers range between 25 to 50 percent gravel and 50 to 75 percent sand.

- Gravel Deposits – The gravel deposits are comprised of at least 50 percent gravel, cobbles, and boulders. Sand occurs within gravel beds and as separate layers within the gravel.

Swamp Deposits – The swamp deposits consist of organic muck and peat that contain minor amounts of sand, silt, and clay, are stratified and poorly sorted, and occur in swamps and freshwater marshes, in kettle depressions, or in poorly drained areas.

The Surficial Geologic Map is shown in Figure 2.

2.2 LGCI's Explorations

2.2.1 General

LGCI coordinated our exploration locations with Dore and Whittier and marked the exploration locations in the field. LGCI notified Dig Safe and the Town of Wilmington for utility clearance prior to starting our explorations at the site.

Unless notified otherwise, we will dispose of the soil samples and rock cores obtained during our explorations after three (3) months.

2.2.2 LGCI's Soil Borings

As part of our preliminary phase services, LGCI engaged Soil X, Corp. (Soil X) of Leominster, Massachusetts to advance eight (8) soil borings (B-1 to B-8) at the site on October 28 and 29, 2024. The borings were advanced with a Diedrich D-70 Turbo ATV Drill Rig using hollow stem auger boring techniques with 4-1/4-inch inner diameter augers. The borings extended to depths ranging between 10.2 and 20.2 feet beneath the ground surface. Upon completion, the boreholes were backfilled with drill cuttings.

As part of our DD phase services, LGCI engaged Soil X to advance an additional twenty-six (26) soil borings (B-101-OW to B-126) at the site between November 12 and 19, 2025. The borings were advanced with a Diedrich D-70 Turbo ATV Drill Rig using hollow stem auger boring techniques with 4-1/4-inch inner diameter augers or using drive and wash boring techniques with 3-inch and 4-inch casing. The borings extended to depths ranging between 8.5 and 22.0 feet beneath the ground surface. Upon completion, the boreholes were backfilled with drill cuttings. The ground surface was restored with cold patch asphalt in paved areas. Soil X installed four (4) groundwater observation wells in four (4) soil borings (one each).

Soil X performed Standard Penetration Tests (SPT) and obtained split spoon samples with an automatic hammer at typical depth intervals of 2 feet or 5 feet as noted on the boring logs in general accordance with ASTM D-1586. One (1) 5-foot rock core was obtained in boring B-B-104.

An LGCI geotechnical field representative observed and logged the borings in the field.

2.2.3 LGCI's Test Pits

As part of our preliminary services, Dore and Whittier coordinated with the Town of Wilmington DPW to perform five (5) test pits (TP-1, TP-2, TP-2A, TP-3, and TP-4) at the site on October 30 and 31, 2024. The purpose of the test pits was to perform double-ring infiltrometer tests as described in Section 2.6. The test pits were excavated with a Volvo EWR150E excavator with a smooth-edge bucket. The test pits extended to depths ranging between 8.0 and 11.3 feet beneath the ground surface. Upon completion, the excavations were backfilled with excavated material in 12- to 18-inch lifts and tamped with the excavator bucket.

As part of our DD phase services, LGCI engaged Saunders Construction of Reading, Massachusetts to perform an additional twelve (12) test pits (TP-101 to TP-112) at the site between December 23 and 24, 2025, and December 29 and 30, 2025. The purpose of the additional test pits was to perform double-ring infiltrometer tests as described in Section 2.6. The test pits were excavated with a Hitachi Zaxis 135 US excavator with a toothed bucket. The test pits extended to depths ranging between 5.0 and 12.0 feet beneath the ground surface. Upon completion, the excavations were backfilled with excavated material in 12- to



18-inch lifts and tamped with the excavator bucket. The ground surface in the athletic fields was restored by loaming, raking, and seeding the surface. The ground surface of the test pits located in paved areas was restored with compacted gravel and was paved by the Town of Wilmington personnel and equipment.

An LGCI geotechnical field representative observed and logged the test pits in the field.

2.2.4 Exploration Logs and Locations

The boring and test pit locations are shown in Figure 3A and Figure 3B. Appendices A and B contain LGCI's boring logs and test pits logs, respectively, and Tables 1 and 2 include summaries of LGCI's borings and test pits, respectively.

2.3 Subsurface Conditions

The subsurface description in this report is based on a limited number of explorations and is intended to highlight the major soil strata encountered during our explorations. The subsurface conditions are known only at the actual exploration locations. Variations may occur and should be expected between exploration locations. The exploration logs represent conditions that we observed at the time of our explorations and were edited, as appropriate, based on the results of the laboratory test data and inspection of the soil samples in the laboratory. The strata boundaries shown in our exploration logs are based on our interpretations and the actual transitions may be gradual. Graphic soil symbols are for illustration only.

The soil strata encountered in LGCI's borings and test pits were as follows, starting at the ground surface.

Topsoil – A layer of surficial organic topsoil was encountered at the ground surface in borings B-1 to B-7, B-101-OW to B-103, B-105, B-107 to B-126, and in all test pits except in test pits TP-104 to TP-106. The thickness of the topsoil ranged between 0.3 feet and 2.4 feet.

Asphalt – Asphalt was encountered at the ground surface in boring B-104 and in test pits TP-104 to TP-106. The thickness of the asphalt ranged between 0.3 feet and 0.7 feet.

Fill – A layer of fill was encountered at the ground surface in borings B-8 and B-106-OW, or beneath the topsoil or asphalt in all borings and test pits except in boring B-118. The fill generally extended to depths ranging between 0.7 and 6.0 feet beneath the ground surface, except near the northwestern portion of the site and near the northwestern corner of the proposed building, the fill extended up to 12.0 feet beneath the ground surface. The samples within this layer were mostly described as well graded sand, poorly graded sand, and silty sand. Two (2) samples were described as silt. The fines content in the fill ranged between 0 and 30 percent, and the gravel content ranged between 0 and 50 percent. When described as silt, the samples were described as slightly plastic. The fill contained traces of organic soil and roots and contained an



organic odor. One (1) sample contained traces of brick. The fill contained 5 to 10 percent cobbles up to 12 inches in size in test pit TP-1.

The SPT N-values in this layer ranged between 2 blows per foot (bpf) and 69 bpf, with most values ranging between 6 bpf and 27 bpf, indicating mostly loose to medium dense material. Please note that the high SPT N-values recorded in the fill may be due to obstructions such as cobbles and boulders present in the fill and may not represent the true density of the fill.

The excavation efforts within the fill layer ranged between easy, moderate, and difficult.

Buried Organic Soil – A layer of buried organic soil was encountered beneath the fill layer in borings B-2, B-5, B-7, B-106-OW, and in test pits TP-105 and TP-108 to TP-112. The buried organic soil extended to depths ranging between 2 feet and 8 feet beneath the ground surface. The samples in this layer were described as silty sand and poorly graded sand. The fines content in the buried organic soil ranged between 5 and 45 percent and the gravel content ranged between 0 and 20 percent. The buried organic soil contained traces of organic soil and roots.

The SPT N-values in this layer ranged between 8 bpf and 40 bpf, with most values ranging between 8 bpf and 16 bpf, indicating mostly loose to medium dense material. Please note that the high SPT N-values recorded in the buried organic soil may be due to obstructions such as cobbles and boulders present in the buried organic soil and may not represent the true density of the buried organic soil.

The excavation efforts within the buried organic soil layer ranged between easy and moderate.

Buried Subsoil – A layer of buried subsoil was encountered beneath the fill in boring B-8 and test pit TP-4 and extended to depths of 4.0 and 3.2 feet beneath the ground surface, respectively. In boring B-8, the samples were described as silty sand. In test pit TP-4, the sample was described as poorly graded sand. The fines content in this layer ranged between 10 and 35 percent, and the gravel content ranged between 0 and 15 percent. The samples contained traces of organic soil and roots.

The SPT N-values in this layer ranged between 11 bpf and 14 bpf, indicating a medium dense material.

The excavation effort within the buried subsoil layer was easy, consistent with loose material.

Swamp Deposits – A layer of swamp deposits was encountered beneath the layer of fill in test pit TP-1 and extended to a depth of 10.0 feet beneath the ground surface. The sample was described as silty sand. The fines content in this layer ranged between 20 and 25 percent and the gravel content ranged between 10 and 15 percent. The swamp deposit contained traces of organic soil, roots, and an organic odor. A trace of swamp deposits was also encountered in the silt layer in TP-110.



The excavation effort within the swamp deposit layer was difficult.

Silt – A layer of silt was encountered beneath the fill layer in borings B-1 and B-101-OW, and in test pit TP-110, and extended to depths of 9.0, 15.4, and 12.0 feet beneath the ground surface, respectively. A layer of silt was encountered within the sand and gravel layer in test pit TP-101 between depths of 7.0 to 8.0 feet beneath the ground surface. The silt extended to the termination depth in test pit TP-110. The samples were described as silt and were described as non-plastic to slightly plastic. The sand content in this layer ranged between 5 and 35 percent and the gravel content ranged between 0 and 5 percent. The silt sample contained traces of swamp deposits in TP-110.

The SPT N-values in this layer were 13 and 26 bpf, indicating medium stiff silt.

The excavation effort within the silt layer was described as easy.

Clay – A layer of clay was encountered beneath the layer of silt in boring B-1 between depths of 9.0 to 14.0 feet. The sample was described as lean clay and was slightly plastic. The sand content ranged between 15 and 20 percent.

The SPT N-value in this layer was 12 bpf, indicating stiff clay.

Sand – A layer of sand was encountered beneath the fill, buried organic soil, or swamp deposits in test pits TP-1, TP-106, TP-108, and TP-111 to TP-112 and extended to a depth of 11.0, 6.1, 7.5, 11.0, and 11.5 feet, respectively, beneath the ground surface. The sand extended to the termination depths in the test pits except in test pit TP-108 where the sand was overlying a layer of sand and gravel. The samples were described as poorly graded sand. The fines content ranged between 0 and 15 percent and the gravel content ranged between 0 and 5 percent.

The excavation effort within the sand layer ranged between easy and difficult, indicating loose to dense material.

Sand and Gravel – A layer of sand and gravel was encountered in all borings and test pits, except in test pits TP-1, TP-106, and TP-110 to TP-112, and extended to the termination depths of the borings and test pits, except for borings B-6, B-104, B-106-OW, B-110, and B-115 where the sand and gravel layer extended to the top of weathered rock or rock. The samples in this layer were mostly described as well graded sand, poorly graded sand, and silty sand. One (1) sample was described as silty gravel. The fines content in this layer ranged between 0 and 35 percent, and the gravel content ranged between 0 and 45 percent. When described as gravel, the sand content in this layer ranged between 20 and 25 percent. Seven (7) samples in this layer contained traces of weathered rock.

The SPT N-values in this layer ranged between 11 bpf and refusal, with most values ranging between 13 bpf and 44 bpf, indicating medium dense to dense material. Please note that the high



SPT N-values in the sand and gravel may be due to obstructions such as cobbles and boulders in the sand and gravel and may not represent the true density of the sand and gravel.

The excavation effort within the sand and gravel layer ranged between easy and difficult, indicating loose to dense material.

Weathered Rock – A layer of weathered rock was encountered beneath the sand and gravel in borings B-6, B-106-OW, B-110, and B-115 and extended to the termination depths of 19.7, 20.0, 21.0, and 20.7 feet beneath the ground surface, respectively. The samples within this layer were described as silty sand, poorly graded sand, and silty gravel. The fines content in this layer ranged between 5 and 20 percent, and the gravel content ranged between 15 and 40 percent. When described as gravel, the sand content in this layer ranged between 15 and 20 percent.
The SPT N-values in this layer were refusal, indicating very dense material.

Rock – Auger refusal was encountered on rock in boring B-104 at a depth of 8.0 feet beneath the ground surface.

To confirm and characterize the rock, rock was cored in boring B-104 between depths of 8.0 and 13.0 feet beneath the ground surface. The rock generally consisted of hard, slightly weathered, slightly fractured, medium-grained, gray, Granite. The rock core recovery was 100 percent, and the Rock Quality Designation (RQD) was 88.33 percent. The coring rate ranged between 3.0 and 4.0 minutes per foot.

2.4 Groundwater

Groundwater was encountered in all borings and test pits, except in borings B-3, B-104, B-117, B-119, B-124, and B-125, and in test pits TP-2, TP-3 to TP-4, TP-101 to TP-102, TP-104, and TP-106 at depths ranging between 5.0 and 18.0 feet beneath the ground surface, as shown in Tables 1 and 2, and in the boring and test pit logs.

The groundwater information reported herein is based on observations made during or shortly after the completion of drilling and excavation. The reported groundwater levels may not represent the actual groundwater conditions, as additional time may be required for the groundwater levels to stabilize. The groundwater information presented in this report only represents the conditions encountered at the time and location of the explorations. Seasonal fluctuation should be anticipated.

Two (2) groundwater level readings were obtained in groundwater observation wells B-101-OW, B-106-OW, and B-111-OW, and one (1) groundwater level reading was obtained in groundwater observation well B-108-OW between the dates of November 18 and 19, 2025. The groundwater level readings ranged between 6.5 and 8.5 feet beneath the ground surface, corresponding to elevations ranging between El. 85.0 feet and El. 86.5 feet, as shown in the table below.



	B-101-OW G.S. El. = 93.0 ft.	B-106-OW G.S. El. = 94.0 ft.	B-108-OW G.S. El. = 93.0 ft.	B-111-OW G.S. El. = 93.0 ft.
Date	**Depth / Elevation (ft.)**	**Depth / Elevation (ft.)**	**Depth / Elevation (ft.)**	**Depth / Elevation (ft.)**
11/18/2025	8.0 / 85.0	8.5 / 85.5	- / -	6.5 / 86.5
11/19/2025	8.0 / 85.0	8.2 / 85.8	8.0 / 85.0	6.5 / 86.5

2.5 Laboratory Test Data

LGCI submitted twelve (12) soil samples collected from the borings and test pits for grain-size analysis. The results of the grain-size analyses are provided in the test data sheets included in Appendix C and are summarized in the table below.

Grain-Size Analysis Test Results

Exploration No.	Sample No.	Stratum	Sample Depth (ft.)	Percent Gravel	Percent Sand	Percent Fines
B-1	S2	Fill	2.0 – 4.0	36.5	43.5	20.0
B-4	S2	Sand and Gravel	2.0 – 4.0	36.9	42.6	20.5
B-107	S2	Fill	2.0 – 4.0	48.0	48.2	3.8
B-110	S2	Fill	3.5 – 5.0	6.2	69.9	23.9
TP-1	Infiltrometer	Fill	5.0	14.1	58.9	27.0
TP-2	Infiltrometer	Fill	4.0	6.8	77.3	15.9
TP-3	Infiltrometer	Sand and Gravel	4.0	31.4	67.1	1.5
TP-4	Infiltrometer	Sand and Gravel	4.6	30.4	58.6	11.0
TP-101	Infiltrometer	Sand and Gravel	4.6	17.6	78.9	3.5
TP-105	Infiltrometer	Sand and Gravel	4.5	13.1	75.2	11.7
TP-108	Infiltrometer	Sand	6.0	0.2	86.4	13.4
TP-111	Infiltrometer	Sand and Gravel	3.3	20.1	61.5	18.4

2.6 Double-ring Infiltrometer Tests

As part of our preliminary phase services, LGCI provided a geotechnical field engineer to perform four (4) double-ring infiltrometer tests in test pits TP-1 to TP-4 (one in each).

As part of our DD phase services, LGCI provided a geotechnical field engineer to perform an additional four (4) double-ring infiltrometer tests in test pits TP-101, TP-105, TP-108, and TP-111 (one in each).

In each case, the excavation was first advanced to the test depth where the test pit bottom was leveled using the excavator bucket. After the infiltrometer rings were driven into the ground, the



test was conducted by filling the rings with water. The test pit was advanced deeper after the completion of the test.

The test results are included in Appendix D and are summarized below.

The results include plots of the hydraulic conductivity for flow within the inner and outer rings. The stabilized portion of the plot for the inner ring indicates the permeability value. The results indicate the following approximate permeability, K, value:

Double-ring Infiltrometer Test Results

Test Pit	Stratum	Test Depth (ft.)	Permeability, K (cm/sec)
TP-1	Fill	5.0	1.00×10^{-3}
TP-2	Fill	4.0	4.06×10^{-3}
TP-3	Sand and Gravel	4.0	6.73×10^{-2}
TP-4	Sand and Gravel	4.5	8.95×10^{-2}
TP-101	Sand and Gravel	4.6	1.67×10^{-2}
TP-105	Sand and Gravel	4.5	8.16×10^{-3}
TP-108	Sand	6.0	5.70×10^{-4}
TP-111	Sand and Gravel	3.3	3.67×10^{-5}

3. EVALUATION AND RECOMMENDATIONS

3.1 Foundation Recommendations

3.1.1 General

Based on the results of the borings and test pits, the subsurface conditions at the site are suitable to support the proposed building after the topsoil, asphalt, existing fill, buried organic soil, buried subsoil, and swamp deposits are removed or improved as described below. There are a few issues that we would like to highlight for consideration and discussion.

3.1.2 Topsoil, Asphalt, Fill, Buried Organic Soil, Buried Subsoil, and Swamp Deposits

- The asphalt and topsoil should be removed from within the entire construction area, including the proposed building footprint and the proposed paved areas.

- The existing fill was observed to be variable in composition and density. The existing fill contained traces of organic soil and roots. In addition, the existing fill overlaid buried organic soil, buried subsoil, and swamp deposits. Existing fill that was not placed with strict moisture, density, and gradation control presents risk of unpredictable settlement that may result in poor performance of floor slabs and foundations. Due to these risks, the existing fill, the buried organic soil, the buried subsoil, and the swamp deposits should be entirely removed from within the proposed building's footprint and should be replaced with Structural Fill. We anticipate that the removal will extend up to depths ranging between 2 and 7 feet beneath the existing ground surface, and up to a depth of 10 feet beneath the ground surface near the northwestern corner of the proposed building. The removal may extend to greater depths at locations not explored by LGCI. Laterally, the removal should extend beyond the proposed building's footprint a distance equal to the distance between the bottom of the proposed footings and the top of the native sand/sand and gravel, stiff silt and clay, or 5 feet, whichever is greater.

- At test pit TP-1, performed outside of the proposed building footprint, swamp deposits were observed beneath the existing fill and extended to a depth of 10 feet beneath the ground surface. A trace of swamp deposits was also encountered near the top of the silt layer in TP-110. If encountered within the proposed building footprint, the swamp deposits should be removed and replaced with Structural Fill.

- After the asphalt, topsoil, existing fill, buried organic soil, buried subsoil, and swamp deposits, if any, are removed from within the proposed building footprint and zone of influence of footings, as described above, the proposed building and other structures may be supported on shallow footings bearing in Structural Fill placed directly on top of the native sand/sand and gravel or stiff silt and clay.



- As an alternative to removing the existing fill, the buried organic soil, the buried subsoil, and the swamp deposits, if any within the proposed building footprint, we considered the option of improving the ground using aggregate piers (APs). This option is applicable where the depth to the bottom of the unsuitable layers is 6 feet or more below the bottom of the proposed slab. Accordingly, if this option is selected, consideration should be given to placing the fill required to raise the grades as Ordinary Fill and installing the APs from a working platform at the top of the placed fill.

- The selection of the APs versus the conventional remove and replace option should be based on a cost benefit analysis that takes into account the depth of removal and replacement with Structural Fill and groundwater control required for the remove and replace option.

- The subgrade of footings should be prepared in accordance with the recommendations in Section 4.1.

- The proposed slab may be designed as a slab-on-grade bearing on Structural Fill placed directly on top of the native sand/sand and gravel or stiff silt and clay.

- Within paved areas, the existing fill, the buried organic soil, the buried subsoil, and the swamp deposits, if any, should be removed to the top of the native sand/sand and gravel or stiff silt and clay or to a depth of 18 inches beneath the bottom of the proposed pavement, whichever occurs first. Where soft organic soil is exposed, the organic soil should be removed. The existing fill, buried organic soil, buried subsoil, and swamp deposits, if any, deeper than 18 inches beneath the bottom of the proposed pavement can remain in place provided that these materials are firm and unyielding following proofrolling as described in Section 4.1.

3.1.3 Shallow Footings and Slabs-on-Grade

Based on the results of the borings and test pits, the subsurface conditions are suitable to support shallow spread and continuous footings bearing on Structural Fill placed directly on top of the native sand/sand and gravel layer or the stiff silt and clay after entirely removing the asphalt, topsoil, the existing fill, the buried organic soil, the buried subsoil, and the swamp deposits, if any, or on ground improved with aggregate piers. The proposed slabs may be designed as slabs-on-grade placed on Structural Fill placed directly on the natural sand/sand and gravel layer or on Structural Fill placed on ground improved with APs. Our recommendations for the remove and replace options are presented in Section 3.2.2, and our recommendations for ground improvement using APs are presented in Section 3.2.3. Our recommendation for net allowable bearing capacity is presented in Section 3.2.4. Our recommendations for slabs-on-grade are presented in Section 3.3. Our recommendations for lateral pressures for retaining walls, if any, are presented in Section 3.6. Section 4.1 provides recommendations for preparation of subgrades.



3.2 Foundation Recommendations

3.2.1 General

We recommend supporting the proposed building on shallow footings placed on Structural Fill placed directly on the native sand/sand and gravel layer or the stiff silt and clay or on ground improved with APs. Shallow foundations and slabs-on-grade should be placed on a subgrade that is prepared in accordance with the recommendations in this report.

3.2.2 Option 1 - Remove and Replace Option

Under this option, we recommend entirely removing the topsoil, the existing fill, the buried organic soil, the buried subsoil, and the swamp deposits, if any, and restoring the grade with Structural Fill to the bottom of the footings and slabs.

3.2.3 Option 2 - Ground Improvements by means of Aggregate Piers

For this option, we recommend improving the existing fill, the buried organic soil, the buried subsoil, and the swamp deposits, if any using APs. The APs should be installed under the proposed footings and slabs.

APs are typically relatively short, stiff elements of compacted aggregate which improve the existing fill. These elements are typically installed by augering holes ranging from 20 inches to 36 inches in diameter. Aggregate (new crushed stone, recycled concrete, or other granular material) is then introduced into the hole and is generally compacted in one-foot lifts by repeated penetrations with the vibrator, which can be mounted to a crane or tracked carrier. The vibratory or ramming energy densifies the aggregate in the element; thus, producing high modulus aggregate piers. The installation of APs also densifies the surrounding soil depending on the type of soil. These high modulus elements reinforce the treatment zone and increase the composite friction angle and stiffness of the reinforced soil mass. The design of APs is typically verified with a modulus load test.

The work of the specialty contractor installing the APs should be coordinated with that of the site contractor who should perform pre-trenching for possible boulders, abandoned foundations, metal pipes, or other obstructions before the installation of the APs. Alternatively, the APs should be installed in pre-augered holes.

While the AP installation generates little spoils, where it is not desired to generate spoils during the improvement process, vertical displacement APs could be used. These are installed by driving a mandrel and hammer to the design depth, feeding the backfill material through the hollow mandrel, and compacting the backfill in 1-foot lifts using the hammer; thus, generating no spoils. Vertical displacement APs are typically installed with diameters ranging between 12 and 16 inches to typical depths ranging between 15 and 35 feet, and to depths of up to 60 feet where needed.



The length of the APs should be based on improvements that reduce the total and differential settlement to within the thresholds established for the project for both static and earthquake loads.

The ground improvement technologies are patented, and the design is performed by the specialty contractors. We recommend that the project plans and specifications for ground improvement be performance-based, allowing a variety of ground improvement contractors the opportunity to bid the work. Specifications should indicate the required allowable bearing pressure for footings and slabs, and the allowable total and differential settlements for the structure, including static and earthquake induced settlement. In addition, we recommend that the specifications require that the supporting design calculations be available for review by the design team. Ground improvement contractors should also be provided with grading plans and subsurface information associated with the proposed structure for use in preparing their bids.

For cost estimating purposes, we recommend assuming ground improvements extending to an average depth of 15 feet beneath the bottom of the proposed slab.

3.2.4 Footing Design

- Footings should be founded on Structural Fill placed directly on the native sand/sand and gravel or on the stiff silt and clay or on ground improved using APs. A representative of LGCI should observe the subgrade during construction to confirm that it is consistent with the materials encountered in our borings and test pits.

- For footing design, we recommend using a net allowable bearing pressure of 4 kips per square foot (ksf).

- The subgrade of footings should be prepared in accordance with the recommendations in Section 4.1.

- Foundations should be designed in accordance with The Commonwealth of Massachusetts State Building Code 780 CMR, Tenth Edition (MSBC 10th Edition).

- Exterior footings and footings in unheated areas should be placed at a minimum depth of 4.0 feet below the final exterior grade to provide adequate frost cover protection. Interior footings in heated areas may be designed and constructed at a minimum depth of 2 feet below finished floor grades.

- We recommend that wall footings have a minimum width of 2 feet, and that column footings have a minimum width of 3 feet. For foundations with a least lateral dimension smaller than 3 feet, the allowable bearing pressure should be reduced to 1/3 of the recommended allowable bearing pressure times the least dimension in feet.



Wall footings should be designed and constructed with continuous, longitudinal steel reinforcement for greater bending strength to span across small areas of loose or soft soils that may go undetected during construction.

3.2.5 Settlement

Using the allowable bearing pressure of 4 ksf and the minimum footing sizes recommended above, we estimate for foundations constructed in accordance with the recommendations contained in this report that the total post-construction settlement will be less than about 1 inch and that the differential settlement will be 3/4 inch or less over a distance of 25 feet. Total and differential settlements of these magnitudes are usually considered tolerable for the anticipated construction. However, the tolerance of the proposed structure to the predicted total and differential settlements should be assessed by the structural engineer.

3.3 Concrete Slab Considerations

- The proposed floor slabs can be constructed as slabs-on-grade bearing on a minimum of 12 inches of Structural Fill placed directly on top of the native sand/sand and gravel or stiff silt and clay or on ground improved with APs.

- To reduce the potential for dampness in the proposed floor slab, the project architect may consider placing a vapor barrier beneath the floor slab. The vapor barrier should be protected from puncture during construction of the slab.

- For the design of the floor slab bearing on the materials described above, we recommend using a modulus of subgrade reaction, k_{s1}, of 100 tons per cubic foot (tcf). Please note that the values of k_{s1} are for a 1 x 1 square foot area. These values should be adjusted for larger areas using the following expression:

$$Modulus of\ Subgrade\ \mathrm{Re}action(k_s) = k_{s1} * \left(\frac{B+1}{2B}\right)^2$$

where:

k_s = Coefficient of vertical subgrade reaction for loaded area,
k_{s1} = Coefficient of vertical subgrade reaction for 1 x 1 square foot area, and
B = Width of area loaded, in feet.

Please note that cracking of slabs-on-grade can occur as a result of heaving or compression of the underlying soil, but also as a result of concrete curing stresses. To reduce the potential for cracking, the precautions listed below should be closely followed for construction of all slabs-on-grade:

- Construction joints should be provided between the floor slab and the walls and columns in accordance with the American Concrete Institute (ACI) requirements, or other applicable code.



- Backfill in interior and exterior utility trenches should be properly compacted.

- In order for the movement of exterior slabs not to be transmitted to the building foundation or superstructure, exterior slabs such as approach slabs and sidewalks, should be isolated from the building superstructure.

3.4 Under-slab Drainage

Based on the groundwater levels observed in our borings and test pits, we believe that an under-slab drainage system is not required beneath the proposed slab.

Elevator pits or other structures that extend beneath the FFE should be designed to be waterproof.

3.5 Seismic Design Criteria

In accordance with Section 1604 of MSBC 10th Edition and International Building Code of 2021 (IBC 2021), and based on the SPT data from the borings, the seismic criteria for the site are as follows:

- Site Class (IBC 2021, Section 1613.2.2): D
- Spectral Response Acceleration at short period (Ss) (MSBC 10th Ed., Table 1604.11): 0.327g
- Spectral Response Acceleration at 1 sec. (S_1) (MSBC 10th Ed., Table 1604.11): 0.072g
- Site Coefficient Fa (IBC 2021, Table 1613.2.3(1)): 1.54
- Site Coefficient Fv (IBC 2021, Table 1613.2.3(2): 2.4
- Adjusted spectral response S_{MS} (IBC 2021, Equation 16-20): 0.503g
- Adjusted spectral response S_{M1} (IBC 2021, Equation 16-21): 0.173g

Based on the SPT data from the borings and in accordance with Section 1806.4 of MSBC 10th Edition, the site soils are not susceptible to liquefaction.

3.6 Lateral Pressures for Wall Design

3.6.1 Lateral Earth Pressures

The lateral earth pressures shown below should be used to design proposed retaining walls.

Coefficient of Active Earth Pressure, K_A:	0.31
Coefficient of At-Rest Earth Pressure, K_o:	0.47
Coefficient of Passive Earth Pressure, K_p:	3.3
Total Unit Weight γ:	125 pcf

Note: The values in the table are based on a friction angle for the backfill of 32 degrees and neglecting friction between the backfill and the wall. The design active and passive coefficients are based on horizontal surfaces (non-sloping backfill) on both the active and passive sides, and on a vertical wall face.

- Exterior walls of below-ground spaces and retaining walls braced at the top to restrain movement/rotation, should be designed using the "at-rest" pressure coefficient.

- We recommend placing free-draining material within the 3 feet immediately behind retaining walls. We recommend providing weep holes in site walls to promote drainage where possible; or a pipe should be placed at the base of the wall to collect the groundwater. Groundwater collected by the wall drains should be discharged in a lower area if gravity flow is possible.

- Passive earth pressures should only be used at the toe of the wall where special measures or provisions are taken to prevent disturbance or future removal of the soil on the passive side of the wall, or in areas where the wall design includes a key. In any case, the passive pressures should be neglected in the top 2 feet.

- Where a permanent vertical uniform load will be applied on the active side immediately adjacent to the wall, a horizontal surcharge load equal to half of the uniform vertical load should be applied over the height of the wall. At a minimum, a temporary construction surcharge of 100 psf should be applied uniformly over the height of the wall.

- We recommend using an ultimate friction factor of 0.5 between the native sand/sand and gravel or Structural Fill and the bottom of the wall. Below-grade walls should be designed for minimum factors of safety of 1.5 for sliding and 2.0 for overturning. We recommend a factor of safety of 1.5 for global stability of walls.

3.6.2 Seismic Pressures

In accordance with MSBC 10th Edition, Section 1610, a lateral earthquake force equal to $0.100*(S_s)*(F_a)*\gamma*H^2$ should be included in the design of the walls (for horizontal backfill), where S_s is the maximum considered earthquake spectral response acceleration (defined in Section 3.5), F_a is the site coefficient (defined in Section 3.5), γ is the total unit weight of the soil backfill, and H is the height of the wall.

The earthquake force should be distributed as an inverted triangle over the height of the wall. In accordance with MSBC 10th Edition, Section 1610.2, a load factor of 1.43 should be applied to the earthquake force for wall strength design.

Temporary surcharges should not be included when designing for earthquake loads. Surcharge loads applied for extended periods of time should be included in the total static



lateral soil pressure, and their earthquake lateral force should be computed and added to the force determined above.

3.6.3 Perimeter Drains

- Should the design change to include retaining walls, free-draining material should be placed within 3 feet of retaining walls and walls of below-grade spaces. To reduce the potential for dampness in below-ground spaces, if any, perimeter walls of the proposed below-ground spaces should be damp-proofed.

- We recommend that drains be provided behind the exterior of walls of below-ground spaces, if any, and behind site retaining walls, if any. The drains should consist of 6-inch perforated PVC pipes installed with the slots facing down. Perimeter drains should be installed at the bottom of the wall in 18 inches of crushed stone wrapped in a geotextile fabric for separation and filtration. Site retaining walls may be designed with weep holes discharging near the bottom of the face of the walls.

- Groundwater collected by the wall drains could be discharged in a lower area if gravity flow is possible. Alternatively, it should be discharged into the street drains. A permit would be required for discharge into street drains.

3.7 Pavement and Sidewalk Considerations

3.7.1 General

The subsurface conditions encountered at the site are generally suitable to support the proposed driveways, parking lots, and sidewalks after preparation of the subgrade as described in Section 4.1.

- We recommend entirely removing the topsoil and asphalt from within the footprint of the proposed driveways and parking lots.

- The existing fill, the buried organic soil, the buried subsoil, and the swamp deposits, if any, should be improved within the proposed paved areas and under sidewalks in accordance with the recommendations in Sections 3.1.2 and 4.1.

Cobbles and boulders should be removed to at least 18 inches below the bottom of the pavement and sidewalks.

3.7.2 Pavement Sections

A typical, minimum, standard-duty pavement section that could be used for parking areas is as follows:



1.5" Asphalt "Top Course"
2.0" Asphalt "Base Course"
8" Processed Gravel for Sub-Base (MassDOT M1.03.1)

A typical, minimum, heavy-duty pavement section that could be used for areas of heavy truck traffic is as follows:

2.0" Asphalt "Top Course"
2.5" Asphalt "Base Course"
12" Processed Gravel for Sub-Base (MassDOT M1.03.1)

The pavement sections shown above represent minimum thicknesses representative of typical local construction practices for similar use. Periodic maintenance should be anticipated.

Pavement material types and construction procedures should conform to specifications of the "Standard Specifications for Highways and Bridges," prepared by the Commonwealth of Massachusetts Department of Transportation dated 2025.

Areas to receive relatively highly concentrated, sustained loads such as dumpsters, loading areas, and storage bins are typically installed over a rigid pavement section to distribute concentrated loads and reduce the possibility of high stress concentrations on the subgrade. Typical rigid pavement sections consist of 6 inches of concrete placed over a minimum of 12 inches of subbase material.

3.7.3 Sidewalks

- Sidewalks should be placed on a minimum of 12 inches of Structural Fill with less than 5 percent fines.

- To reduce the potential for heave caused by surface water penetrating under the sidewalk, the joints between sidewalk concrete sections should be sealed with a waterproof compound. The sidewalks should be sloped away from the building or other vertical surfaces to promote flow of water. To the extent possible, roof leaders should not discharge onto sidewalk surfaces.

3.8 Underground Utilities

Boulders at the bottom of utility trenches should be removed to at least 12 inches below the pipe invert and the resulting excavation should be backfilled with suitable backfill. Utilities should be placed on suitable bedding material in accordance with the manufacturer's recommendations. "Cushion" material should be placed, by hand, above the utility pipe in maximum 6-inch lifts. The lift should be compacted by hand to avoid damage to the utility. Where the bedding/cushion material consists of crushed stone, it should be wrapped in a geotextile fabric.



Before placing the bedding material, the bottom of utility trenches should be compacted to a firm and unyielding condition. Where soft or pumping material is encountered, it should be removed and replaced with Ordinary Fill.

Compaction of fill in utility trenches should be in accordance with our recommendations in Section 4.3. To reduce the potential for damage to utilities, placement and compaction of fill immediately above the utilities should be performed in accordance with the manufacturer's recommendations.



4. CONSTRUCTION CONSIDERATIONS

4.1 Subgrade Preparation for the Remove and Replace Option

- Existing asphalt, topsoil, existing fill, buried organic soil, buried subsoil, swamp deposits, if any, organic materials, abandoned utilities, buried foundations, remnants of demolished buildings, and other below-ground structures should be entirely removed from within the footprint of the proposed building before the start of foundation work.

- Tree stumps, root balls, and roots larger than ½ inch in diameter should be removed and the cavities filled with suitable material and compacted per Section 4.4 of this report.

- Cobbles and boulders should be removed at least 6 inches from beneath footings and 18 inches beneath the bottom of slabs and paved areas. The resulting excavations should be backfilled with compacted Structural Fill under the building and with Ordinary Fill under the subbase of paved areas.

- Excavation in the silt and clay layers should be performed with a smooth bladed bucket, and the subgrade should be compacted with statically.

- The base of footing excavations should be compacted with a dynamic vibratory compactor weighing at least 200 pounds and imparting a minimum of 4 kips of force to the subgrade, before placing concrete.

- The subgrade of the proposed slab should be compacted with a dynamic vibratory compactor imparting a minimum of 10 kips of force to the subgrade before placing Structural Fill.

- To reduce the potential for disturbance of the footing subgrade, excavations should be extended at least 12 inches beneath the bottom of the proposed footings and should be restored with Structural Fill or crushed stone to serve as a working mat.

- To reduce the potential of increasing lateral pressures on any retaining walls, fill placed within 3 feet of the walls, if any, should be compacted using a small plate compactor imparting a maximum dynamic effort of 4 kips. The fill within 3 feet of the walls should be placed in maximum 8-inch loose lifts.

- Fill placed within the footprint of the proposed building should meet the gradation and compaction requirements of Structural Fill shown in Section 4.5.1.

- Fill placed under the subbase of paved areas should meet the gradation and compaction requirements of Ordinary Fill shown in Section 4.5.2.



- Fill placed in the top 12 inches beneath sidewalks should consist of Structural Fill with less than 5 percent fines.

- An LGCI geotechnical representative should observe the exposed subgrades prior to fill and concrete placement to verify that the exposed bearing materials are suitable for the design soil bearing pressure.

- If soft or loose pockets are encountered in the footing excavations, the soft or loose materials should be removed, and the bottom of the footing should be placed at a lower elevation on firm soil, or the resulting excavation should be backfilled with Structural Fill or crushed stone wrapped in a geotextile filter fabric.

- When crushed stone is required in the drawings or it is used for the convenience of the contractor, it should be wrapped in a geotextile fabric for separation. The geotextile fabric should not be used under retaining walls as it promotes a plane of sliding.

4.2 Subgrade Preparation for APs

- The surficial asphalt, topsoil, and other surficial deleterious matter should be entirely removed from within the proposed building footprint before the start of foundation work.

- The base of the footing excavations on ground improved with APs should be compacted with a dynamic vibratory compactor weighing at least 200 pounds and imparting a minimum of 4 kips of force to the subgrade before placing the required 6 inches of Structural Fill.

- The subgrade of the proposed slab should be compacted dynamic vibratory compactor imparting a minimum of 10 kips of force.

- APs that are damaged as a result of excavation for footings should be repaired in accordance with the requirements of the specialty contractor installing the APs.

- The APs should be exposed during the excavation for footings, and the subgrade should be compacted to a firm and unyielding conditions.

- An LGCI geotechnical representative should observe the installation of the aggregate piers and the modulus test. An LGCI geotechnical representative should also observe the exposed subgrades prior to fill and concrete placement to verify that the aggregate piers are properly exposed.



4.3 Subgrade Preparation for Paved Areas, Sidewalks, and Exterior Pads

- The asphalt and topsoil should be entirely removed within the proposed paved areas.

- The topsoil, existing fill, buried organic soil, buried subsoil, and the swamp deposits, if any, should be removed in the top 18 inches beneath the bottom of the proposed asphalt from within the paved areas and under sidewalks.

- After the asphalt and topsoil are entirely removed, and the existing fill, buried organic soil, buried subsoil, and the swamp deposits, if any, are removed in the top 18 inches beneath the bottom of the proposed asphalt from within the proposed paved areas and under sidewalks in accordance with the recommendations in Section 3.1.1, the exposed topsoil, existing fill, buried organic soil, the buried subsoil, and the swamp deposits, if any, should be improved by compacting the exposed surface with at least six (6) overlapping passes of a vibratory roller compactor imparting a dynamic effort of at least 40 kips. Where soft zones of soil are observed, the soft soil should be removed, and the grade should be restored using Ordinary Fill to the bottom of the proposed subbase layer.

- Fill placed under the subbase of paved areas and sidewalks should meet the gradation and compaction requirements of Ordinary Fill shown in Section 4.5.2.

- The subbase of paved areas should conform to the recommendations in Section 3.7.2 above.

- The subbase of sidewalks should consist of Structural Fill with less than 5 percent fines.

4.4 Subgrade Protection

The site soils are frost susceptible. If construction takes place during freezing weather, special measures should be taken to prevent the subgrade from freezing. Such measures should include the use of heat blankets or excavating the final 6 inches of soil just before pouring concrete. Footings should be backfilled as soon as possible after footing construction. Soil used as backfill should be free of frozen material, as should the ground on which it is placed. Earthwork operations should be suspended during freezing weather.

Materials with high fines content are typically difficult to handle when wet as they are sensitive to moisture content variations. Subgrade support capacities may deteriorate when such soils become wet and/or disturbed. The contractor should keep exposed subgrades properly drained and free of ponded water. Subgrades should be protected from machine and foot traffic to reduce disturbance.

4.5 Fill Materials

Fill placed within the footprint of the proposed building should meet the gradation and compaction requirements of Structural Fill. Fill placed outside the building footprint beneath



any pavement subbase should meet the gradation and compaction requirements of Ordinary Fill. Structural Fill and Ordinary Fill should consist of inert, hard, durable sand and gravel, free from organic matter, clay, surface coatings, and deleterious materials.

4.5.1 Structural Fill

The Structural Fill should have a plasticity index of less than 6 and should meet the gradation requirements shown below. Structural Fill should be compacted in maximum 9-inch loose lifts to at least 95 percent of the Modified Proctor maximum dry density (ASTM D1557), with moisture contents within ±2 percentage points of optimum moisture content.

Sieve Size	Percent Passing by Weight
3 inches	100
1 ½ inch	80 - 100
½ inch	50 – 100
No. 4	30 – 85
No. 20	15 – 60
No. 60	5 – 35
No. 200*	0 – 10

* 0 – 5 for the top 12 inches under sidewalks; exterior slabs, pads, stairways, and walkways

4.5.2 Ordinary Fill

Ordinary Fill should have a plasticity index of less than 6 and should meet the gradation requirements shown below. Ordinary Fill should be compacted in maximum 9-inch loose lifts to at least 95 percent of the Modified Proctor maximum dry density (ASTM D1557), with moisture contents within ±2 percentage points of optimum moisture content.

Sieve Size	Percent Passing by Weight
6 inches	100
1 inch	50 - 100
No. 4	20 – 100
No. 20	10 - 70
No. 60	5 – 45
No. 200	0 – 20

4.6 Reuse of Onsite Materials

Based on the laboratory tests, the granular portion of the existing fill free of organic soil may be used as Ordinary Fill. The onsite materials are not suitable for reuse as Structural Fill.



Soils with high fines content (higher than about 20 percent) are generally very sensitive to moisture content variations and are susceptible to frost. These soils are difficult to compact at moisture contents that are much higher or much lower than the optimum moisture content determined from the laboratory compaction test. Therefore, strict moisture control should be implemented during stockpiling, placement, and compaction of the existing fill.

All materials to be used as fill should first be tested for compliance with the applicable gradation specifications. During earthwork operations, the contractor should avoid mixing the reusable soils with fine-grained and/or organic soils.

4.7 Groundwater Control Procedures

Based on the groundwater levels encountered in our explorations, we anticipate the need for groundwater control procedures during the removal of the existing fill, the buried organic soil, the buried subsoil, and the swamp deposits, if any, and during footing and utility excavations. We anticipate that filtered sump pumps installed in pits located at least 3 feet below the bottom of the excavation may be sufficient to handle surface runoff that may enter the excavation. The contractor should be prepared to use multiple sump pumps as needed.

The contractor should be permitted to employ whatever commonly accepted means and practices are necessary, including well points, if necessary, to maintain the groundwater level below the excavation, and to maintain a dry excavation during wet weather. Placement of reinforcing steel or concrete in standing water should not be permitted.

Groundwater levels should be maintained at a minimum of 1-foot below the bottom of excavations during construction.

To reduce the potential for sinkholes developing over sump pump pits after the sump pumps are removed, the crushed stone placed in the sump pump pits should be wrapped in a geotextile fabric. Alternatively, the crushed stone should be entirely removed after the sump pumps are no longer in use and the sump pump pits should be restored with suitable backfill.

4.8 Temporary Excavations

All excavations to receive human traffic, including utility trenches, basement or footing excavations, or others (i.e. underground storage tanks, etc.), should be constructed in accordance with the OSHA guidelines.

The site soils should generally be considered Type “C” and should have a maximum allowable slope of 1.5 Horizontal to 1 Vertical (1.5H:1V) for excavations less than 20 feet deep. Deeper excavations, if needed, should have a shoring designed by a professional engineer.



The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of the excavation sides and bottom.

5. REPORT LIMITATIONS

Our analyses and recommendations are based on project information provided to us at the time of this report. If changes to the type, size, and location of the proposed structures or to the site grading are made, the recommendations contained in this report shall not be considered valid unless the changes are reviewed, and the conclusions and recommendations modified in writing by LGCI. LGCI cannot accept responsibility for designs based on our recommendations unless we are engaged to review the final plans and specifications to determine whether any changes in the project affect the validity of our recommendations, and whether our recommendations have been properly implemented in the design.

It is not part of our scope to perform a more detailed site history; therefore, we have not explored for or researched the locations of buried utilities or other structures in the area of the proposed construction. Our scope did not include environmental services or services related to moisture, mold, or other biological contaminants in or around the site.

The recommendations in this report are based in part on the data obtained from the subsurface explorations. The nature and extent of variations between explorations may not become evident until construction. If variations from anticipated conditions are encountered, it may be necessary to revise the recommendations in this report. We cannot accept responsibility for designs based on recommendations in this report unless we are engaged to 1) make site visits during construction to check that the subsurface conditions exposed during construction are in general conformance with our design assumptions and 2) ascertain that, in general, the work is being performed in compliance with the contract documents.

Our report has been prepared in accordance with generally accepted engineering practices and in accordance with the terms and conditions set forth in our agreement. No other warranty, expressed or implied, is made. This report has been prepared for the exclusive use of Dore and Whittier Architects, Inc. for the proposed Wildwood Early Childhood Center at the North Intermediate School located at 320 Salem Street Site in Wilmington, Massachusetts as conceived at this time.



6. REFERENCES

In addition to the references included in the text of the report, we used the following references:

American Society of Civil Engineers, "Minimum Design Loads and Associated Criteria for Buildings and Other Structures," ASCE/SEI 7-16, 2017.

The Commonwealth of Massachusetts (2024), "The Massachusetts State Building Code, Ninth (10th) Edition."

The Department of Labor, Occupational Safety and Health Administration (1989), "Occupational Safety and Health Standards - Excavations; Final Rule," 20 CFR Part 1926, Subpart P.

USGS Wilmington, MA topographic map from http://mapserver.mytopo.com.



Table 1 - Summary of LGCI's Borings
Proposed Wildwood Early Childcare Center
Wilmington, MA
LGCI Project No. 2437

Boring No.	Ground Surface Elevation (ft.)[1]	Groundwater[2] Depth / **El.** (ft.)	Bottom of Topsoil/ **Asphalt** Depth / **El.** (ft.)	Bottom of Fill Depth / **El.** (ft.)	Bottom of Buried Organic Soil / **Buried Subsoil** Depth / **El.** (ft.)	Bottom of Sand and Gravel Depth / **El.** (ft.)	Bottom of Weathered Rock Depth / **El.** (ft.)	Top of Rock Depth / **El.** (ft.)	Bottom of Boring Depth / **El.** (ft.)
2024 Borings									
B-1	93.0	9.0 / **84.0**	0.6 / **92.4**	6.0 [3]/ **87.0**	- / **-**	19.0 [4]/ **74.0**	- / **-**	- / **-**	19.0 / **74.0**
B-2	94.0	9.0 / **85.0**	0.8 / **93.2**	2.8 / **91.2**	4.0 / **90.0**	19.0 [4]/ **75.0**	- / **-**	- / **-**	19.0 / **75.0**
B-3	95.0	- / **-**	0.7 / **94.3**	2.0 / **93.0**	- / **-**	10.3 [4]/ **84.7**	- / **-**	- / **-**	10.3 / **84.7**
B-4	93.0	9.0 / **84.0**	0.6 / **92.4**	2.0 / **91.0**	- / **-**	11.0 [4]/ **82.0**	- / **-**	- / **-**	11.0 / **82.0**
B-5	94.0	9.0 / **85.0**	0.7 / **93.3**	4.0 / **90.0**	4.4 / **89.6**	10.5 [4]/ **83.5**	- / **-**	- / **-**	10.5 / **83.5**
B-6	94.0	14.0 / **80.0**	2.0 / **92.0**	6.0 / **88.0**	- / **-**	19.0 / **75.0**	19.7 [5]/ **74.3**	- / **-**	19.7 / **74.3**
B-7	92.0	10.0 / **82.0**	0.9 / **91.1**	6.0 / **86.0**	8.0 / **84.0**	20.3 [6]/ **71.7**	- / **-**	- / **-**	20.3 / **71.7**
B-8	94.0	9.0 / **85.0**	- / **-**	0.7 / **93.3**	**4.0** / **90.0**	19.8 [6]/ **74.2**	- / **-**	- / **-**	19.8 / **74.2**
2025 Borings									
B-101-OW	93.0	5.0 / **88.0**	2.0 / **91.0**	9.0 [3]/ **84.0**	- / **-**	22.0 [6]/ **71.0**	- / **-**	- / **-**	22.0 / **71.0**
B-102	94.0	10.0 / **84.0**	1.0 / **93.0**	5.0 / **89.0**	- / **-**	18.5 [4]/ **75.5**	- / **-**	- / **-**	18.5 / **75.5**
B-103	94.0	9.0 / **85.0**	0.7 / **93.3**	2.4 / **91.6**	- / **-**	14.0 [4]/ **80.0**	- / **-**	- / **-**	14.0 / **80.0**
B-104	94.0	- / **-**	**0.7** / **93.3**	2.0 / **92.0**	- / **-**	8.0 [4]/ **86.0**	- / **-**	8.0 [7]/ **86.0**	13.0 / **81.0**
B-105	93.0	10.0 / **83.0**	1.0 / **92.0**	6.5 / **86.5**	- / **-**	22.0 [6]/ **71.0**	- / **-**	- / **-**	22.0 / **71.0**
B-106-OW	94.0	10.0 / **84.0**	- / **-**	0.7 / **93.3**	2.0 / **92.0**	19.0 / **75.0**	20.1 [5]/ **73.9**	- / **-**	20.1 / **73.9**
B-107	93.0	15.0 / **78.0**	2.0 / **91.0**	5.0 / **88.0**	- / **-**	20.1 [6]/ **72.9**	- / **-**	- / **-**	20.1 / **72.9**
B-108-OW	93.0	7.0 / **86.0**	1.1 / **91.9**	2.0 / **91.0**	- / **-**	17.0 [4]/ **76.0**	- / **-**	- / **-**	17.0 / **76.0**
B-109	92.0	7.0 / **85.0**	0.6 / **91.4**	5.0 / **87.0**	- / **-**	22.0 [6]/ **70.0**	- / **-**	- / **-**	22.0 / **70.0**
B-110	93.0	10.0 / **83.0**	1.8 / **91.2**	5.0 / **88.0**	- / **-**	20.0 / **73.0**	21.0 [5]/ **72.0**	- / **-**	21.0 / **72.0**
B-111-OW	93.0	9.0 / **84.0**	0.7 / **92.3**	3.1 / **89.9**	- / **-**	21.0 [6]/ **72.0**	- / **-**	- / **-**	21.0 / **72.0**
B-112	93.0	10.0 / **83.0**	0.8 / **92.2**	3.5 / **89.5**	- / **-**	12.5 [4]/ **80.5**	- / **-**	- / **-**	12.5 / **80.5**
B-113	94.0	10.0 / **84.0**	2.4 / **91.6**	2.7 [3]/ **91.3**	- / **-**	14.0 [6]/ **80.0**	- / **-**	- / **-**	14.0 / **80.0**
B-114	94.0	9.5 / **84.5**	0.8 / **93.2**	2.0 / **92.0**	- / **-**	10.5 [4]/ **83.5**	- / **-**	- / **-**	10.5 / **83.5**
B-115	93.0	10.0 / **83.0**	2.0 / **91.0**	6.0 / **87.0**	- / **-**	20.0 / **73.0**	20.7 [5]/ **72.3**	- / **-**	20.7 / **72.3**
B-116	93.0	9.0 / **84.0**	0.5 / **92.5**	12.0 / **81.0**	- / **-**	14.0 [6]/ **79.0**	- / **-**	- / **-**	14.0 / **79.0**
B-117	94.0	- / **-**	1.0 / **93.0**	2.0 / **92.0**	- / **-**	8.5 [4]/ **85.5**	- / **-**	- / **-**	8.5 / **85.5**
B-118	94.0	9.0 / **85.0**	2.0 / **92.0**	- / **-**	- / **-**	11.3 [4]/ **82.7**	- / **-**	- / **-**	11.3 / **82.7**
B-119	94.0	- / **-**	2.0 / **92.0**	4.0 / **90.0**	- / **-**	12.0 [6]/ **82.0**	- / **-**	- / **-**	12.0 / **82.0**
B-120	92.0	7.0 / **85.0**	2.0 / **90.0**	5.0 / **87.0**	- / **-**	12.0 [6]/ **80.0**	- / **-**	- / **-**	12.0 / **80.0**
B-121	93.0	9.0 / **84.0**	1.5 / **91.5**	5.0 / **88.0**	- / **-**	12.9 [6,8]/ **80.1**	- / **-**	- / **-**	12.9 / **80.1**
B-122	94.0	10.0 / **84.0**	2.0 / **92.0**	6.0 / **88.0**	- / **-**	12.0 [6]/ **82.0**	- / **-**	- / **-**	12.0 / **82.0**
B-123	95.0	10.0 / **85.0**	2.0 / **93.0**	7.8 / **87.2**	- / **-**	11.0 [6]/ **84.0**	- / **-**	- / **-**	11.0 / **84.0**
B-124	102.0	- / **-**	0.8 / **101.2**	2.0 / **100.0**	- / **-**	9.0 [4]/ **93.0**	- / **-**	- / **-**	9.0 / **93.0**
B-125	106.0	- / **-**	0.6 / **105.4**	4.8 / **101.2**	- / **-**	17.0 [6]/ **89.0**	- / **-**	- / **-**	17.0 / **89.0**
B-126	93.0	10.0 / **83.0**	2.0 / **91.0**	10.0 / **83.0**	- / **-**	12.0 [6]/ **81.0**	- / **-**	- / **-**	12.0 / **81.0**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.
2. Groundwater was measured during drilling, at the end of drilling, after drilling, or based on sample moisture whichever is shallower.
3. A layer of silt was encountered beneath the fill in boring B-1 and B-101-OW, between depths of 6 to 9 feet and 9 to 15.4 feet, respectively. In boring B-1, a layer of clay was encountered beneath the silt between depths of 9 and 14 feet.
4. Boring terminated due to split spoon / auger refusal on possible boulder or rock in the sand and gravel layer.
5. Boring terminated in the weathered rock.
6. Boring terminated in the sand and gravel layer.
7. Boring terminated in rock.
8. Traces of swamp deposits observed in the sand and gravel layer in boring B-121.
9. "-" means the groundwater or layer was not encountered.

Table 2 - Summary of LGCI's Test Pits
Proposed Wildwood Early Childcare Center
Wilmington, MA
LGCI Project No. 2437

Test Pit No.	Ground Surface Elevation (ft.)[1]	Groundwater[2] Depth / **El.** (ft.)	Bottom of Topsoil/ **Asphalt** Depth / **El.** (ft.)	Bottom of Fill Depth / **El.** (ft.)	Bottom of Swamp Deposits / **Buried Subsoil** Depth / **El.** (ft.)	Bottom of Buried Organic Soil Depth / **El.** (ft.)	Bottom of Sand and Gravel Depth / **El.** (ft.)	Bottom of Silt Depth / **El.** (ft.)	Bottom of Sand Depth / **El.** (ft.)	Bottom of Test Pit Depth / **El.** (ft.)
2024 Explorations										
TP-1	92.0	9.5 / **82.5**	1.5 / **90.5**	7.0 / **85.0**	10.0 / **82.0**	- / **-**	- / **-**	- / **-**	11.0 [5]/ **81.0**	11.0 / **81.0**
TP-2	94.0	- / **-**	0.7 / **93.3**	5.5 / **88.5**	- / **-**	- / **-**	9.0 [3]/ **85.0**	- / **-**	- / **-**	9.0 / **85.0**
TP-2A	94.0	9.5 / **84.5**	1.5 / **92.5**	7.0 / **87.0**	- / **-**	- / **-**	11.3 [3]/ **82.7**	- / **-**	- / **-**	11.3 / **82.7**
TP-3	94.0	- / **-**	0.8 / **93.2**	2.3 / **91.7**	- / **-**	- / **-**	8.0 [3]/ **86.0**	- / **-**	- / **-**	8.0 / **86.0**
TP-4	95.0	- / **-**	1.0 / **94.0**	2.0 / **93.0**	**3.2** / **91.8**	**-** / **-**	9.0 [3]/ **86.0**	- / **-**	- / **-**	9.0 / **86.0**
2025 Explorations										
TP-101	100.0	- / **-**	0.4 / 99.6	4.6 / **95.4**	- / **-**	- / **-**	9.8 [3, 6]/ **90.2**	- / **-**	- / **-**	9.8 / **90.2**
TP-102	100.0	- / **-**	0.3 / **99.7**	4.8 / **95.2**	- / **-**	- / **-**	10.0 [3]/ **90.0**	- / **-**	- / **-**	10.0 / **90.0**
TP-103	94.0	9.9 / **84.1**	1.3 / **92.7**	6.3 / **87.7**	- / **-**	- / **-**	10.1 [3]/ **83.9**	- / **-**	- / **-**	10.1 / **83.9**
TP-104	94.0	- / **-**	**0.3 / 93.7**	1.3 / **92.7**	- / **-**	- / **-**	5.0 [3]/ **89.0**	- / **-**	- / **-**	5.0 / **89.0**
TP-105	94.0	10.8 / **83.2**	**0.4 / 93.6**	2.1 / **91.9**	- / **-**	2.4 / **91.6**	11.0 [3]/ **83.0**	- / **-**	- / **-**	11.0 / **83.0**
TP-106	94.0	- / **-**	**0.3 / 93.7**	3.2 [7]/ **90.8**	- / **-**	- / **-**	- / **-**	- / **-**	6.1 [5]/ **87.9**	6.1 / **87.9**
TP-107	94.0	10.0 / **84.0**	0.6 / **93.4**	4.6 / **89.4**	- / **-**	- / **-**	10.5 [3]/ **83.5**	- / **-**	- / **-**	10.5 / **83.5**
TP-108	94.0	8.9 / **85.1**	0.8 / **93.2**	1.6 / **92.4**	- / **-**	2.1 / **91.9**	9.5 [3]/ **84.5**	- / **-**	7.5 [9]/ **86.5**	9.5 / **84.5**
TP-109	93.0	9.3 / **83.7**	0.5 / **92.5**	2.5 / **90.5**	- / **-**	2.9 / **90.1**	9.6 [3]/ **83.4**	- / **-**	- / **-**	9.6 / **83.4**
TP-110	92.0	8.0 / **84.0**	1.1 / **90.9**	5.0 / **87.0**	- [8]/ **-**	7.3 / **84.7**	- / **-**	12.0 [4]/ **80.0**	- / **-**	12.0 / **80.0**
TP-111	92.0	9.0 / **83.0**	1.1 / **90.9**	5.0 / **87.0**	- / **-**	7.0 / **85.0**	- / **-**	- / **-**	11.0 [5]/ **81.0**	11.0 / **81.0**
TP-112	93.0	5.8 / **87.2**	0.8 / **92.2**	4.5 / **88.5**	- / **-**	5.1 / **87.9**	- / **-**	- / **-**	11.5 [5]/ **81.5**	11.5 / **81.5**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.
2. Groundwater was measured during drilling, at the end of drilling, after drilling, or based on sample moisture whichever is shallower.
3. Test Pit terminated in the sand and gravel layer.
4. Test Pit terminated in the silt layer.
5. Test Pit terminated in the sand layer.
6. A layer of silt was encountered in the sand and gravel of TP-101 from a depth of 7.0 feet to 8.0 feet beneath ground surface.
7. A layer of subbase was encountered in TP-105 from a depth of 0.3 feet to 0.8 feet beneath ground surface.
8. Trace of swamp deposits encountered in the silt layer in TP-110.
9. The sand layer was encountered on top of the sand and gravel layer.
10. "-" means the groundwater or layer was not encountered.



N

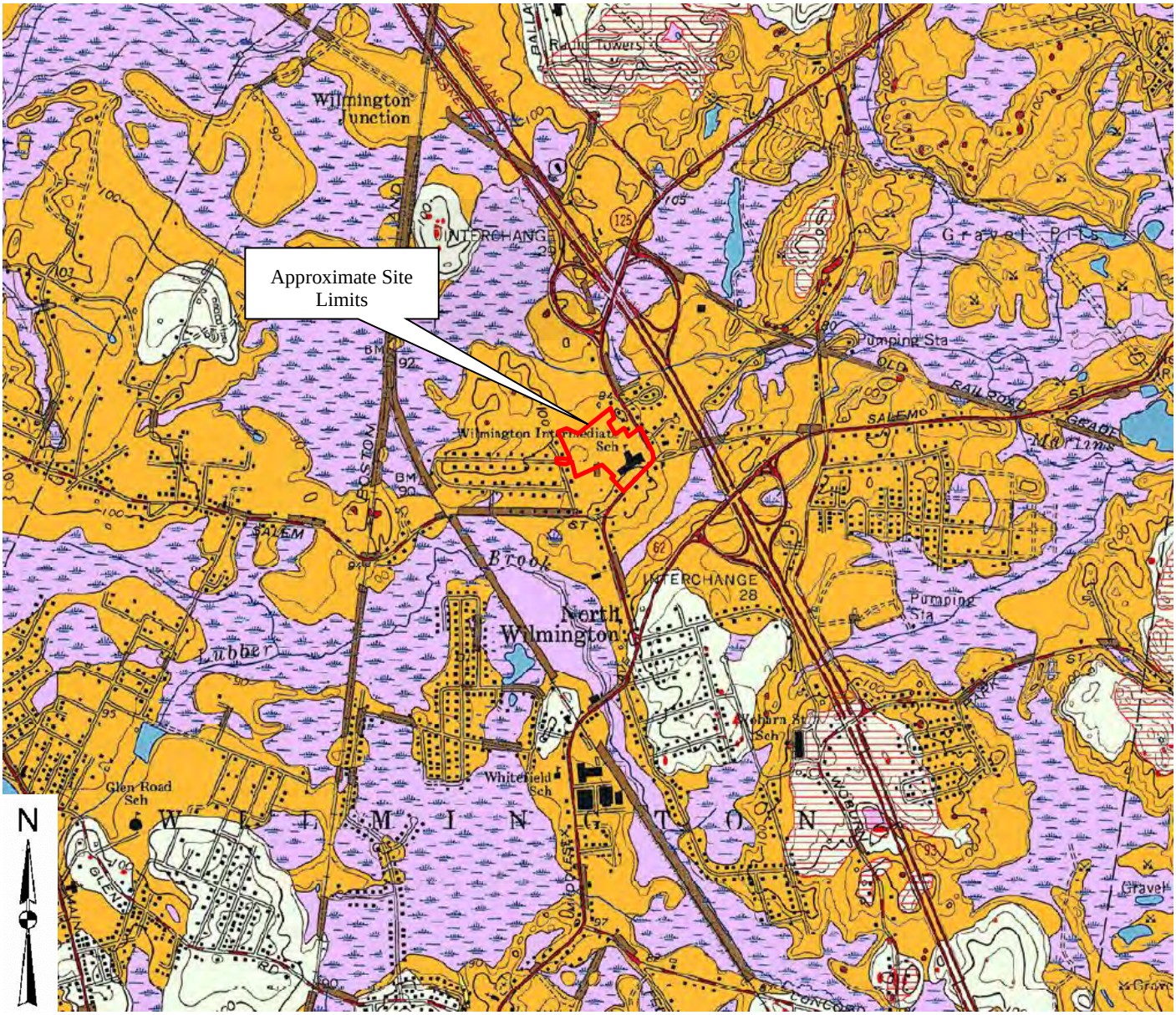
Contour Intervals: 10 feet

0.4 mi

Note: Figure based on USA Topo Maps of Wilmington, MA *ngmdb.usgs.gov/topoview/viewer*

Client:	Project:	
Dore and Whittier Architects, Inc.	Proposed Wildwood Early Childhood Center	Figure 1 – Site Location Map

	Project Location:	LGCI Project No.:	Date:
LGCI Lahlaf Geotechnical Consulting, Inc.	Wilmington, MA	2437	Jan. 2026



Swamp deposits—Organic muck and peat that contain minor amounts of sand, silt, and clay, are stratified and poorly sorted, and occur in swamps and freshwater marshes, in kettle depressions, or in poorly drained areas. Unit is shown only where deposits are estimated to be at least 3 ft thick; most deposits are less than 10 ft thick. Swamp deposits overlie glacial deposits or bedrock. They locally overlie glacial till even where they occur within thin glacial meltwater deposits

Coarse deposits consist of *gravel deposits*, *sand and gravel deposits*, and *sand deposits*, not differentiated in this report. *Gravel deposits* are composed of at least 50 percent gravel-size clasts; cobbles and boulders predominate; minor amounts of sand occur within gravel beds, and sand comprises a few separate layers. Gravel layers generally are poorly sorted, and bedding commonly is distorted and faulted due to postdepositional collapse related to melting of ice. *Sand and gravel deposits* occur as mixtures of gravel and sand within individual layers and as layers of sand alternating with layers of gravel. Sand and gravel layers generally range between 25 and 50 percent gravel particles and between 50 and 75 percent sand particles. Layers are well sorted to poorly sorted; bedding may be distorted and faulted due to postdepositional collapse. *Sand deposits* are composed mainly of very coarse to fine sand, commonly in well-sorted layers. Coarser layers may contain up to 25 percent gravel particles, generally granules and pebbles; finer layers may contain some very fine sand, silt, and clay

Note: Figure based on map titled: "Surficial Materials Map of Wilmington Quadrangle, Massachusetts," compiled by Byron D. Stone, Janet R. Stone, and Mary L. DiGiacomo-Cohen, Scientific Investigation Map 3402, Quadrangle 113 – Wilmington, 2018.

Client:	Project:	Figure 2 – Surficial Geologic Map	
Dore and Whittier Architects, Inc.	Proposed Wildwood Early Childhood Center		
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Wilmington, MA	LGCI Project No.: 2437	Date: Jan. 2026

Legend

Approximate locations of the borings advanced by Soil X, Corp. of Leominster, MA, from November 12 to 19, 2025, and observed by Lahlaf Geotechnical Consulting, Inc. (LGCI).

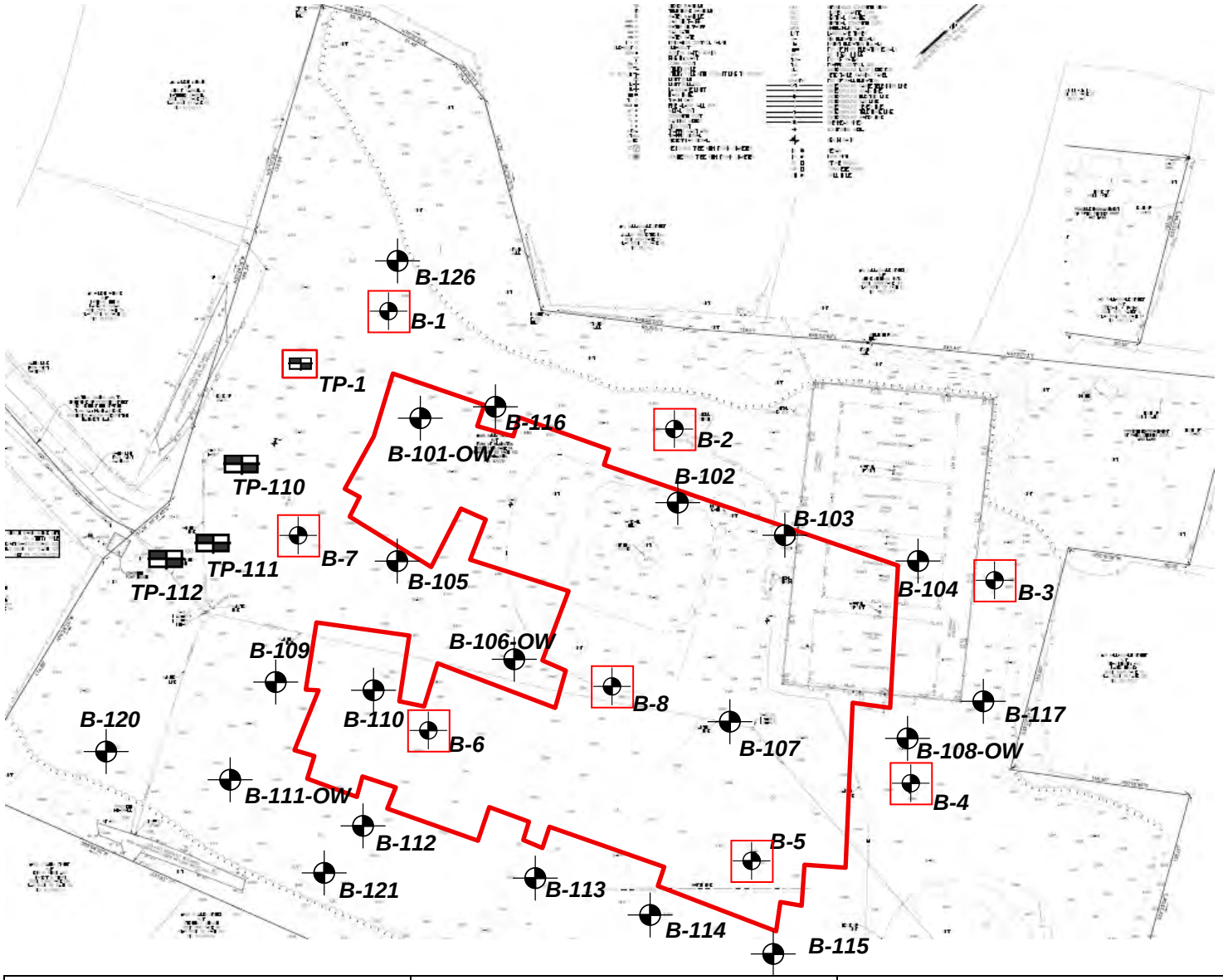
Approximate location of borings advanced by Soil Exploration, Corp. (Soil X) of Leominster, MA on October 28 and October 29, 2024, and observed by Lahlaf Geotechnical Consulting, Inc. (LGCI).

Approximate locations of the test pits advanced by Saunders Construction of Reading, MA, from December 29 to 30, 2025, and observed by Lahlaf Geotechnical Consulting, Inc. (LGCI).

Approximate location of test pits advanced by Soil Exploration, Corp. (Soil X) of Leominster, MA on October 30, 2024, and observed by Lahlaf Geotechnical Consulting, Inc. (LGCI).

Approximate Scale (ft.)

40 20 0 40 80 120



Note

Figure and proposed site limitations based on drawing C2.00 titled: "Layout and Materials Plan," prepared by Dore & Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore & Whittier Architects, Inc. via e-mail on December 4, 2025.

Client: Dore & Whittier Architects, Inc.	Project: Proposed Wildwood Early Childcare Center	Figure 3A – Exploration Location Plan - North	
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Wilmington, MA	LGCI Project No.: 2437	Date: Jan. 2026

Legend

Approximate locations of the borings advanced by Soil X, Corp. of Leominster, MA, from November 12 to 19, 2025, and observed by Lahlaf Geotechnical Consulting, Inc. (LGCI).

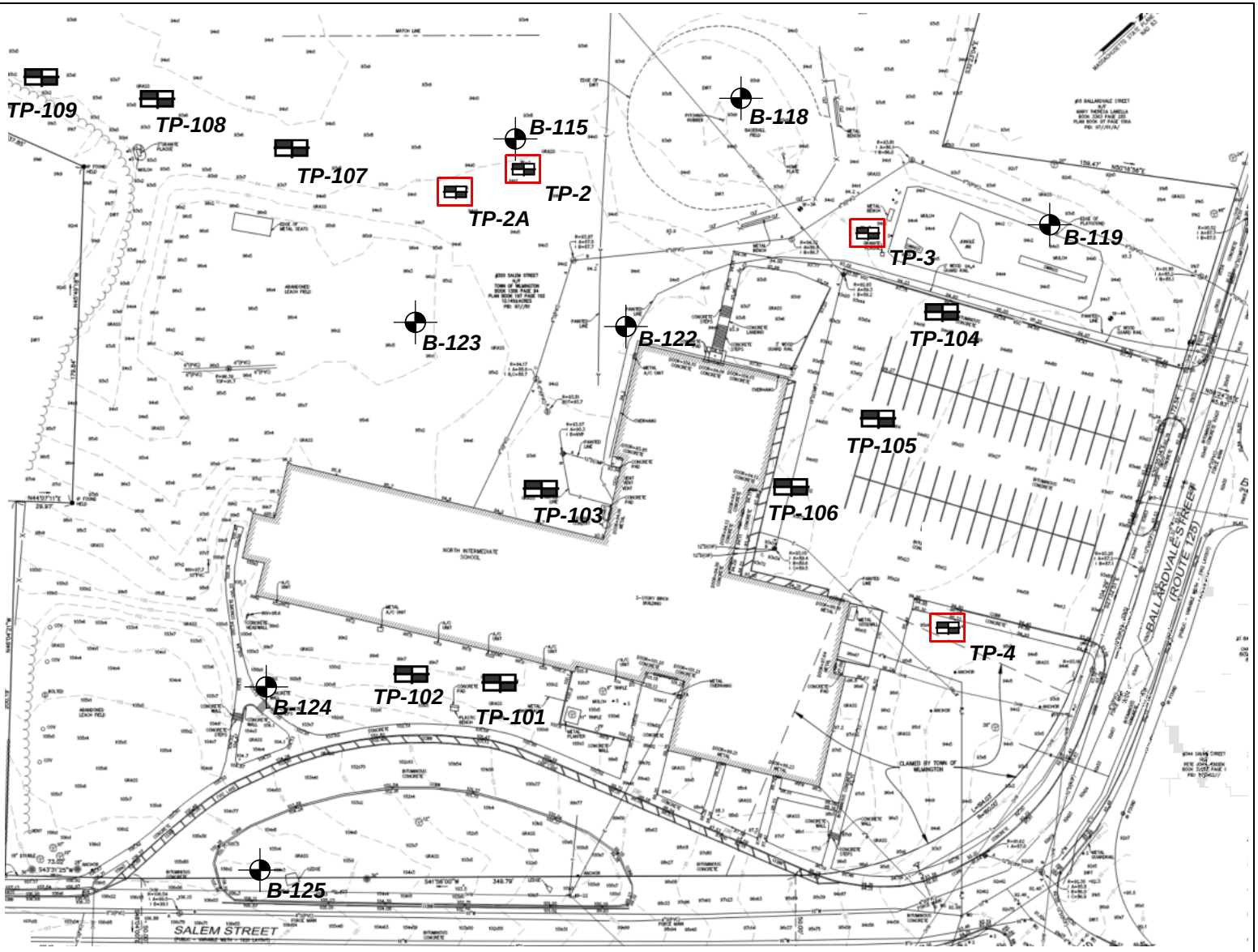
Approximate locations of the test pits advanced by Saunders Construction of Reading, MA, from December 23 to 30, 2025, and observed by Lahlaf Geotechnical Consulting, Inc. (LGCI).

Approximate location of test pits advanced by Soil Exploration, Corp. (Soil X) of Leominster, MA on October 30, 2024, and observed by Lahlaf Geotechnical Consulting, Inc. (LGCI).

MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NAD 83

Approximate Scale (ft.)

20 0 20 40 80



Note

Figure based on drawing EX-1.1 titled: "Existing Conditions Plan," prepared by Dore & Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore & Whittier Architects, Inc. via e-mail on December 4, 2025.

Client: Dore & Whittier Architects, Inc.	Project: Proposed Wildwood Early Childcare Center	Figure 3B – Exploration Location Plan - South	
LGCI Lahlaf Geotechnical Consulting, Inc.	Project Location: Wilmington, MA	LGCI Project No.: 2437	Date: Jan. 2026

Appendix A – LGCI's Boring Logs

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-1
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/28/24 **DATE COMPLETED:** 10/28/24
BORING LOCATION: Near NW corner of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 19 ft.
WEATHER: 60's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 9.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 9.5 ft. / El. 83.5 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.6 / 92.4	S1 - Top 8": Topsoil Bot. 9": Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, ~10% fines, 15-20% fine to coarse subangular gravel, brown, moist
	90.0	2	S1	3-8-15-38 (23)	24/17		Fill		S2 - Silty SAND with Gravel (SM), fine to coarse, ~20% fines, 35-40% fine to coarse subangular gravel, brown, moist (sieve performed)
5		4	S2	42-28-26-18 (54)	24/12				S3 - No recovery
		6	S3	21-13-10-4 (23)	24/0			6.0 / 87.0	
	85.0	8	S4	10-8-5-3 (13)	24/6		Silt	9.0 / 84.0	S4 - SILT (ML), slightly plastic, 5-10% fine sand, gray, moist
10		9	S5	4-7-5-6 (12)	24/24		Clay		S5 - Lean CLAY with Sand (CL), slightly plastic, 15-20% fine to coarse sand, gray, wet
	80.0	11						14.0 / 79.0	
15		14	S6	6-11-10-9 (21)	24/12		Sand and Gravel		S6 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, ~10% fines, 20-25% fine to coarse subangular gravel, brown, wet
	75.0	16							
		19	S7	100/0"	0/0	1		19.0	REMARK 1: Split spoon and auger refused on possible large boulder or rock at a depth of 19.0 feet. S7 - No recovery Bottom of borehole at 19.0 feet. Backfilled borehole with drill cuttings.
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

BORING LOG

B-2
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/28/24 **DATE COMPLETED:** 10/28/24
BORING LOCATION: Near NW side of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 19 ft.
WEATHER: 50's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 9.0 ft. / El. 85.0 ft. Based on sample moisture
AT END OF DRILLING: 13.0 ft. / El. 81.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** SG

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	4-7-9-10 (16)	24/15		Topsoil	0.8 / 93.2	S1 - Top 10": Topsoil Bot. 5": Silty SAND with Gravel (SM), fine to medium, trace coarse, 15-20% fines, 20-25% fine to coarse subangular gravel, trace of organic soil, trace of roots, brown, moist
		2	S2	9-8-8-4 (16)	24/13		Fill	2.8 / 91.2	S2 - Top 10": Silty SAND (SM), mostly fine to medium, ~15% fines, ~10% fine to coarse subangular gravel, trace of organic soil, light brown to brown, moist
	90.0	4	S3	5-5-10-10 (15)	24/19		Buried Organic Soil	4.0 / 90.0	Bot. 3": Silty SAND (SM), fine, 40-45% fines, trace of roots, black, moist (mostly organic soil) S3 - Poorly Graded SAND (SP), fine to medium, 0-5% fines, light brown, moist
5		6	S4	13-13-17-16 (30)	24/17				S4 - Similar to S3, gray to light brown
	85.0	9	S5	10-15-13-11 (28)	24/18				▽ S5 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 5-10% fines, 15-20% fine to coarse subangular gravel, brown to orange, wet
10		11					Sand and Gravel		
	80.0	14	S6	19-20-21-29 (41)	24/14				▼ S6 - Silty SAND (SM), fine to medium, ~25% fines, 5-10% fine subangular gravel, gray, wet
15		16							
	75.0	19	S7	100/0"	0/0	1		19.0	REMARK 1: Split spoon and auger refusal at depth of 19 feet on possible boulder or rock. S7 - No recovery Bottom of borehole at 19.0 feet. Backfilled borehole with drill cuttings.
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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BORING LOG

B-3
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/28/24 **DATE COMPLETED:** 10/28/24
BORING LOCATION: Near northern corner of prop. building
COORDINATES: NA
SURFACE El.: 95 ft. (see note 1) **TOTAL DEPTH:** 10.3 ft.
WEATHER: 50's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: Not Encountered
AT END OF DRILLING: Not Encountered
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** SG

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.7	S1 - Top 8": Topsoil
			S1	3-4-8-8 (12)	24/16		Fill	94.3	Bot. 8": Well Graded SAND (SW), fine to coarse, 0-5% fines, ~5% fine subangular gravel, light brown to orange, moist
		2	S2	12-41-26-18 (67)	24/10			2.0 93.0	S2 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 30-35% fine to coarse subangular gravel, light brown, moist
		4	S3	11-8-12-16 (20)	24/11				S3 - Silty SAND (SM), mostly fine to medium, 15-20% fines, ~10% fine to coarse subrounded gravel, light brown to orange, moist
5	90.0	6	S4	26-20-22-80/2" (42)	20/0	1	Sand and Gravel		REMARK 1: Auger chattering between depths of 6.0 to 9.0 feet. S4 - No recovery
		7.7							
		9	S5	36-70-20/3" (90/9")	15/4				S5 - Silty SAND with Gravel (SM), mostly fine to medium, ~15% fines, 30-35% fine to coarse subangular gravel, gray, moist
10	85.0	10.3				2		10.3	REMARK 2: Split spoon and auger refusal encountered at depth of 10.3 feet on possible boulder or rock. Bottom of borehole at 10.3 feet. Backfilled borehole with drill cuttings.
15	80.0								
20	75.0								
25	70.0								

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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BORING LOG

B-4
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/29/24 **DATE COMPLETED:** 10/29/24
BORING LOCATION: Near SE corner of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 11 ft.
WEATHER: 60's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 9.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: Not Encountered
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.6 / 92.4	S1 - Top 8": Topsoil
			S1	3-8-10-20 (18)	24/15		Fill		Bot. 7": Well Graded SAND (SW), fine to coarse, 0-5% fines, 0-5% fine subangular gravel, light brown to orange, moist
		2				1		2.0 / 91.0	REMARK 1: Drill chattering observed from depth of 2.0 feet on possible boulder.
	90.0		S2	29-26-33-70/3" (59)	21/11				S2 - Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, 35-40% fine to coarse subangular gravel, light brown, moist (sieve performed)
		3.8							
		4	S3	15-17-36-52 (53)	24/16				S3 - Similar to S2, 25-30% fine to coarse subangular gravel, light brown to gray
5		6	S4	16-29-29-39 (58)	24/11		Sand and Gravel		S4 - Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, 15-20% fine to coarse subangular gravel, brown, moist
	85.0	8							
		9	S5	18-82/4" (82/4")	10/5				S5 - Similar to S4, wet
10		9.8							
						2		11.0	REMARK 2: Split spoon and auger refusal encountered at depth of 11.0 feet on possible large boulder or rock.
									Bottom of borehole at 11.0 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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BORING LOG

B-5
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/29/24 **DATE COMPLETED:** 10/29/24
BORING LOCATION: Near SE corner of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 10.5 ft.
WEATHER: 60's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 9.0 ft. / El. 85.0 ft. Based on sample moisture
AT END OF DRILLING: 9.0 ft. / El. 85.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.7	S1 - Top 9": Topsoil
		2	S1	3-5-5-5 (10)	24/14		Fill	93.3	Bot. 5": Well Graded SAND with Silt (SW-SM), fine to coarse, 10-15% fines, trace of organic soil, trace of roots, dark brown, moist
			S2	4-4-3-3 (7)	24/3				S2 - Well Graded SAND with Silt (SW-SM), fine to coarse, 10-15% fines, 10-15% fine to coarse subangular gravel, trace of organic soil, trace of roots, dark brown, moist
	90.0	4				1		4.0	REMARK 1: Split spoon bouncing at depth of 4.0 feet. Borehole offset 4.0 feet east.
5			S3	10-16-22-20 (38)	24/18		Buried Organic Soil	90.0 4.4 89.6	S3 - Top 4": Silty SAND (SM), fine to medium, 25-30% fines, trace of organic soil, trace of roots, dark brown, moist
		6				2			Bot. 14": Silty SAND (SM), fine to coarse, 15-20% fines, 20-25% fine subangular gravel, brown, moist
			S4	21-33-24-17 (57)	24/12		Sand and Gravel		REMARK 2: Drill chattering observed on possible boulders from depth of 6.0 feet.
		8							S4 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 35-40% fine to coarse subangular gravel, brown to gray, moist
	85.0	9							
		9.2	S5	100/2"	2/1				S5 - Silty SAND (SM), fine to coarse, 15-20% fines, 20-25% fine subangular gravel, brown, wet (little to no recovery)
10									
		10.5	S6	100/0"	0/0	3		10.5	REMARK 3: Auger and split spoon refusal on possible boulder or rock at depth of 10.5 feet. Due to time constraint boring was terminated.
									S6 - No recovery
									Bottom of borehole at 10.5 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-6
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/29/24 **DATE COMPLETED:** 10/29/24
BORING LOCATION: Near southern face of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 19.8 ft.
WEATHER: 60's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 14.0 ft. / El. 80.0 ft. Based on sample moisture
AT END OF DRILLING: 18.0 ft. / El. 76.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0							
			S1	2-2-6-11 (8)	24/16		Topsoil	2.0	S1 - Topsoil
		2						92.0	
			S2	12-9-12-17 (21)	24/14		Fill		S2 - Well Graded SAND with Gravel (SW), fine to coarse, 0-5% fines, ~15% fine to coarse subangular gravel, orange to light brown, moist (possibly reworked)
	90.0	4							
5			S3	13-19-21-18 (40)	24/15				S3 - Similar to S2
		6						6.0	
			S4	15-13-22-23 (35)	24/17			88.0	S4 - Silty SAND (SM), fine to coarse, 15-20% fines, 0-5% fine to coarse subangular gravel, brown, moist
		8							
	85.0	9				1			REMARK 1: Drill chattering observed on possible boulders at depth of 9.0 feet.
10			S5	13-22-80/3" (102/9")	15/13				S5 - Similar to S4
		10.3					Sand and Gravel		
	80.0	14							▽
15			S6	14-17-26-35 (43)	24/21				S6 - Similar to S4, wet
		16							
									▼
	75.0	19						19.0	
			S7	22-80/3" (80/3")	9/4		Weathered Rock	75.0	S7 - Silty SAND with Gravel (SM), fine to coarse, 15-20% fines, 35-40% fine to coarse subangular gravel, trace of weathered rock, black to brown, wet
20		19.8						19.8	Bottom of borehole at 19.8 feet. Backfilled borehole with drill cuttings.
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

BORING LOG

B-7
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/29/24 **DATE COMPLETED:** 10/29/24
BORING LOCATION: Near SW corner of prop. building
COORDINATES: NA
SURFACE El.: 92 ft. (see note 1) **TOTAL DEPTH:** 20.3 ft.
WEATHER: 50's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 82.0 ft. Based on sample moisture
AT END OF DRILLING: 10.5 ft. / El. 81.5 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	2-3-7-9 (10)	24/14		Topsoil	0.9	S1 - Top 11": Topsoil
	90.0	2	S2	8-7-10-10 (17)	24/0		Fill	91.1	Bot. 3": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, trace coarse, ~10% fines, 20-25% fine to coarse subangular gravel, brown, moist S2 - No recovery
		4	S3	14-10-5-6 (15)	24/0				S3 - No recovery
5		6	S4	17-17-23-24 (40)	24/4		Buried Organic Soil	6.0 86.0	S4 - Silty SAND (SM), fine to medium, 25-30% fines, 0-5% fine to coarse subangular gravel, trace of organic soil, dark brown to black, moist
	85.0	8	S5	11-11-12-11 (23)	24/16			8.0 84.0	S5 - Poorly Graded SAND with Silt (SP-SM), fine to medium, ~10% fines, gray, moist
10		10	S6	7-10-15-15 (25)	24/15				S6 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 15-20% fine to coarse subangular gravel, brown, wet
	80.0	12					Sand and Gravel		
		14	S7	9-14-12-43/3" (26)	21/12				S7 - Similar to S6, 25-30% fine to coarse subangular gravel
15		15.8							
	75.0								
		19	S8	24-26-75/3" (101/9")	15/11				S8 - Silty SAND (SM), fine to coarse, 15-20% fines, ~5% fine subangular gravel, brown, wet
20		20.3						20.3	
									Bottom of borehole at 20.3 feet. Backfilled borehole with drill cuttings.
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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BORING LOG

B-8
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/28/24 **DATE COMPLETED:** 10/28/24
BORING LOCATION: Near center of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 19.8 ft.
WEATHER: 50's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 9.0 ft. / El. 85.0 ft. Based on sample moisture
AT END OF DRILLING: 16.5 ft. / El. 77.5 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: BH **CHECKED BY:** SG

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	4-5-6-11 (11)	24/20		Fill	0.7 93.3	S1 - Top 9": Silty SAND (SM), fine, 25-30% fines, trace of roots, brown, moist Mid. 10": Silty SAND (SM), fine to medium, 30-35% fines, 0-5% fine subangular gravel, trace of organic soil, trace of roots, black, moist
		2	S2	8-6-8-8 (14)	24/16		Subsoil		Bot. 1": Silty SAND with Gravel (SM), fine to coarse, ~15% fines, ~15% fine to coarse subangular gravel, trace of organic soil, orange, moist S2 - Top 10": Silty SAND (SM), fine, 25-30% fines, ~5% fine subangular gravel, brown, moist
	90.0	4						4.0 90.0	Bot. 6": Silty SAND (SM), fine to coarse, 15-20% fines, 5-10% fine to coarse subangular gravel, light brown, moist
5			S3	12-18-25-24 (43)	24/15				S3 - Well Graded SAND with Gravel (SW), fine to coarse, 0-5% fines, ~30% fine to coarse subangular gravel, light brown, moist
		6	S4	24-21-23-29 (44)	24/18				S4 - Similar to S3, ~15% fine subangular gravel
		8							
	85.0	9	S5	18-82	12/8				S5 - Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, 15-20% fine to coarse subangular gravel, gray to olive, wet
10		10					Sand and Gravel		
	80.0	14	S6	20-25-25-45 (50)	24/14				S6 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 25-30% fine to coarse subangular gravel, olive to gray, wet
15		16							
	75.0	19	S7	10-95/4" (95/4")	10/8				S7 - Similar to S6
20		19.8				1		19.8	REMARK 1: Split spoon refusal encountered at depth of 19.8 feet on possible boulder or rock. Bottom of borehole at 19.8 feet. Backfilled borehole with drill cuttings.
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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BORING LOG

B-101-OW
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/14/25 **DATE COMPLETED:** 11/14/25
BORING LOCATION: Near NW corner of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 22 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 5.0 ft. / El. 88.0 ft. Based on sample moisture
AT END OF DRILLING: 5.0 ft. / El. 88.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil		S1 - Topsoil
		2	S1	1-4-9-11 (13)	24/12			2.0	
	90.0		S2	15-10-10-9 (20)	24/7		Fill	91.0	S2 - Silty SAND with Gravel (SM), fine to medium, ~20% fines, 20-25% fine to coarse subrounded gravel, trace of organic odor, brown, moist
		4				1			REMARK 1: Possible perched water encountered at depth of 4.0 feet.
5		5	S3	3-5-5-7 (10)	24/8				S3 - Silty SAND (SM), fine, 25-30% fines, trace of organic soil, trace of roots, brown, wet
		7	S4	11-11-10-12 (21)	24/5				S4 - Silty SAND (SM), fine, 25-30% fines, trace of organic soil, trace of roots, brown, wet
	85.0	9	S5	11-12-14-14 (26)	24/17			9.0	
10		11					Silt	84.0	S5 - SILT (ML), non plastic, gray, wet
	80.0								
15		15	S6	8-9-11-11 (20)	24/18			15.4	S6 - Top 5": SILT (ML), non plastic, gray, wet
		17					Sand and Gravel	77.6	Bot. 13": Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 10-15% fine subrounded gravel, brown, wet
	75.0								
20		20	S7	6-12-15-16 (27)	24/15				S7 - Well Graded SAND with Silt, (SW-SM), fine to coarse, 10-15% fines, 10-15% fine to coarse subrounded gravel, brown, wet
		22						22.0	
	70.0								Bottom of borehole at 22.0 feet. Installed groundwater observation well.
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-102
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/14/25 **DATE COMPLETED:** 11/14/25
BORING LOCATION: Near northern edge of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 18.5 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 11.0 ft. / El. 83.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	1.0	S1 - Top 12": Topsoil
		2	S1	3-7-15-12 (22)	24/19		Fill	93.0	Bot. 7": Silty SAND (SM), fine, 15-20% fines, 5-10% fine to coarse subrounded gravel, trace of organic odor, brown, moist
			S2	11-10-10-9 (20)	24/6				S2 - Silty SAND (SM), fine, 15-20% fines, 5-10% fine to coarse subrounded gravel, trace of organic odor, brown, moist
	90.0	4							
5		5	S3	7-9-12-14 (21)	24/19			5.0	
		7					Sand and Gravel	89.0	S3 - Poorly Graded SAND with Silt and Gravel (SP-SM), 5-10% fines, 15-20% fine to coarse subrounded gravel, brown, moist
	85.0								
10		10	S4	5-11-14-18 (25)	24/17				S4 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 15-20% fine to coarse subrounded gravel, brown, wet
		12							
	80.0								
15		15	S5	13-13-11-22 (24)	24/13				S5 - Silty SAND with Gravel (SM), fine, 25-30% fines, 20-25% fine to coarse subangular gravel, gray, wet
		17							
	75.0					1		18.5	REMARK 1: Auger refusal encountered at depth of 18.5 feet on possible large boulder or rock. Boring terminated.
20									Bottom of borehole at 18.5 feet. Backfilled borehole with drill cuttings.
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-103
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/17/25 **DATE COMPLETED:** 11/17/25
BORING LOCATION: Near northern edge of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 14 ft.
WEATHER: 30's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 9.0 ft. / El. 85.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.7 93.3	S1 - Top 7": Topsoil
		2	S1	3-4-10-13 (14)	24/13		Fill	2.4 91.6	Bot. 6": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subrounded gravel, trace of roots, trace of organic odor, brown, moist
	90.0	4	S2	11-13-17-11 (30)	24/22				S2 - Top 5": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15%fines, 15-20% fine to coarse subrounded gravel, trace of roots, trace of organic odor, brown, moist
5		5							Bot. 17": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, 20-25% fine to coarse subrounded gravel, brown, moist
		7	S3	18-23-19-22 (42)	24/17		Sand and Gravel		S3 - Poorly Graded SAND with Gravel (SP), fine to medium, 0-5% fines, 25-30% fine to coarse subrounded gravel, orange-brown, moist
	85.0								
10		10	S4	27-35-42-41 (77)	24/14				S4 - Silty SAND with Gravel (SM), fine, 15-20% fines, 15-20% fine to coarse subrounded gravel, brown, wet
		12				1			REMARK 1: Drill rig chattering encountered between depths of 13.0 feet and 14.0 feet.
	80.0					2		14.0	REMARK 2: Auger refusal encountered at depth of 14.0 feet on possible large boulder or rock. Boring terminated.
15									Bottom of borehole at 14.0 feet. Backfilled borehole with drill cuttings.
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-104
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/17/25 **DATE COMPLETED:** 11/18/25
BORING LOCATION: Near NE corner of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 13 ft.
WEATHER: 30's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: Not Encountered
AT END OF DRILLING: Not Encountered
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: HSA (4-1/4" I.D.) then 3-inch casing
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Asphalt	0.7	S1 - Top 8": Asphalt
		2	S1	12-14-14-17 (28)	24/16		Fill	93.3 / 2.0	Bot. 8": Poorly Graded SAND with Silt and Gravel (SP-SM), fine, 10-15% fines, 15-20% fine to coarse subrounded gravel, brown, moist
	90.0	4	S2	20-22-27-23 (49)	24/20		Sand and Gravel	92.0	S2 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, 20-25% fine to coarse subrounded gravel, brown, moist
5		5	S3	21-27-20-15 (47)	24/17				S3 - Silty SAND with Gravel (SM), fine, 15-20% fines, 20-25% fine to coarse subrounded gravel, brown, moist
		7				1			REMARK 1: Drill rig chattering encountered between depths of 7.0 feet and 8.0 feet.
		8				2		8.0	REMARK 2: Auger refusal encountered at depth of 8.0 feet on rock. Cored rock between depths of 8.0 feet and 13.0 feet.
	85.0		C1		60/60		Rock	86.0	C1 - Min./ft.: 4.0, 4.0, 3.0, 3.5, 4.0 REC. = 60"/60" = 100.00% RQD = 53"/60" = 88.33% Hard, slightly weathered, slightly fractured, medium-grained, gray, GRANITE
10									
		13						13.0	
	80.0								Bottom of borehole at 13.0 feet. Backfilled borehole with drill cuttings.
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-105
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/13/25 **DATE COMPLETED:** 11/13/25
BORING LOCATION: Near western portion of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 22 ft.
WEATHER: 40's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 83.0 ft. Based on sample moisture
AT END OF DRILLING: 12.0 ft. / El. 81.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	1-3-13-27 (16)	24/14		Topsoil	1.0	S1 - Top 12": Topsoil
	90.0	2	S2	38-28-18-12 (46)	24/0		Fill	92.0	Bot. 2": Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 15-20% fine subrounded gravel, gray-brown, moist S2 - No recovery, auger cuttings indicate material similar to S1 Bot. 2"
5		4							
		5	S3	4-4-7-20 (11)	24/20				S3 - Top 18": Poorly Graded SAND with Silt (SP-SM), fine, 5-10% fines, gray-brown, moist
	85.0	7						6.5	
							Sand and Gravel	86.5	Bot. 2": Poorly Graded SAND with Gravel (SP), fine to medium, trace coarse, 0-5% fines, 15-20% fine subrounded gravel, orange-brown, moist
10		10	S4	8-8-7-9 (15)	24/16				S4 - Poorly Graded SAND (SP), fine to medium, trace coarse, 0-5% fines, 0-5% fine subrounded gravel, orange-brown, wet
	80.0	12							
15		15	S5	8-10-14-50 (24)	24/15				S5 - Top 3": Poorly Graded SAND (SP), fine to medium, trace coarse, 0-5% fines, 0-5% fine subrounded gravel, orange-brown, wet Bot. 12": Silty SAND (SM), fine to medium, 15-20% fines, 10-15% fine to coarse subangular gravel, gray, wet
	75.0	17							
20		20	S6	8-7-6-12 (13)	24/16				S6 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, 10-15% fine subangular gravel, gray, wet
		22						22.0	
	70.0								Bottom of borehole at 22.0 feet. Backfilled borehole with drill cuttings.
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

BORING LOG

B-106-OW
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/13/25 **DATE COMPLETED:** 11/13/25
BORING LOCATION: Near center of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 20.1 ft.
WEATHER: 50's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 11.0 ft. / El. 83.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Fill	0.7 / 93.3	S1 - Top 8": Silty SAND (SM), fine, 15-20% fines, brown, moist Bot. 8": Silty SAND (SM), fine to medium, 25-30% fines, trace of organic soil, black, moist (buried organic soil)
		2	S1	2-4-4-12 (8)	24/16		Buried Organic Soil	2.0 / 92.0	
	90.0	4	S2	15-14-21-25 (35)	24/16				S2 - Poorly Graded SAND with Gravel (SP), fine to medium, trace coarse, 0-5% fines, 15-20% fine subrounded gravel, orange-brown, moist
5		5	S3	17-22-22-60 (44)	24/17				S3 - Similar to S2
		7				1			REMARK 1: Auger grinding encountered between depths of 7.0 feet and 10.0 feet.
	85.0								
10		10	S4	20-23-23-28 (46)	24/18		Sand and Gravel		S4 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 15-20% fine to coarse subangular gravel, gray-brown, wet
		12							
	80.0								
15		15	S5	11-10-12-14 (22)	24/17	2			REMARK 2: Auger grinding encountered between depths of 15.0 feet and 20.0 feet. S5 - Silty SAND (SM), fine to medium, trace coarse, 15-20% fines, 5-10% fine to coarse subangular gravel, brown, wet
		17							
	75.0							19.0 / 75.0	
						3	Weathered Rock		REMARK 3: Strata change assumed based on drilling effort.
20		20	S6	60/0"	0/0			20.1	S6 - No recovery, piece of what appears to be weathered rock stuck in tip of split spoon Bottom of borehole at 20.1 feet. Installed groundwater observation well.
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-107
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/14/25 **DATE COMPLETED:** 11/14/25
BORING LOCATION: Near eastern portion of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 20.1 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 15.0 ft. / El. 78.0 ft. Based on sample moisture
AT END OF DRILLING: 16.0 ft. / El. 77.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0							
		2	S1	3-4-14-14 (18)	24/8		Topsoil	2.0	S1 - Topsoil
	90.0		S2	21-20-49-45 (69)	24/5		Fill	91.0	S2 - Well Graded SAND with Gravel (SW), fine to coarse, 0-5% fines, 45-50% fine to coarse subrounded gravel, brown, moist (sieve performed)
5		4						5.0	
		5	S3	12-40-54-32 (94)	24/16			88.0	S3 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 20-25% fine to coarse subangular gravel, brown, moist
	85.0	7							
10		10	S4	6-8-14-13 (22)	24/13				S4 - Silty SAND (SM), fine, 20-25% fines, 10-15% fine to coarse subrounded gravel, brown, moist
	80.0	12					Sand and Gravel		
15		15	S5	22-11-26-15 (37)	24/12				S5 - Silty SAND with Gravel (SM), fine, 30-35% fines, 20-25% fine to coarse subrounded gravel, orange, wet
	75.0	17				1			REMARK 1: Auger grinding encountered at depth of 19.0 feet.
20		20	S6	60/0"	0/0			20.1	S6 - No recovery
	70.0								Bottom of borehole at 20.1 feet. Backfilled borehole with drill cuttings.
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-108-OW
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/18/25 **DATE COMPLETED:** 11/18/25
BORING LOCATION: Near eastern edge of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 17 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 12.0 ft. / El. 81.0 ft. Based on sample moisture
AT END OF DRILLING: 7.0 ft. / El. 86.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	5-4-7-11 (11)	24/18		Topsoil	1.1	S1 - Top 13": Topsoil
							Fill	91.9	Bot. 5": Poorly Graded SAND with Silt (SP-SM), fine, 5-10% fines, trace of organic odor, brown, moist
		2	S2	18-20-20-19 (40)	24/19			2.0 / 91.0	S2 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, 15-20% fine to coarse subrounded gravel, brown, moist
	90.0	4							
5		5	S3	14-24-80/5" (104/11")	17/11				S3 - Similar to S2
		6.4				1			REMARK 1: Drill rig chattering encountered between depths of 6.4 feet and 8.0 feet.
	85.0						Sand and Gravel		
10		10	S4	10-18-26-21 (44)	24/18				S4 - Silty SAND with Gravel (SM), fine, 20-25% fines, 30-35% fine to coarse subangular gravel, trace of weathered rock, brown, moist to wet
		12				2			REMARK 2: Drill rig chattering encountered between depths of 12.0 feet and 14.0 feet.
	80.0								
15		15	S5	20-21-20-50/0" (41)	18/18				S5 - Silty SAND with Gravel (SM), fine, 20-25% fines, 40-45% fine to coarse subrounded gravel, trace of weathered rock, brown, wet
		16.5				3		17.0	REMARK 3: Auger refusal encountered at depth of 17.0 feet on possible large boulder or rock. Boring terminated.
	75.0								Bottom of borehole at 17.0 feet. Installed groundwater observation well.
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-109
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/13/25 **DATE COMPLETED:** 11/13/25
BORING LOCATION: Near SW portion of prop. building
COORDINATES: NA
SURFACE El.: 92 ft. (see note 1) **TOTAL DEPTH:** 22 ft.
WEATHER: 40's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 7.0 ft. / El. 85.0 ft. Based on sample moisture
AT END OF DRILLING: 9.0 ft. / El. 83.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
						1	Topsoil	0.6 / 91.4	REMARK 1: Hand dug to depth of 1.0 foot to check for irrigation line.
	90.0	1	S1	2-11-16-20 (27)	24/20	2	Fill		S1 - Top 3": Poorly Graded SAND (SP), fine to medium, 0-5% fines, brown, moist Mid. 3": Silty SAND (SM), fine to medium, 25-30% fines, trace of organic soil, black, moist
		3	S2	16-16-16-18 (32)	24/0				REMARK 2: 1.5-inch diameter PVC pipe encountered at depth of 1.5 feet. Offset boring 2.0 feet and continued drilling. Bot. 14": Silty SAND (SM), fine to medium, trace coarse, 15-20% fines, 5-10% fine to coarse subangular gravel, brown to gray-brown, moist
5		5	S3	5-9-10-10 (19)	24/18			5.0 / 87.0	S2 - No recovery S3 - Poorly Graded SAND (SP), fine to medium, 0-5% fines, brown, moist
	85.0	7	S4	9-10-12-12 (22)	24/18				S4 - Similar to S3, wet
10		10	S5	7-9-16-18 (25)	24/15				S5 - Top 12": Poorly Graded SAND (SP), fine to medium, 0-5% fines, brown, wet Bot. 3": Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 5-10% fines, 15-20% fine to coarse subrounded gravel, orange-brown, wet
	80.0	12					Sand and Gravel		
15		15	S6	6-5-6-5 (11)	24/16				S6 - Poorly Graded SAND (SP), fine to medium, 0-5% fines, orange-brown to brown, wet
	75.0	17				3			REMARK 3: Augered through cobbles between depths of 17.5 feet and 20.0 feet.
20		20	S7	14-16-24-50 (40)	24/16				S7 - Silty SAND (SM), fine to medium, 15-20% fines, 10-15% fine to coarse subrounded gravel, brown to gray, wet
	70.0	22						22.0	Bottom of borehole at 22.0 feet. Backfilled borehole with drill cuttings.
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-110
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/13/25 **DATE COMPLETED:** 11/13/25
BORING LOCATION: Near SW portion of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 21 ft.
WEATHER: 40's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 83.0 ft. Based on sample moisture
AT END OF DRILLING: 13.0 ft. / El. 80.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
						1	Topsoil	1.8	REMARK 1: Hand dug to depth of 2.0 feet to check for irrigation line.
	90.0	2	S1	14-17-30 (47)	18/17		Fill	91.2	S1 - Top 12": Poorly Graded SAND with Silt (SP-SM), fine to medium, trace coarse, 5-10% fines, 5-10% fine subrounded gravel, brown, moist
		3.5	S2	27-23-16 (39)	18/15				Bot. 5": Silty SAND (SM), fine to medium, 15-20% fines, 5-10% fine subrounded gravel, gray, moist S2 - Silty SAND (SM), mostly fine to medium, 20-25% fines, 5-10% fine subrounded gravel, brown, moist (sieve performed)
5		5	S3	15-22-22-24 (44)	24/20			5.0	
	85.0	7						88.0	S3 - Poorly Graded SAND with Gravel (SP), fine to medium, trace coarse, 0-5% fines, 15-20% fine to coarse subangular gravel, orange-brown, moist
10		10	S4	12-16-15-18 (31)	24/22				S4 - Top 12": Similar to S3, wet Bot. 10": Silty SAND (SM), fine to medium, 15-20% fines, 10-15% fine to coarse subrounded gravel, gray-brown, wet
	80.0	12				2	Sand and Gravel		REMARK 2: Augered through cobbles between depths of 13.0 feet and 20.0 feet.
15		15	S5	10-11-18-14 (29)	24/17				S5 - Top 6": Well Graded SAND with Gravel (SW), fine to coarse, 0-5% fines, 15-20% fine to coarse subrounded gravel, orange-brown, wet Bot. 11": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, trace coarse, 5-10% fines, 15-20% fine to coarse subrounded gravel, gray, wet
	75.0	17						20.0	
20		20	S6	28-100	12/12		Weathered Rock	73.0 21.0	S6 - Top 6": Similar to S5 Bot. 11", trace of weathered rock Bot. 6": Similar to S5 Bot. 11", trace of weathered rock
	70.0	21							Bottom of borehole at 21.0 feet. Backfilled borehole with drill cuttings.
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-111-OW
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/12/25 **DATE COMPLETED:** 11/12/25
BORING LOCATION: Near SW corner of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 21 ft.
WEATHER: 40's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 9.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 10.0 ft. / El. 83.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Drive and wash with 4-inch casing
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.7 / 92.3	S1 - Top 8": Topsoil
			S1	2-3-7-14 (10)	24/19		Fill		Bot. 11": Silty SAND (SM), fine to medium, 15-20% fines, 0-5% fine subrounded gravel, gray-brown, moist
		2							S2 - Top 10": Similar to S1 Bot. 11"
	90.0		S2	28-30-15-14 (45)	24/20			3.1 / 89.9	Mid. 3": Silty SAND (SM), fine to medium, 25-30% fines, trace of organic soil, black, moist
		4							Bot. 7": Poorly Graded SAND (SP), fine to medium, 0-5% fines, brown, moist
5			S3	11-13-15-15 (28)	24/14				S3 - Similar to S2 Bot. 7", stratification visible
		6							
	85.0								
		9							S4 - Poorly Graded SAND (SP), fine to medium, trace coarse, 0-5% fines, orange-brown, wet
10			S4	8-8-8-8 (16)	24/8				
		11					Sand and Gravel		
	80.0								
		14							S5 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 15-20% fine to coarse subangular gravel, brown, wet
15			S5	40-33-20-18 (53)	24/15				
		16							
	75.0								
		19							S6 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, trace coarse, 10-15% fines, 15-20% fine to coarse subangular gravel, gray, wet
20			S6	14-14-22-28 (36)	24/14				
		21						21.0	Bottom of borehole at 21.0 feet. Installed groundwater observation well.
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-112
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/12/25 **DATE COMPLETED:** 11/12/25
BORING LOCATION: Near southern edge of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 12.5 ft.
WEATHER: 40's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 83.0 ft. Based on sample moisture
AT END OF DRILLING: 10.0 ft. / El. 83.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	2-2-4-8 (6)	24/16		Topsoil	0.8 / 92.2	S1 - Top 9": Topsoil
	90.0	2	S2	14-15-15-16 (30)	24/20		Fill	3.5 / 89.5	Bot. 7": Silty SAND (SM), fine to medium, trace coarse, 15-20% fines, 0-5% fine subrounded gravel, gray-brown, moist S2 - Top 18": Similar to S1 Bot. 7" Bot. 2": Poorly Graded SAND (SP), fine to medium, trace coarse, 0-5% fines, 0-5% fine subrounded gravel, orange-brown, moist
5		4 5	S3	15-17-17-16 (34)	24/20				S3 - Similar to S2 Bot. 2"
	85.0	7					Sand and Gravel		
10		10	S4	17-25-47-70 (72)	24/16				S4 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 15-20% fine to coarse subrounded gravel, gray-brown, wet
	80.0	12				1 2		12.5	REMARK 1: Auger grinding encountered between depths of 12.0 feet and 12.5 feet. REMARK 2: Auger refusal encountered at depth of 12.5 feet on possible large boulder or rock. Boring terminated. Bottom of borehole at 12.5 feet. Backfilled borehole with drill cuttings.
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-113
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/12/25 **DATE COMPLETED:** 11/12/25
BORING LOCATION: Near southern edge of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 14 ft.
WEATHER: 30's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 13.0 ft. / El. 81.0 ft. Based on sample moisture
AT END OF DRILLING: 10.0 ft. / El. 84.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Material Description
		0	S1	1-2-3-4 (5)	24/17		Topsoil	S1 - Topsoil
		2	S2	5-7-16-16 (23)	24/14		Fill (2.4 / 91.6)	S2 - Top 5": Topsoil Mid. 4": Silty SAND (SM), fine, 15-20% fines, brown, moist
	90.0	4					(2.7 / 91.3)	Bot. 5": Poorly Graded SAND (SP), fine to medium, trace coarse, 0-5% fines, brown, moist
5		5	S3	15-15-16-20 (31)	24/18			S3 - Similar to S2 Bot. 5", 0-5% fine subrounded gravel, orange-brown
		7						
		8	C1		60/36	1	Sand and Gravel	REMARK 1: Auger refusal encountered at depth of 8.0 feet on possible large boulder or rock. Started to core rock at depth of 8.0 feet. C1 - Cored through one (1) boulder about 14 inches in diameter, cobbles up to 5 inches in diameter, and coarse gravel
	85.0							▼
10								
		13	S4	35-60	12/5	2		REMARK 2: Cored through boulders and cobbles between depths of 8.0 feet and 13.0 feet. Obtained sample S4 at depth of 13.0 feet.
	80.0	14					(14.0)	S4 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 15-20% fine to coarse subangular gravel, gray-brown, wet Bottom of borehole at 14.0 feet. Backfilled borehole with drill cuttings.
15								
	75.0							
20								
	70.0							
25								

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

BORING LOG

B-114
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/12/25 **DATE COMPLETED:** 11/12/25
BORING LOCATION: Near SE portion of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 10.5 ft.
WEATHER: 30's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 9.5 ft. / El. 84.5 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: AS **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.8 / 93.2	S1 - Top 10": Topsoil
			S1	1-4-9-12 (13)	24/18		Fill	2.0 / 92.0	Bot. 8": Silty SAND (SM), fine to medium, 15-20% fines, 5-10% fine subrounded gravel, brown, moist
		2	S2	12-12-13-14 (25)	24/18				S2 - Poorly Graded SAND (SP), fine to medium, trace coarse, 0-5% fines, 0-5% fine subrounded gravel, brown, moist
	90.0	4							
5		5	S3	13-16-20-20 (36)	24/16		Sand and Gravel		S3 - Well Graded SAND (SW), fine to coarse, 0-5% fines, 0-5% fine subrounded gravel, orange-brown, moist
		7				1			REMARK 1: Auger grinding encountered between depths of 7.5 feet and 10.0 feet.
	85.0								
10		10	S4	60/0"	0/0	2		10.5	S4 - No recovery, wet auger cuttings REMARK 2: Auger refusal encountered at depth of 10.5 feet on possible large boulder or rock. Boring terminated. Bottom of borehole at 10.5 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-115
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/19/25 **DATE COMPLETED:** 11/19/25
BORING LOCATION: NW of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 20.7 ft.
WEATHER: 30's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 83.0 ft. Based on sample moisture
AT END OF DRILLING: 10.0 ft. / El. 83.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0							
			S1	4-4-3-2 (7)	24/7		Topsoil	2.0	S1 - Topsoil
		2						91.0	
	90.0		S2	1-1-1-2 (2)	24/10		Fill		S2 - Silty SAND (SM), fine, 20-25% fines, 0-5% fine subrounded gravel, brown, moist
		4							
5			S3	2-1-2-7 (3)	24/16				S3 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, ~5% fine to coarse subrounded gravel, brown, moist
		6						6.0	
			S4	11-13-17-17 (30)	24/21			87.0	S4 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, 30-35% fine to coarse subrounded gravel, brown, moist
	85.0	8							
10		10							
		10.3	S5	90/4"	4/4	1			S5 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 25-30% fine to coarse subrounded gravel, brown, wet
			S6	16-31-33-66/3" (64)	21/15				REMARK 1: Split spoon refusal encountered at depth of 10.3 feet on possible boulder. Offset borehole 4.0 feet east and continued drilling.
		12.1							S6 - Silty SAND with Gravel (SM), fine, 15-20% fines, 20-25% fine to coarse subrounded gravel, brown, wet
	80.0						Sand and Gravel		
15		15							
			S7	9-25-38-36 (63)	24/16				S7 - Silty GRAVEL with Sand (GM), fine to coarse, subangular, 15-20% fines, 20-25% fine sand, trace of weathered rock, brown, wet
		17							
	75.0							20.0	
20		20							
			S8	85-35/2" (35/2")	8/8		Weathered Rock	73.0	S8 - Silty GRAVEl with Sand (GM), fine to coarse, subangular, 15-20% fines, 15-20% fine sand, trace of weathered rock, brown, wet
		20.7						20.7	Bottom of borehole at 20.7 feet. Backfilled borehole with drill cuttings.
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
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BORING LOG

B-116
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/14/25 **DATE COMPLETED:** 11/14/25
BORING LOCATION: North of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 14 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 83.0 ft. Based on sample moisture
AT END OF DRILLING: 9.0 ft. / El. 84.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	3-21-20-18 (41)	24/15		Topsoil	0.5 / 92.5	S1 - Top 6": Topsoil Bot. 9": Silty SAND (SM), fine, 15-20% fines, 10-15% fine to coarse subrounded gravel, trace of roots, trace of organic odor, dark brown, moist
	90.0	2	S2	11-13-17-17 (30)	24/24				S2 - Top 18": Similar to S1 Bot. 9" Bot. 6": Silty SAND with Gravel (SM), fine, 20-25% fines, 15-20% fine to coarse subrounded gravel, light brown, moist
5		4							
		5	S3	14-10-10-9 (20)	24/17		Fill		S3 - Top 10": Similar to S2 Bot. 6" Bot. 7": Similar to S2 Bot. 6", trace of organic soil
		7	S4	11-9-9-9 (18)	24/18				S4 - Top 9": Similar to S2 Bot. 6" Bot. 9": SILT (ML), slightly plastic, gray, moist
	85.0	9							
10		10	S5	4-1-5-8 (6)	24/18				S5 - Top 14": Similar to S4 Bot. 9", wet
		12	S6	9-8-8-10 (16)	24/22			12.0 / 81.0	Bot. 4": Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 10-15% fine to coarse subrounded gravel, trace of organic soil, brown, wet
	80.0	14					Sand and Gravel	14.0	S6 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 20-25% fine to coarse subrounded gravel, brown, wet
15									Bottom of borehole at 14.0 feet. Backfilled borehole with drill cuttings.
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-117
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/18/25 **DATE COMPLETED:** 11/18/25
BORING LOCATION: East of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 8.5 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: Not Encountered
AT END OF DRILLING: Not Encountered
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
0		0					Topsoil	1.0	S1 - Top 12": Topsoil
			S1	2-3-7-7 (10)	24/18		Fill	93.0	Bot. 6": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, ~15% fine to coarse subrounded gravel, brown, moist (appears reworked)
		2						2.0 92.0	
			S2	10-13-17-37 (30)	24/18				S2 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, 20-25% fine to coarse subrounded gravel, brown, moist
	90.0	4							
5		5				1	Sand and Gravel		REMARK 1: Drill rig chattering encountered between depths of 5.0 feet and 8.5 feet.
			S3	18-80-38-32 (118)	24/15				S3 - Silty SAND with Gravel (SM), fine, ~15% fines, 40-45% fine to coarse subrounded gravel, trace of weathered rock, brown, moist
		7							
	85.0					2		8.5	REMARK 2: Auger refusal encountered at depth of 8.5 feet on possible large boulder or rock. Boring terminated.
10									Bottom of borehole at 8.5 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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BORING LOG

B-118
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/18/25 **DATE COMPLETED:** 11/18/25
BORING LOCATION: SE of prop. building
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 11.3 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 9.0 ft. / El. 85.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0							
			S1	5-6-8-8 (14)	24/17		Topsoil	2.0	S1 - Topsoil
		2						92.0	
			S2	7-10-10-11 (20)	24/20				S2 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, ~15% fine to coarse subrounded gravel, brown, moist
	90.0	4							
5		5							
			S3	18-19-19-18 (38)	24/16		Sand and Gravel		S3 - Similar to S2
		7							
	85.0								
10		10							
			S4	10-27-73/4" (100/10")	16/14				S4 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 30-35% fine to coarse subrounded gravel, trace of weathered rock, brown, wet
		11.3				1		11.3	REMARK 1: Split spoon refusal encountered at depth of 11.3 feet on possible large boulder or rock. Boring terminated.
									Bottom of borehole at 11.3 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
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BORING LOG

B-119
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/19/25 **DATE COMPLETED:** 11/19/25
BORING LOCATION: Near northern portion of existing parking lot
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 12 ft.
WEATHER: 30's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: Not Encountered
AT END OF DRILLING: Not Encountered
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	5-9-7-4 (16)	24/9		Topsoil	2.0	S1 - Topsoil
		2	S2	6-5-5-6 (10)	24/14		Fill	92.0 4.0	S2 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, ~15% fine to coarse subrounded gravel, trace of organic soil, trace of organic odor, brown, moist
	90.0	4	S3	9-10-12-10 (22)	24/12		Sand and Gravel	90.0	S3 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 20-25% fine to coarse subrounded gravel, brown, moist
5		6	S4	11-12-12-12 (24)	24/22				S4 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine, 10-15% fines, 25-30% fine to coarse subrounded gravel, brown, moist
	85.0	8							
10		10	S5	15-19-16-26 (35)	24/17			12.0	S5 - Silty SAND (SM), fine, 20-25% fines, 10-15% fine to coarse subrounded gravel, brown, moist
		12							Bottom of borehole at 12.0 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
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BORING LOG

B-120
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/17/25 **DATE COMPLETED:** 11/17/25
BORING LOCATION: SW of prop. building
COORDINATES: NA
SURFACE El.: 92 ft. (see note 1) **TOTAL DEPTH:** 12 ft.
WEATHER: 30's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 7.0 ft. / El. 85.0 ft. Based on sample moisture
AT END OF DRILLING: 8.0 ft. / El. 84.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0							
	90.0	2	S1	2-3-5-6 (8)	24/9		Topsoil	2.0	S1 - Topsoil
		4	S2	8-11-11-13 (22)	24/0		Fill	90.0	S2 - No recovery, rock stuck in tip of split spoon
5		5						5.0	
	85.0	7	S3	8-13-21-22 (34)	24/20		Sand and Gravel	87.0	S3 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, brown, moist to wet
10		10	S4	7-6-5-6 (11)	24/22			12.0	S4 - Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 5-10% fines, ~15% fine to coarse subrounded gravel, orange-brown, wet
	80.0	12							Bottom of borehole at 12.0 feet. Backfilled borehole with drill cuttings.
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-121
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/17/25 **DATE COMPLETED:** 11/17/25
BORING LOCATION: South of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 12.9 ft.
WEATHER: 30's / Cloudy
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 83.0 ft. Based on sample moisture
AT END OF DRILLING: 9.0 ft. / El. 84.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	3-3-5-13 (8)	24/21		Topsoil	1.5	S1 - Top 18": Topsoil
	90.0	2	S2	18-17-12-10 (29)	24/15		Fill	91.5	Bot. 3": Silty SAND (SM), fine to medium, 15-20% fines, 5-10% fine to coarse subrounded gravel, trace of roots, brown, moist S2 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, ~15% fine to coarse subrounded gravel, brown, moist
5		4						5.0	
		5	S3	15-17-17-15 (34)	24/6		Sand and Gravel	88.0	S3 - Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, 0-5% coarse subrounded gravel, brown, moist
	85.0	7							
10		10	S4	10-15-14-10 (29)	24/5				S4 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subrounded gravel, trace of roots, trace of organic odor, dark brown, wet (swamp deposit)
		12	S5	11-89/5" (89/5")	11/11				S5 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 5-10% fines, 20-25% fine to coarse subrounded gravel, brown, wet
	80.0	12.9						12.9	Bottom of borehole at 12.9 feet. Backfilled borehole with drill cuttings.
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-122
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/18/25 **DATE COMPLETED:** 11/18/25
BORING LOCATION: Near northern edge of existing school
COORDINATES: NA
SURFACE El.: 94 ft. (see note 1) **TOTAL DEPTH:** 12 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 84.0 ft. Based on sample moisture
AT END OF DRILLING: 10.0 ft. / El. 84.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0							
			S1	3-6-10-12 (16)	24/16		Topsoil	2.0	S1 - Topsoil
		2						92.0	
			S2	11-16-11-19 (27)	24/16		Fill		S2 - Silty SAND (SM), fine, 20-25% fines, 10-15% fine to coarse subrounded gravel, brown, moist (appears reworked)
	90.0	4							
5			S3	19-22-15-14 (37)	24/0				S3 - No recovery, rock stuck in tip of split spoon
		6						6.0	
			S4	20-21-20-21 (41)	24/22			88.0	S4 - Poorly Graded SAND with Silt (SP-SM), fine, 10-15% fines, light brown, moist
		8					Sand and Gravel		
	85.0								
10		10							
			S5	8-7-6-7 (13)	24/16				S5 - Well Graded SAND with Silt (SW-SM), fine to coarse, 5-10% fines, 5-10% fine subrounded gravel, brown, wet
		12						12.0	
									Bottom of borehole at 12.0 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-123
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/18/25 **DATE COMPLETED:** 11/18/25
BORING LOCATION: Near NW portion of existing school
COORDINATES: NA
SURFACE El.: 95 ft. (see note 1) **TOTAL DEPTH:** 11 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 85.0 ft. Based on sample moisture
AT END OF DRILLING: 10.0 ft. / El. 85.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0	S1	4-5-6-7 (11)	24/9		Topsoil	2.0	S1 - Topsoil
		2	S2	15-17-13-8 (30)	24/8		Fill	93.0	S2 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subrounded gravel, brown, moist
		4							
5	90.0	5	S3	5-4-5-11 (9)	24/14				S3 - Silty SAND with Gravel (SM), fine to medium, 15-20% fines, 15-20% fine to coarse subrounded gravel, trace of organic soil, dark brown, moist
		7	S4	17-14-16-21 (30)	24/19			7.8	S4 - Top 9": Similar to S3
		9	S5	10-11-9-9 (20)	24/17		Sand and Gravel	87.2	Bot. 10": Poorly Graded SAND with Silt (SP-SM), fine, 10-15% fines, 0-5% fine subrounded gravel, brown, moist
10	85.0								S5 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subrounded gravel, brown, moist to wet
		11						11.0	Bottom of borehole at 11.0 feet. Backfilled borehole with drill cuttings.
15	80.0								
20	75.0								
25	70.0								

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

BORING LOG

B-124
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/19/25 **DATE COMPLETED:** 11/19/25
BORING LOCATION: South of existing school
COORDINATES: NA
SURFACE El.: 102 ft. (see note 1) **TOTAL DEPTH:** 9 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: Not Encountered
AT END OF DRILLING: Not Encountered
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0					Topsoil	0.8	S1 - Top 9": Topsoil
			S1	3-5-9-17 (14)	24/18		Fill	101.2	Bot. 9": Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 5-10% fine to coarse subrounded gravel, trace of organic odor, trace of roots, orange-brown, moist
	100.0	2						2.0	
			S2	16-11-16-12 (27)	24/12			100.0	S2 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 25-30% fine to coarse subrounded gravel, brown, moist
		4							
5		5					Sand and Gravel		S3 - Poorly Graded SAND with Silt (SP-SM), fine, 10-15% fines, ~5% fine subrounded gravel, brown, moist
			S3	7-8-11-19 (19)	24/18				
	95.0	7							
						1			REMARK 1: Drill rig chattering encountered between depths of 8.0 feet and 9.0 feet.
						2		9.0	REMARK 2: Auger refusal encountered at depth of 9.0 feet on possible large boulder or rock. Boring terminated.
10									Bottom of borehole at 9.0 feet. Backfilled borehole with drill cuttings.
	90.0								
15									
	85.0								
20									
	80.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

BORING LOG

B-125
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/19/25 **DATE COMPLETED:** 11/19/25
BORING LOCATION: South of existing school
COORDINATES: NA
SURFACE El.: 106 ft. (see note 1) **TOTAL DEPTH:** 17 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: Not Encountered
AT END OF DRILLING: Not Encountered
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
	105.0	0					Topsoil	0.6	S1 - Top 7": Topsoil
		2	S1	3-4-7-6 (11)	24/12		Fill	105.4	Bot. 5": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subrounded gravel, trace of roots, trace of organic odor, brown, moist
		4	S2	6-4-5-4 (9)	24/15				S2 - Similar to S1 Bot. 5"
5		6	S3	7-10-11-15 (21)	24/21			4.8	S3 - Top 9": Silty SAND (SM), fine, 20-25% fines, brown, moist
	100.0						Sand and Gravel	101.2	Bot. 12": Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 20-25% fine to coarse subrounded gravel, brown, moist
10		10	S4	26-40-23-39 (63)	24/20				S4 - Silty SAND with Gravel (SM), fine, 15-20% fines, 35-40% fine to coarse subrounded gravel, trace of weathered rock, brown, moist
	95.0	12							
15		15	S5	23-12-13-11 (25)	24/11				S5 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 40-45% fine to coarse subangular gravel, trace of weathered rock, brown, moist
	90.0	17						17.0	Bottom of borehole at 17.0 feet. Backfilled borehole with drill cuttings.
20									
	85.0								
25									

GENERAL NOTES:

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

BORING LOG

B-126
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 11/14/25 **DATE COMPLETED:** 11/14/25
BORING LOCATION: NW of prop. building
COORDINATES: NA
SURFACE El.: 93 ft. (see note 1) **TOTAL DEPTH:** 12 ft.
WEATHER: 40's / Sunny
GROUNDWATER LEVELS:
DURING DRILLING: 10.0 ft. / El. 83.0 ft. Based on sample moisture
AT END OF DRILLING: 10.0 ft. / El. 83.0 ft.
OTHER: -

DRILLING SUBCONTRACTOR: Soil X, Corp.
DRILLING FOREMAN: Edwin Fajardo
DRILLING METHOD: Hollow Stem Auger (4-1/4" I.D.)
DRILL RIG TYPE/MODEL: Diedrich D-70 Turbo ATV
HAMMER TYPE: Automatic
HAMMER WEIGHT: 140 lb. **HAMMER DROP:** 30 in.
SPLIT SPOON DIA.: 1.375 in. I.D., 2 in. O.D.
CORE BARREL SIZE: NA
LOGGED BY: JA **CHECKED BY:** NP

Depth (ft.)	El. (ft.)	Sample Interval (ft.)	Sample Number	Blow Counts (N Value)	Pen./Rec. (in.)	Remark	Strata	Depth El.(ft.)	Material Description
		0							
			S1	3-2-4-6 (6)	24/9		Topsoil	2.0	S1 - Topsoil
		2						91.0	
	90.0		S2	7-6-7-11 (13)	24/9		Fill		S2 - Silty SAND (SM), fine to medium, 15-20% fines, 5-10% fine subrounded gravel, trace of roots, brown, moist
		4							
5									
		5	S3	2-3-5-15 (8)	24/19				S3 - Silty SAND (SM), fine, 20-25% fines, 10-15% fine to coarse subrounded gravel, trace of organic soil, trace of organic odor, dark brown, moist
		7	S4	17-22-28-24 (50)	24/22				S4 - Similar to S3, 5-10% fine to coarse subrounded gravel
	85.0								
		9							
10								10.0 ▼	
		10	S5	8-8-7-6 (15)	24/11		Sand and Gravel	83.0	S5 - Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subrounded gravel, brown, wet
		12						12.0	Bottom of borehole at 12.0 feet. Backfilled borehole with drill cuttings.
	80.0								
15									
	75.0								
20									
	70.0								
25									

GENERAL NOTES:

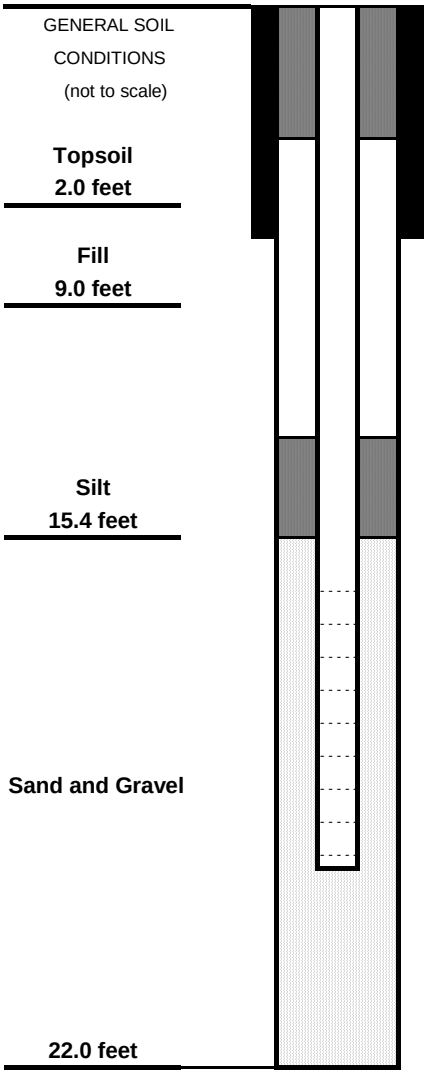
1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Boring No. : **B-101-OW**

Project Name:	**Prop. Wildwood Early Childhood Center, Wilmington, MA**		
LGCI Project Number:	**2437**		
Client:	**Dore and Whittier Architects**		
Drilling Subcontractor:	Soil X, Corp.	Date Started:	11/14/25
Drilling Foreman:	Edwin Fajardo	Date Completed:	11/14/25
LGCI Engineer:	Jude Aladmawy	Location:	Near NW corner of prop. building
Ground Surface Elevation:	93.0 feet (see note 1)	Total Depth of Boring:	22.0 feet
Groundwater Depth:	5.0 feet (based on sample moisture)	Drill Rig Type:	Diedrich D-70 Tubro ATV
	5.0 feet at the end of drilling	Drilling Method:	Hollow Stem Auger (4-1/4" I.D.)



Riser Stickup ~0.0' above ground surface

THICKNESS OF SURFACE SEAL	0.5 foot
TYPE OF SURFACE SEAL	Concrete
TYPE OF SURFACE CASING	Roadway Box
ID OF SURFACE CASING	6 inch
DEPTH TO BOTTOM OF CASING	0.7 foot
ID OF RISER PIPE	2 inch
TYPE OF RISER PIPE	Schedule 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Filter sand (Holliston sand)
DEPTH TO TOP OF SEAL	7.0 feet
TYPE OF SEAL	Bentonite Chips
DEPTH TO BOTTOM OF SEAL	9.0 feet
DEPTH TO TOP OF PERVIOUS SECTION	10.0 feet
TYPE OF PERVIOUS SECTION	Schedule 40 PVC
DESCRIBE OPENINGS	0.01 inch slots
ID OF PERVIOUS SECTION	2 inch
TYPE OF BACKFILL AROUND PERVIOUS SECTION	Filter sand (Holliston sand)
DEPTH TO BOTTOM OF PERVIOUS SECTION	15.0 feet
DEPTH TO BOTTOM OF SAND COLUMN	22.0 feet
TYPE OF BACKFILL BELOW PERVIOUS SECTION	Filter sand (Holliston sand)
DIAMETER OF BOREHOLE	4 inch
DEPTH TO BOTTOM OF BOREHOLE	22.0 feet

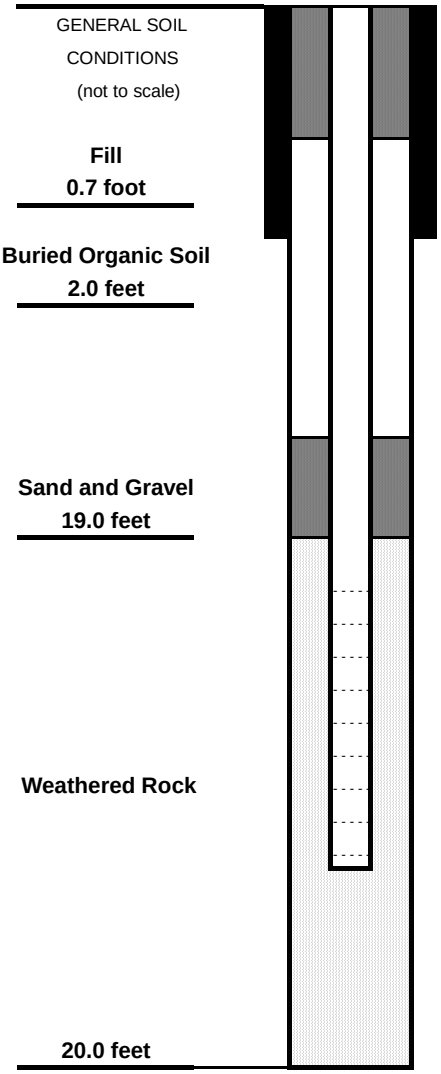
NOTES: The ground surface elevation was interpolated to the nearest foot from drawing titled: "Existing Conditions Plan, 320 Salem Street, Wilmington, Massachusetts," prepared by Dore and Whittier Architects, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects via e-mail on November 8, 2024.

LGCI
Lahlaf Geotechnical Consulting, Inc.

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Boring No. : **B-106-OW**

Project Name: **Prop. Wildwood Early Childhood Center, Wilmington, MA**	
LGCI Project Number: **2437**	
Client: **Dore and Whittier Architects**	
Drilling Subcontractor: Soil X, Corp.	Date Started: 11/13/25
Drilling Foreman: Edwin Fajardo	Date Completed: 11/13/25
LGCI Engineer: Alan Smith	Location: Near center of prop. building
Ground Surface Elevation: 94.0 feet (see note 1)	Total Depth of Boring: 20.0 feet
Groundwater Depth: 10.0 feet (based on sample moisture)	Drill Rig Type: Diedrich D-70 Tubro ATV
11.0 feet at the end of drilling	Drilling Method: Hollow Stem Auger (4-1/4" I.D.)



Riser Stickup ~0.0' above ground surface

THICKNESS OF SURFACE SEAL	0.5 foot
TYPE OF SURFACE SEAL	Concrete
TYPE OF SURFACE CASING	Roadway Box
ID OF SURFACE CASING	6 inch
DEPTH TO BOTTOM OF CASING	0.7 foot
ID OF RISER PIPE	2 inch
TYPE OF RISER PIPE	Schedule 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Auger Cuttings
DEPTH TO TOP OF SEAL	6.0 feet
TYPE OF SEAL	Bentonite Chips
DEPTH TO BOTTOM OF SEAL	8.0 feet
DEPTH TO TOP OF PERVIOUS SECTION	9.0 feet
TYPE OF PERVIOUS SECTION	Schedule 40 PVC
DESCRIBE OPENINGS	0.01 inch slots
ID OF PERVIOUS SECTION	2 inch
TYPE OF BACKFILL AROUND PERVIOUS SECTION	Filter sand (Holliston sand)
DEPTH TO BOTTOM OF PERVIOUS SECTION	19.0 feet
DEPTH TO BOTTOM OF SAND COLUMN	20.0 feet
TYPE OF BACKFILL BELOW PERVIOUS SECTION	Filter sand (Holliston sand)
DIAMETER OF BOREHOLE	10 inch
DEPTH TO BOTTOM OF BOREHOLE	20.0 feet

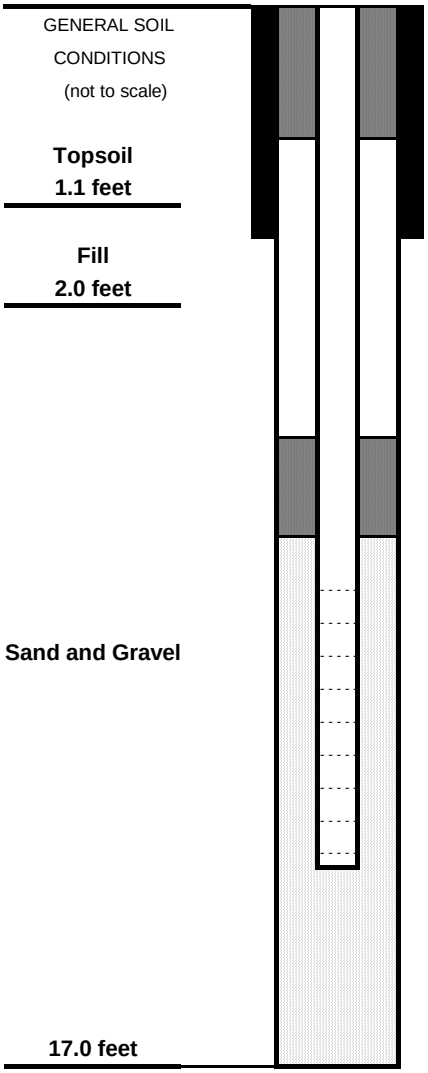
NOTES: The ground surface elevation was interpolated to the nearest foot from drawing titled: "Existing Conditions Plan, 320 Salem Street, Wilmington, Massachusetts," prepared by Dore and Whittier Architects, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects via e-mail on November 8, 2024.

LGCI
Lahlaf Geotechnical Consulting, Inc.

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Boring No. : **B-108-OW**

Project Name: **Prop. Wildwood Early Childhood Center, Wilmington, MA**	
LGCI Project Number: **2437**	
Client: **Dore and Whittier Architects**	
Drilling Subcontractor: Soil X, Corp.	Date Started: 11/18/25
Drilling Foreman: Edwin Fajardo	Date Completed: 11/18/25
LGCI Engineer: Jude Aladmawy	Location: Near eastern edge of prop. building
Ground Surface Elevation: 93.0 feet (see note 1)	Total Depth of Boring: 17.0 feet
Groundwater Depth: 12.0 feet (based on sample moisture)	Drill Rig Type: Diedrich D-70 Tubro ATV
7.0 feet at the end of drilling	Drilling Method: Hollow Stem Auger (4-1/4" I.D.)



Riser Stickup ~0.0' above ground surface

THICKNESS OF SURFACE SEAL	0.5 foot
TYPE OF SURFACE SEAL	Concrete
TYPE OF SURFACE CASING	Roadway Box
ID OF SURFACE CASING	6 inch
DEPTH TO BOTTOM OF CASING	0.7 foot
ID OF RISER PIPE	2 inch
TYPE OF RISER PIPE	Schedule 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Filter sand (Holliston sand)
DEPTH TO TOP OF SEAL	4.0 feet
TYPE OF SEAL	Bentonite Chips
DEPTH TO BOTTOM OF SEAL	6.0 feet
DEPTH TO TOP OF PERVIOUS SECTION	7.0 feet
TYPE OF PERVIOUS SECTION	Schedule 40 PVC
DESCRIBE OPENINGS	0.01 inch slots
ID OF PERVIOUS SECTION	2 inch
TYPE OF BACKFILL AROUND PERVIOUS SECTION	Filter sand (Holliston sand)
DEPTH TO BOTTOM OF PERVIOUS SECTION	17.0 feet
DEPTH TO BOTTOM OF SAND COLUMN	17.0 feet
TYPE OF BACKFILL BELOW PERVIOUS SECTION	Filter sand (Holliston sand)
DIAMETER OF BOREHOLE	4 inch
DEPTH TO BOTTOM OF BOREHOLE	17.0 feet

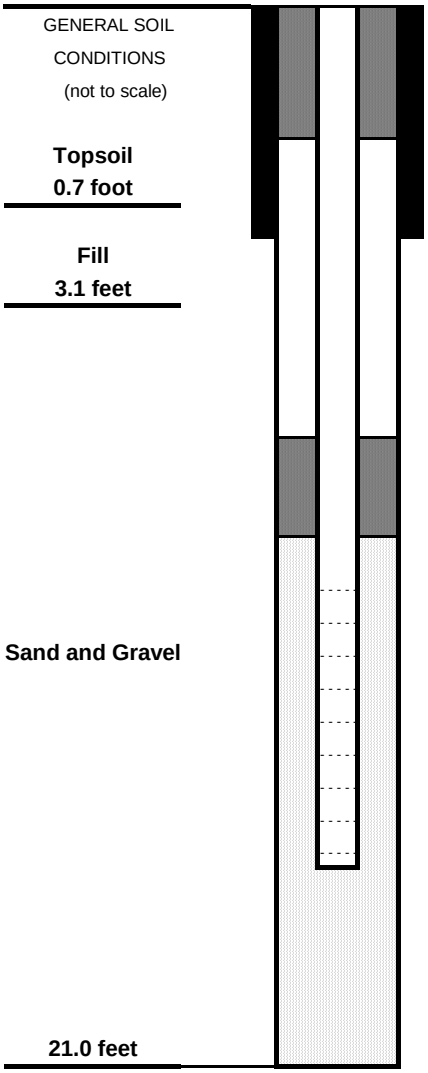
NOTES: The ground surface elevation was interpolated to the nearest foot from drawing titled: "Existing Conditions Plan, 320 Salem Street, Wilmington, Massachusetts," prepared by Dore and Whittier Architects, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects via e-mail on November 8, 2024.

LGCI
Lahlaf Geotechnical Consulting, Inc.

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Boring No. : **B-111-OW**

Project Name: **Prop. Wildwood Early Childhood Center, Wilmington, MA**	
LGCI Project Number: **2437**	
Client: **Dore and Whittier Architects**	
Drilling Subcontractor: Soil X, Corp.	Date Started: 11/12/25
Drilling Foreman: Edwin Fajardo	Date Completed: 11/12/25
LGCI Engineer: Alan Smith	Location: Near SW corner of prop. building
Ground Surface Elevation: 93.0 feet (see note 1)	Total Depth of Boring: 21.0 feet
Groundwater Depth: 9.0 feet (based on sample moisture)	Drill Rig Type: Diedrich D-70 Tubro ATV
10.0 feet at the end of drilling	Drilling Method: Drive and Wash with 4-inch Casing



Riser Stickup ~0.0' above ground surface

THICKNESS OF SURFACE SEAL	0.5 foot
TYPE OF SURFACE SEAL	Concrete
TYPE OF SURFACE CASING	Roadway Box
ID OF SURFACE CASING	6 inch
DEPTH TO BOTTOM OF CASING	0.7 foot
ID OF RISER PIPE	2 inch
TYPE OF RISER PIPE	Schedule 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	Drill Cuttings
DEPTH TO TOP OF SEAL	6.0 feet
TYPE OF SEAL	Bentonite Chips
DEPTH TO BOTTOM OF SEAL	8.0 feet
DEPTH TO TOP OF PERVIOUS SECTION	9.0 feet
TYPE OF PERVIOUS SECTION	Schedule 40 PVC
DESCRIBE OPENINGS	0.01 inch slots
ID OF PERVIOUS SECTION	2 inch
TYPE OF BACKFILL AROUND PERVIOUS SECTION	Filter sand (Holliston sand)
DEPTH TO BOTTOM OF PERVIOUS SECTION	19.0 feet
DEPTH TO BOTTOM OF SAND COLUMN	21.0 feet
TYPE OF BACKFILL BELOW PERVIOUS SECTION	Filter sand (Holliston sand)
DIAMETER OF BOREHOLE	5 inch
DEPTH TO BOTTOM OF BOREHOLE	21.0 feet

NOTES: The ground surface elevation was interpolated to the nearest foot from drawing titled: "Existing Conditions Plan, 320 Salem Street, Wilmington, Massachusetts," prepared by Dore and Whittier Architects, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects via e-mail on November 8, 2024.

Appendix B – LGCI's Test Pit Logs

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TEST PIT LOG

TP-1
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/30/24 **DATE COMPLETED:** 10/30/24
TEST PIT LOCATION: Near western face of prop. school
COORDINATES: NA
SURFACE EL.: 92.0 ft. (see note 1) **TOTAL DEPTH:** 11 ft.
GROUNDWATER LEVELS:
▽ **DURING EXCAVATION:** Not Encountered
▼ **AT END OF EXCAVATION:** 9.5 ft. / El. 82.5 ft.

EXCAVATION SUBCONTRACTOR: Wilmington DPW
EXCAVATION FOREMAN: Sean Moon
EXCAVATOR TYPE/MODEL: Volvo EWR150E
WEATHER: 60's / Cloudy
TEST PIT DIMENSIONS: 9.0' X 6.0'
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth / El. (ft.)	Material Description
		E		Topsoil	1.5 / 90.5	0 ft. - 1.5 ft.: Topsoil
		M				
	90.0	M		Fill		1.5 ft. - 5 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, trace coarse, 10-15% fines, 10-15% fine to coarse subangular gravel, trace of organic soil, trace of roots, brown, moist (cobbles up to 12 inches make up 5-10% of stockpile)
2.5		D				
	87.5					
5.0			1			5 ft. - 7 ft.: Silty SAND with Gravel (SM), mostly fine to medium, 25-30% fines, 10-15% fine subangular gravel, brown, moist (sieve performed) REMARK 1: Double ring infiltrometer test performed at depth of 5.0 feet.
		D				
	85.0				7.0 / 85.0	
7.5		D		Swamp Deposits		7 ft. - 10 ft.: Silty SAND (SM), fine to medium, 20-25% fines, 10-15% fine to coarse subangular gravel, trace of organic soil, trace of roots, trace of organic odor, gray, moist to wet
	82.5					▼
10.0					10.0 / 82.0	
		D		Sand		10 ft. - 11 ft.: Poorly Graded SAND (SP), fine to medium, 0-5% fines, gray, wet
			2		11.0	REMARK 2: Test pit terminated due to excavator refusal at depth of 11.0 feet on possible boulder or rock.
						Bottom of test pit at 11.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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TEST PIT LOG

TP-2
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/30/24 **DATE COMPLETED:** 10/30/24
TEST PIT LOCATION: Near southern face of proposed school
COORDINATES: NA
SURFACE EL.: 94.0 ft. (see note 1) **TOTAL DEPTH:** 9 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: Not Encountered

EXCAVATION SUBCONTRACTOR: Wilmington DPW
EXCAVATION FOREMAN: Sean Moon
EXCAVATOR TYPE/MODEL: Volvo EWR150E
WEATHER: 60's / Cloudy
TEST PIT DIMENSIONS: 10.0' X 7.0'
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	0.7 / 93.3	0 ft. - 0.7 ft.: Topsoil
	92.5					0.7 ft. - 4 ft.: Well Graded SAND with Silt (SW-SM), fine to coarse, 5-10% fines, ~10% fine to coarse subangular gravel, trace of roots, trace of organic soil, brown to orange, moist
2.5		E		Fill		
	90.0		1			4 ft. - 5.5 ft.: Silty SAND (SM), mostly fine to medium, 15-20% fines, 5-10% mostly fine subangular gravel, brown to orange, moist (sieve performed)
5.0		M	2			REMARK 1: Double ring infiltrometer test performed at depth of 4.0 feet. REMARK 2: Unmarked cast iron pipe encountered near the southwestern corner of the test pit. Excavator bucket pulled and bent pipe. Pipe does not appear to be broken. DPW indicated that they are not aware of utilities at this location.
					5.5 / 88.5	5.5 ft. - 9 ft.: Well Graded SAND (SW), fine to coarse, 0-5% fines, 10-15% fine to coarse subangular gravel, light brown, moist
	87.5					
7.5		M		Sand and Gravel		
	85.0				9.0	Bottom of test pit at 9.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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TEST PIT LOG

TP-2A
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/30/24 **DATE COMPLETED:** 10/30/24
TEST PIT LOCATION: Near southern face of prop. school
COORDINATES: NA
SURFACE EL.: 94.0 ft. (see note 1) **TOTAL DEPTH:** 11.3 ft.
GROUNDWATER LEVELS:
▽ **DURING EXCAVATION:** Not Encountered
▼ **AT END OF EXCAVATION:** 9.5 ft. / El. 84.5 ft.

EXCAVATION SUBCONTRACTOR: Wilmington DPW
EXCAVATION FOREMAN: Sean Moon
EXCAVATOR TYPE/MODEL: Volvo EWR150E
WEATHER: 60's / Cloudy
TEST PIT DIMENSIONS: 10.0' X 3.0'
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
	92.5	E		Topsoil	1.5 92.5	0 ft. - 1.5 ft.: Topsoil
2.5		E		Fill		1.5 ft. - 7 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subangular gravel, trace of roots, trace of organic soil, brown to orange, moist
	90.0					
5.0		M				
	87.5				7.0 87.0	
7.5				Sand and Gravel		7 ft. - 11.3 ft.: Well Graded SAND (SW), fine to coarse, 0-5% fines, 10-15% fine to coarse subangular gravel, light brown, moist (wet after 9.5 feet)
	85.0	M			▼	
10.0						
		V	1		11.3	REMARK 1: Test pit terminated due to excavator refusal at depth of 11.3 feet on possible boulder or rock.
						Bottom of test pit at 11.3 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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Lahlaf Geotechnical Consulting, Inc.

TEST PIT LOG

TP-3
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/31/24 **DATE COMPLETED:** 10/31/24
TEST PIT LOCATION: Near eastern face of prop. school
COORDINATES: NA
SURFACE EL.: 94.0 ft. (see note 1) **TOTAL DEPTH:** 8 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: Not Encountered

EXCAVATION SUBCONTRACTOR: Wilmington DPW
EXCAVATION FOREMAN: Sean Moon
EXCAVATOR TYPE/MODEL: Volvo EWR150E
WEATHER: 70's / Sunny
TEST PIT DIMENSIONS: 11.0' X 6.0'
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	0.8	0 ft. - 0.8 ft.: Topsoil
		E		Fill	93.2	0.8 ft. - 1 ft.: Well Graded SAND (SW), fine to coarse, 0-5% fines, light brown, moist 1 ft. - 2.3 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, 15-20% fine to coarse subangular gravel, trace of organic soil, trace of roots, dark brown, moist
	92.5	E				
2.5		E		Sand and Gravel	2.3 91.7	2.3 ft. - 4 ft.: Well Graded SAND with Gravel (SW), fine to coarse, 0-5% fines, 20-25% fine to coarse subangular gravel, light brown to orange, moist
		M				
	90.0		1			4 ft. - 8 ft.: Poorly Graded SAND with Gravel (SP), mostly medium to coarse, 0-5% fines, 30-35% fine to coarse subangular gravel, light brown to orange, moist (sieve performed) REMARK 1: Double ring infiltrometer test performed at depth of 4.0 feet.
5.0		M				
	87.5	D				
7.5		V	2		8.0	REMARK 2: Test pit terminated due to excavator refusal at depth of 8.0 feet on possible boulder or rock. Bottom of test pit at 8.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

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TEST PIT LOG

TP-4
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 10/31/24 **DATE COMPLETED:** 10/31/24
TEST PIT LOCATION: Near eastern face of existing school
COORDINATES: NA
SURFACE EL.: 95.0 ft. (see note 1) **TOTAL DEPTH:** 9 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: Not Encountered

EXCAVATION SUBCONTRACTOR: Wilmington DPW
EXCAVATION FOREMAN: Sean Moon
EXCAVATOR TYPE/MODEL: Volvo EWR150E
WEATHER: 70's / Sunny
TEST PIT DIMENSIONS: 10.0' X 6.0'
LOGGED BY: BH **CHECKED BY:** JKW

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	1.0 / 94.0	0 ft. - 1 ft.: Topsoil
		E		Fill	2.0 / 93.0	1 ft. - 2 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, trace coarse, 5-10% fines, 0-5% fine to coarse subangular gravel, light brown, moist
2.5	92.5	E		Buried Subsoil	3.2 / 91.8	2 ft. - 3.2 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 0-5% fine to coarse subangular gravel, trace of organic soil, trace of roots, orange, moist
		E		Sand and Gravel		3.2 ft. - 4.6 ft.: Well Graded SAND (SW), fine to coarse, 0-5% fines, 0-5% fine subangular gravel, light brown to orange, moist
		M	1			4.6 ft. - 9 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), mostly fine to medium, 10-15% fines, 30-35% fine to coarse subangular gravel, brown to orange, moist (sieve performed) REMARK 1: Double ring infiltrometer test performed at depth of 4.6 feet.
5.0	90.0	M				
		D				
7.5	87.5	V				
			2		9.0	REMARK 2: Test pit terminated due to excavator refusal at depth of 9.0 feet on possible boulder or rock. Bottom of test pit at 9.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from drawing titled "Existing Conditions Plan 320 Salem Street Wilmington, Massachusetts," prepared by Dore and Whittier 212 Battery Street, Burlington, VT 05401, dated October 24, 2024, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on November 08, 2024.

TEST PIT LOG

TP-101
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/23/25 **DATE COMPLETED:** 12/23/25
TEST PIT LOCATION: South of existing building
COORDINATES: NA
SURFACE EL.: 100 ft. (see note 1) **TOTAL DEPTH:** 9.8 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: Not Encountered

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Chris Saunders
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 12.0' x 4.3'
LOGGED BY: OL / HK **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	0.4 / 99.6	0 ft. - 0.4 ft.: Topsoil
		E		Fill		0.4 ft. - 1.8 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), medium to coarse, 5-10% fines, 15-20% fine subrounded gravel, trace of roots, brown, moist
2.5	97.5	E				1.8 ft. - 2.5 ft.: Well Graded SAND with Silt (SW-SM), 10-15% fines, 5-10% fine to coarse subrounded gravel, trace of organic soil, brown, moist (appears reworked)
		E				2.5 ft. - 4.6 ft.: Well Graded SAND (SW), fine to coarse, 0-5% fines, 5-10% fine to coarse subrounded gravel, brown, moist
5.0	95.0	E	1	Sand and Gravel	4.6 / 95.4	4.6 ft. - 7 ft.: Poorly Graded SAND with Gravel (SP), mostly medium, trace of fine and coarse, 0-5% fines, 15-20% fine to coarse subrounded gravel, brown (sieve performed) (possible fill)
						REMARK 1: Double ring infiltrometer test performed at depth of 4.6 feet.
7.5	92.5	E		Silt	7.0 / 93.0	7 ft. - 8 ft.: SILT with Sand (ML), non plastic, 25-30% fine sand, orange-brown (possible buried subsoil)
		E		Sand and Gravel	8.0 / 92.0	8 ft. - 9.8 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 5-10% fine to coarse subrounded gravel, trace of organic odor, brown-gray, moist
		M	2		9.8	REMARK 2: Test pit terminated due to excavator refusal at depth of 9.8 feet on possible boulder. Bottom of test pit at 9.8 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

TEST PIT LOG

TP-102
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/23/25 **DATE COMPLETED:** 12/23/25
TEST PIT LOCATION: South of existing building
COORDINATES: NA
SURFACE EL.: 100 ft. (see note 1) **TOTAL DEPTH:** 10 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: Not Encountered

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Chris Saunders
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 14.0' x 5.0'
LOGGED BY: OL / HK **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	0.3 / 99.7	0 ft. - 0.3 ft.: Topsoil
		E		Fill		0.3 ft. - 1 ft.: Silty SAND with Gravel (SM), fine to coarse, 15-20% fines, 15-20% fine to coarse subrounded gravel, trace of organic soil, trace of brick, brown, moist
		E				1 ft. - 4.2 ft.: Well Graded SAND (SW), fine to coarse, 0-5% fines, ~10% fine to coarse subrounded gravel, brown, moist
2.5	97.5	E				
		E			4.8 / 95.2	4.2 ft. - 4.8 ft.: Silty SAND (SM), fine, 25-30% fines, trace of organic soil, trace of roots, light brown, moist
5.0	95.0	E		Sand and Gravel		4.8 ft. - 10 ft.: Silty SAND with Gravel (SM), fine to coarse, 20-25% fines, ~15% fine to coarse subrounded gravel, olive-brown, moist
7.5	92.5	M	1			REMARK 1: Cobbles ranging up to 12 inches in diameter encountered between depths of 8.0 feet to 10.0 feet.
		D				
10.0	90.0		2		10.0	REMARK 2: Test pit terminated due to excavator refusal at depth of 10.0 feet on possible boulder.
						Bottom of test pit at 10.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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TEST PIT LOG

TP-103
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/30/25 **DATE COMPLETED:** 12/30/25
TEST PIT LOCATION: SW of existing building
COORDINATES: NA
SURFACE EL.: 94 ft. (see note 1) **TOTAL DEPTH:** 10.1 ft.
GROUNDWATER LEVELS:
▽ **DURING EXCAVATION:** Not Encountered
▼ **AT END OF EXCAVATION:** 9.9 ft. / El. 84.1 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Peter Papazoglou
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 20's / Cloudy
TEST PIT DIMENSIONS: 12.0' x 5.0'
LOGGED BY: OL **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	1.3	0 ft. - 1.3 ft.: Topsoil
		D				
	92.5				92.7	
2.5		D	1	Fill		1.3 ft. - 3.8 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), mostly fine, 10-15% fines, 15-20% fine to coarse subrounded gravel, light brown, moist REMARK 1: Cobbles ranging up to 12 inches in diameter encountered at depth of 2.1 feet.
	90.0	D				3.8 ft. - 4 ft.: Poorly Graded SAND with Silt (SP-SM), fine, 5-10% fines, 0-5% fine subrounded gravel, trace of organic soil, light brown, moist (appears reworked)
		M				4 ft. - 4.2 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, 0-5% fine subrounded gravel, dark brown, moist
5.0		M				4.2 ft. - 6.3 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 0-5% fine subrounded gravel, dark brown, moist
		E			6.3	
	87.5	E		Sand and Gravel	87.7	6.3 ft. - 10.1 ft.: Poorly Graded SAND with Gravel (SP), medium to coarse, 0-5% fines, 15-20% fine to coarse subrounded gravel, orange, moist
7.5		M				
	85.0					
10.0					10.1 ▼	
						Bottom of test pit at 10.1 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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Lahlaf Geotechnical Consulting, Inc.

TEST PIT LOG

TP-104
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/24/25 **DATE COMPLETED:** 12/24/25
TEST PIT LOCATION: Parking lot north of existing building
COORDINATES: NA
SURFACE EL.: 94 ft. (see note 1) **TOTAL DEPTH:** 5 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: Not Encountered

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Chris Saunders
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 11.0' x 8.0'
LOGGED BY: OL **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Asphalt	0.3 / 93.7	0 ft. - 0.3 ft.: Asphalt
		E		Fill		0.3 ft. - 0.5 ft.: Silty SAND with Gravel (SM), medium to coarse, ~15% fines, 20-30% fine to coarse subangular gravel, trace of asphalt, black, moist
		E				0.5 ft. - 1.3 ft.: Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, ~10% fines, 25-30% fine subrounded gravel, dark brown, moist
	92.5				1.3 / 92.7	
		E		Sand and Gravel		1.3 ft. - 3.2 ft.: Poorly Graded SAND (SP), fine to medium, 0-5% fines, 5-10% fine to coarse subrounded gravel, brown, moist
2.5						
		M				3.2 ft. - 3.7 ft.: Silty SAND with Gravel (SM), fine to medium, 20-25% fines, 15-20% fine to coarse subrounded gravel, light brown, moist
		M				3.7 ft. - 5 ft.: Well Graded SAND with Silt (SW-SM), fine to coarse, 10-15% fines, 10-15% fine to coarse subrounded gravel, light brown, moist
	90.0	M	1			REMARK 1: Boulder ranging up to 2.0 feet in diameter encountered at a depth of 3.8 feet.
		V	2			REMARK 2: Cobbles ranging up to 9.0 inches in diameter encountered from between depths of 4.0 feet to 5.0 feet.
5.0			3		5.0	REMARK 3: Test pit terminated due to excavator refusal at depth of 5.0 feet on boulders.
						Bottom of test pit at 5.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

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Lahlaf Geotechnical Consulting, Inc.

TEST PIT LOG

TP-105
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/24/25 **DATE COMPLETED:** 12/24/25
TEST PIT LOCATION: Parking lot north of existing building
COORDINATES: NA
SURFACE EL.: 94 ft. (see note 1) **TOTAL DEPTH:** 11 ft.
GROUNDWATER LEVELS:
▽ **DURING EXCAVATION:** Not Encountered
▼ **AT END OF EXCAVATION:** 10.8 ft. / El. 83.2 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Chris Saunders
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 13.0' x 15.0'
LOGGED BY: OL / HK **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Asphalt	0.4	0 ft. - 0.4 ft.: Asphalt
		E		Fill	93.6	0.4 ft. - 1.1 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), medium to coarse, 10-15% fines, ~15% fine subangular gravel, trace of asphalt, black, moist
	92.5	E				1.1 ft. - 2.1 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), mostly fine, 10-15% fines, 15-20% fine subrounded gravel, brown, moist
2.5		E		Buried Organic Soil	2.1 91.9 2.4	2.1 ft. - 2.4 ft.: Silty SAND (SM), fine, 15-20% fines, dark brown, moist
		E			91.6	2.4 ft. - 3.2 ft.: Silty SAND (SM), mostly fine, 15-20% fines, light brown, moist
	90.0	E	1			3.2 ft. - 4.5 ft.: Silty SAND (SM), fine to medium, 15-20% fines, 5-10% fine subrounded gravel, brown, moist
5.0		E				4.5 ft. - 6.5 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, trace coarse, 10-15% fines, 10-15% fine to coarse subrounded gravel, brown (sieve performed) REMARK 1: Double ring infiltrometer test performed at depth of 4.5 feet.
	87.5	E		Sand and Gravel		6.5 ft. - 7.5 ft.: Silty SAND (SM), fine, 15-20% fines, ~5% fine subrounded gravel, gray, moist
7.5		E				7.5 ft. - 11 ft.: Well Graded SAND (SW), fine to coarse, 0-5% fines, 0-5% fine subrounded gravel, orange, moist
	85.0	E				
10.0		M	2			REMARK 2: Boulders and cobbles ranging up to 2.0 feet and 9.0 inches in diameter, respectively, encountered at a depth of 10.5 feet.
			3		11.0	REMARK 3: Test pit terminated at depth of 11.0 feet due to side walls of test pit collapsing. Bottom of test pit at 11.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

TEST PIT LOG

TP-106
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/23/25 **DATE COMPLETED:** 12/23/25
TEST PIT LOCATION: Parking lot north of existing building
COORDINATES: NA
SURFACE EL.: 94 ft. (see note 1) **TOTAL DEPTH:** 6.1 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: Not Encountered

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Chris Saunders
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 5.0' x 13.0'
LOGGED BY: OL / HK **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		M		Asphalt	0.3 / 93.7	0 ft. - 0.3 ft.: Asphalt
		M		Subbase	0.8 / 93.2	0.3 ft. - 0.8 ft.: Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 10-15% fines, 15-20% fine to coarse subangular gravel, black, moist
		M				0.8 ft. - 1.4 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, ~10% fines, 0-5% fine to coarse subrounded gravel, dark brown, moist
	92.5	M	1	Fill		1.4 ft. - 3.2 ft.: Silty SAND (SM), fine, ~15% fines, 10-15% fine to coarse subrounded gravel, tan, moist
2.5		E				REMARK 1: Bricks encountered at a depth of 1.4 feet.
					3.2 / 90.8	3.2 ft. - 6.1 ft.: Poorly Graded SAND with Silt (SP-SM), fine, ~10% fines, orange, moist
	90.0	E		Sand		
5.0			2		6.1	REMARK 2: Test pit terminated due to hitting a drain line at depth of 6.1 feet.
						Bottom of test pit at 6.1 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

TEST PIT LOG

TP-107
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/29/25 **DATE COMPLETED:** 12/29/25
TEST PIT LOCATION: SW of existing building
COORDINATES: NA
SURFACE EL.: 94 ft. (see note 1) **TOTAL DEPTH:** 10.5 ft.
GROUNDWATER LEVELS:
▽ **DURING EXCAVATION:** Not Encountered
▼ **AT END OF EXCAVATION:** 10.0 ft. / El. 84.0 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Peter Papazoglou
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 20.0' x 6.0'
LOGGED BY: OL **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	0.6 / 93.4	0 ft. - 0.6 ft.: Topsoil
		E		Fill		0.6 ft. - 1.5 ft.: Silty SAND with Gravel (SM), fine, 15-20% fines, ~15% fine subrounded gravel, trace of roots, black, moist
	92.5	M				
			1			1.5 ft. - 3.9 ft.: Silty SAND with Gravel (SM), fine to medium, 15-20% fines, ~25% fine to coarse subrounded gravel, tan, moist REMARK 1: Cobbles ranging up to 6.0 inches in diameter encountered at depth of 2.0 feet.
2.5		E				
	90.0	M				3.9 ft. - 4.5 ft.: Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, ~10% fines, ~15% fine to coarse subrounded gravel, orange, moist
		E				
		E			4.6 / 89.4	4.5 ft. - 4.6 ft.: Silty SAND (SM), fine to medium, 15-20% fines, 0-5% subrounded gravel, brown, moist
5.0		E				4.6 ft. - 6.9 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, 10-15% fines, 0-5% fine subrounded gravel, tan, moist
	87.5					
7.5		E		Sand and Gravel		6.9 ft. - 10.5 ft.: Poorly Graded SAND (SP), medium to coarse, 0-5% fines, ~10% fine subrounded gravel, orange-red, moist
	85.0					
10.0		D	2		10.5	REMARK 2: Test pit terminated due to excavator refusal at depth of 10.5 feet on possible boulder or rock and side walls collapsing.
						Bottom of test pit at 10.5 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

TEST PIT LOG

TP-108
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/24/25 **DATE COMPLETED:** 12/24/25
TEST PIT LOCATION: SW of existing building
COORDINATES: NA
SURFACE EL.: 94 ft. (see note 1) **TOTAL DEPTH:** 9.5 ft.
GROUNDWATER LEVELS:
▽ **DURING EXCAVATION:** Not Encountered
▼ **AT END OF EXCAVATION:** 8.9 ft. / El. 85.1 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Chris Saunders
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 20.0' x 8.0'
LOGGED BY: OL / HK **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	0.8	0 ft. - 0.8 ft.: Topsoil
	92.5	E		Fill	93.2 1.6	0.8 ft. - 1.6 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), fine to medium, 10-15% fines, ~15% fine to coarse subrounded gravel, brown, moist
		E		Buried Organic Soil	92.4 2.1	1.6 ft. - 2.1 ft.: Silty SAND (SM), fine, 15-20% fines, black, moist
2.5		E		Sand	91.9	2.1 ft. - 4.9 ft.: Poorly Graded SAND (SP), fine, 0-5% fines, tan, moist
	90.0					
5.0		E				4.9 ft. - 6 ft.: Poorly Graded SAND (SP), fine, 0-5% fines, light gray, moist
	87.5	E				6 ft. - 7.5 ft.: Poorly Graded SAND with Silt (SP-SM), mostly fine, trace medium to coarse, 10-15% fines, 0-5% fine subrounded gravel, brown (sieve performed)
7.5		E		Sand and Gravel	7.5 86.5	7.5 ft. - 9.5 ft.: Well Graded SAND with Silt and Gravel (SW-SM), fine to coarse, 5-10% fines, ~15% fine to coarse subrounded gravel, red, moist
	85.0	M	1		9.5	REMARK 1: Test pit terminated at depth of 9.5 feet due to side walls of test pit collapsing.
						Bottom of test pit at 9.5 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

TEST PIT LOG

TP-109
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/24/25 **DATE COMPLETED:** 12/24/25
TEST PIT LOCATION: SW of existing building
COORDINATES: NA
SURFACE EL.: 93 ft. (see note 1) **TOTAL DEPTH:** 9.6 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: 9.3 ft. / El. 83.7 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Chris Saunders
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 5.0' x 17.0'
LOGGED BY: OL / HK **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
	92.5	E		Topsoil	0.5 92.5	0 ft. - 0.5 ft.: Topsoil
		E		Fill	2.5	0.5 ft. - 2.5 ft.: Poorly Graded SAND with Silt (SP-SM), mostly fine, ~10% fines, 10-15% fine to coarse subrounded gravel, light brown, moist
2.5		E		Buried Organic Soil	90.5 2.9	2.5 ft. - 2.9 ft.: Silty SAND (SM), fine, 15-20% fines, 0-5% fine subrounded gravel, black, moist
	90.0	E			90.1	2.9 ft. - 4.5 ft.: Poorly Graded SAND (SP), fine, 0-5% fines, tan, moist
5.0	87.5	E		Sand and Gravel		4.5 ft. - 7.5 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, 0-5% fine subrounded gravel, orange-brown, moist
7.5	85.0	E				7.5 ft. - 9.6 ft.: Well Graded SAND with Silt (SW-SM), fine to coarse, 5-10% fines, 10-15% fine subrounded gravel, orange-brown, moist
		M	1		9.6	REMARK 1: Test pit terminated due to excavator refusal at depth of 9.6 feet on possible boulder.
						Bottom of test pit at 9.6 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

TEST PIT LOG

TP-110
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/29/25 **DATE COMPLETED:** 12/29/25
TEST PIT LOCATION: West side of grass field, SW of existing building
COORDINATES: NA
SURFACE EL.: 92 ft. (see note 1) **TOTAL DEPTH:** 12 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: 8.0 ft. / El. 84.0 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Peter Papazoglou
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 5.0' x 18.0'
LOGGED BY: OL **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	1.1	0 ft. - 1.1 ft.: Topsoil
	90.0	M	1	Fill	90.9	1.1 ft. - 2.8 ft.: Silty SAND with Gravel (SM), fine, 15-20% fines, 15-20% fine to coarse subangular gravel, light brown, moist REMARK 1: Cobbles ranging up to 12.0 inches in diameter encountered at depth of 2.0 feet.
2.5		M				2.8 ft. - 5 ft.: Silty SAND with Gravel (SM), fine, 15-20% fines, 15-20% fine to coarse subangular gravel, trace of roots, gray, moist
	87.5	D			5.0	
5.0		M		Buried Organic Soil	87.0	5 ft. - 7.3 ft.: Silty SAND (SM), fine to medium, 25-30% fines, 5-10% fine subrounded gravel, trace of roots, black, moist
	85.0	E			7.3	
7.5		E		Silt	84.7	7.3 ft. - 12 ft.: SILT (ML), slightly plastic, 10-15% fine sand, trace of swamp deposits, gray, moist
	82.5					
10.0						
	80.0		2		12.0	REMARK 2: Test pit terminated at depth of 12.0 feet due to side walls of test pit collapsing. Bottom of test pit at 12.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

TEST PIT LOG

TP-111
PAGE 1 OF 1

LGCI Lahlaf Geotechnical Consulting, Inc.

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/30/25 **DATE COMPLETED:** 12/30/25
TEST PIT LOCATION: West side of grass field, SW of existing building
COORDINATES: NA
SURFACE EL.: 92 ft. (see note 1) **TOTAL DEPTH:** 11 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: 9.0 ft. / El. 83.0 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Peter Papazoglou
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 20's / Cloudy
TEST PIT DIMENSIONS: 18.0' x 7.0'
LOGGED BY: OL **CHECKED BY:** JA

Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
		E		Topsoil	1.1	0 ft. - 1.1 ft.: Topsoil
	90.0	M	1		90.9	1.1 ft. - 3.3 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), mostly fine, ~10% fines, 15-20% fine to coarse subrounded gravel, trace of organic soil, light brown, moist
2.5		D	2	Fill		REMARK 1: Cobbles ranging up to 9.0 inches in diameter encountered at depth of 2.0 feet. REMARK 2: Buried organic soil encountered on the west side of the excavation at depth of 2.0 feet.
		M	3			3.3 ft. - 5 ft.: Silty SAND with Gravel (SM), fine to medium, trace coarse, 15-20% fines, ~20% mostly fine subrounded gravel, brown (sieve performed) REMARK 3: Double ring infiltrometer test performed at depth of 3.3 feet.
	87.5	M			5.0	
5.0		E		Buried Organic Soil	87.0	5 ft. - 5.5 ft.: Silty SAND (SM), fine to medium, ~20% fines, 0-5% fine subrounded gravel, black, moist
		E				5.5 ft. - 7 ft.: Poorly Graded SAND with Silt and Gravel (SP-SM), fine, 10-15% fines, 15-20% fine to coarse subrounded gravel, trace of roots, trace of organic soil, gray, moist
	85.0				7.0	
7.5		E		Sand	85.0	7 ft. - 11 ft.: Poorly Graded SAND with Silt (SP-SM), fine, ~10% fines, 0-5% fine subrounded gravel, tan-light brown, moist
	82.5					
10.0					11.0	
						Bottom of test pit at 11.0 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

LGCI
Lahlaf Geotechnical Consulting, Inc.

TEST PIT LOG

TP-112
PAGE 1 OF 1

CLIENT: Dore and Whittier Architects, Inc.
PROJECT NAME: Proposed Wildwood Early Childhood Center
LGCI PROJECT NUMBER: 2437
PROJECT LOCATION: Wilmington, MA

DATE STARTED: 12/29/25 **DATE COMPLETED:** 12/29/25
TEST PIT LOCATION: West side of grass field, SW of existing building
COORDINATES: NA
SURFACE EL.: 93 ft. (see note 1) **TOTAL DEPTH:** 11.5 ft.
GROUNDWATER LEVELS:
DURING EXCAVATION: Not Encountered
AT END OF EXCAVATION: 5.8 ft. / El. 87.2 ft.

EXCAVATION SUBCONTRACTOR: Saunders Construction
EXCAVATION FOREMAN: Peter Papazoglou
EXCAVATOR TYPE/MODEL: Hitachi Zaxis 135 US
WEATHER: 30's / Cloudy
TEST PIT DIMENSIONS: 13.0' x 6.0'
LOGGED BY: OL **CHECKED BY:** JA

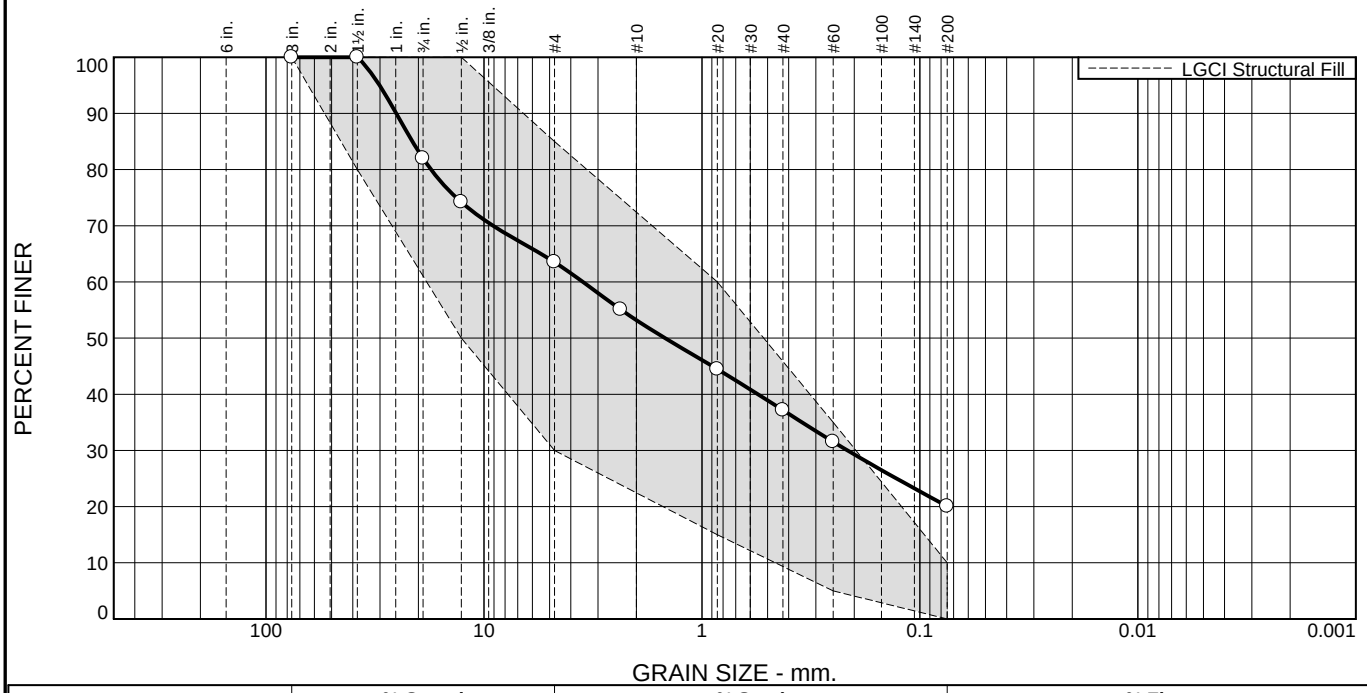
Depth (ft)	El. (ft)	Excavation Effort	Remark	Strata	Depth El.(ft.)	Material Description
	92.5	E		Topsoil	0.8	0 ft. - 0.8 ft.: Topsoil
		E		Fill	92.2	0.8 ft. - 2 ft.: Silty SAND with Gravel (SM), mostly fine, 15-20% fines, ~15% fine to coarse subrounded gravel, trace of roots, trace of organic soil, black, moist (appears reworked)
		M				
2.5		M				2 ft. - 2.5 ft.: Silty SAND with Gravel (SM), fine, 15-20% fines, 15-20% fine to coarse subrounded gravel, trace of roots, trace of organic soil, brown, moist
	90.0	M				2.5 ft. - 4.5 ft.: Silty SAND (SM), fine, 20-25% fines, 10-15% fine to coarse subrounded gravel, trace of roots, trace of organic soil, dark brown, moist
		D	1			REMARK 1: Cobbles ranging up to 9.0 inches in diameter encountered between depths of 3.5 feet to 5.0 feet.
		D		Buried Organic Soil	4.5 88.5	4.5 ft. - 4.9 ft.: Silty SAND with Gravel (SM), fine, 15-20% fines, 15-20% fine to coarse subrounded gravel, gray, moist
5.0					5.1	4.9 ft. - 7 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, 5-10% fines, 0-5% fine subrounded gravel, light brown, moist
	87.5	E	2		87.9	REMARK 2: Boulder with diameter of 2.0 feet encountered at depth of 6.0 feet.
7.5				Sand		7 ft. - 11.5 ft.: Poorly Graded SAND with Silt (SP-SM), fine to medium, ~10% fines, 0-5% fine subrounded gravel, tan, moist
	85.0	E				
10.0						
	82.5		3		11.5	REMARK 3: Test pit terminated at depth of 11.5 feet due to side walls of test pit collapsing.
						Bottom of test pit at 11.5 feet. Backfilled test pit with excavated material in 12 inch lifts and tamped with excavator.

GENERAL COMMENTS: **E = Easy, M - Moderate, D = Difficult, V = Very Difficult**

1. The ground surface elevation was interpolated to the nearest foot from the Schematic Design Drawings EX-1.0 and EX-1.1 titled: "Existing Conditions Plan, Wilmington Elementary School, 320 Salem Street, Wilmington, MA 01887," (Existing Conditions Plan), prepared by Dore and Whittier Architects, Inc., dated April 24, 2025, and provided to LGCI by Dore and Whittier Architects, Inc. via e-mail on December 4, 2025.

Appendix C – Laboratory Test Results

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	18.0	18.5	10.3	16.0	17.2	20.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1 1/2"	100.0	80.0 - 100.0	
3/4"	82.0		
1/2"	74.2	50.0 - 100.0	
#4	63.5	30.0 - 85.0	
#8	55.1		
#20	44.5	15.0 - 60.0	
#40	37.2		
#60	31.5	5.0 - 35.0	
#200	20.0	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Silty SAND with Gravel (SM) , fine to coarse, 20% fines, 36.5% fine to coarse subangular gravel, brown

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 25.2612 D_{85}= 21.2913 D_{60}= 3.5169
D_{50}= 1.4776 D_{30}= 0.2147 D_{15}=
D_{10}= C_u= C_c=

Remarks

Fill Sample.

Date Received: 10/28/24 **Date Tested:** 10/31/24

Tested By: LC

Checked By: JKW

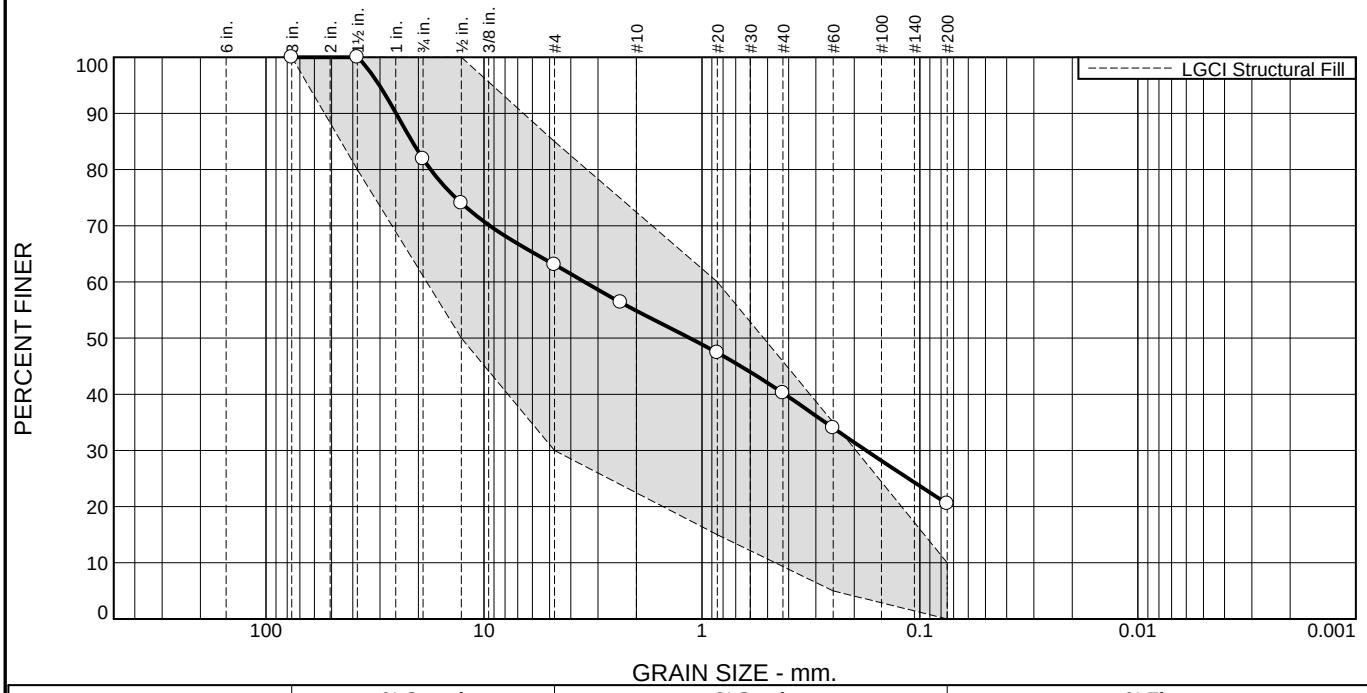
Location: B-1
Sample Number: S2 **Depth:** 2'-4'

Date Sampled: 10/28/24

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center
Wilmington, MA
Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	18.1	18.8	8.2	14.7	19.7	20.5	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1 1/2"	100.0	80.0 - 100.0	
3/4"	81.9		
1/2"	74.0	50.0 - 100.0	
#4	63.1	30.0 - 85.0	
#8	56.4		
#20	47.4	15.0 - 60.0	
#40	40.2		
#60	34.0	5.0 - 35.0	
#200	20.5	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Silty SAND with Gravel (SM) , fine to coarse, 20.5% fines, 36.9% fine to coarse subangular gravel, light brown

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 25.3090 D_{85}= 21.3513 D_{60}= 3.4571
D_{50}= 1.1367 D_{30}= 0.1765 D_{15}=
D_{10}= C_u= C_c=

Remarks

Sand and Gravel Sample.

Date Received: 10/29/24 **Date Tested:** 10/31/24

Tested By: LC

Checked By: JKW

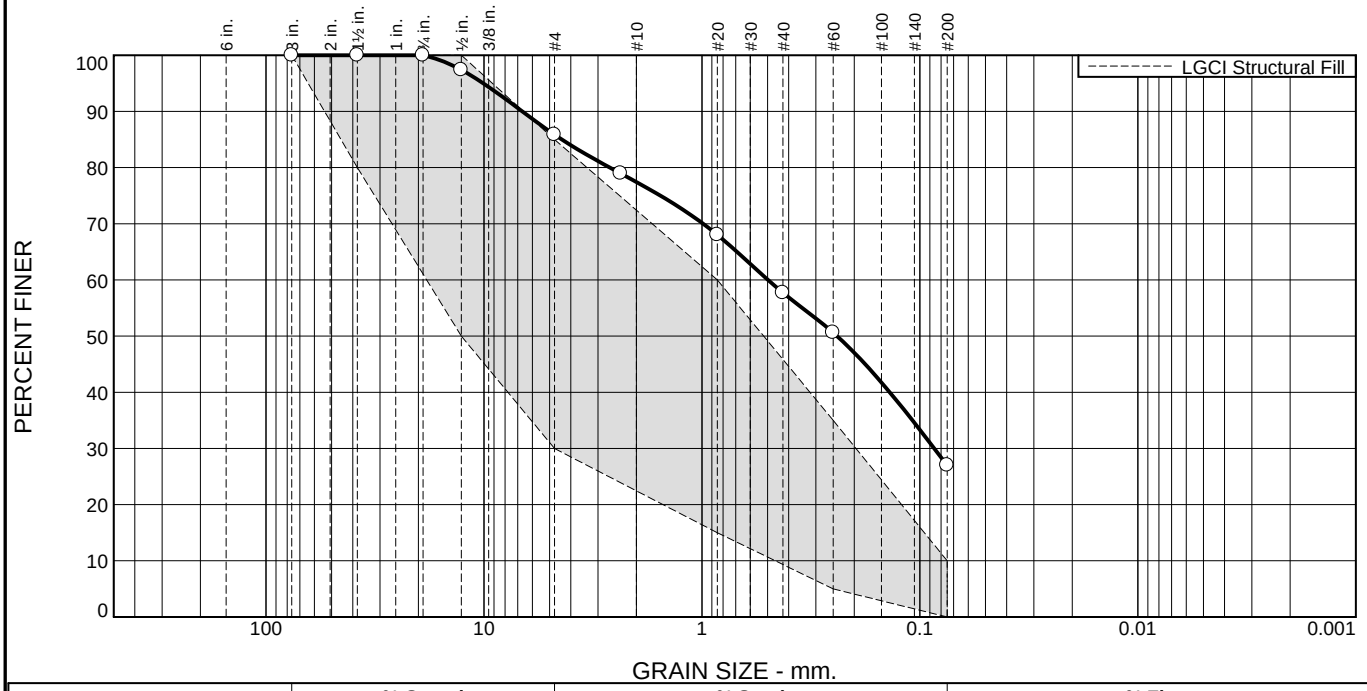
Location: B-4
Sample Number: S2 **Depth:** 2'-4'

Date Sampled: 10/29/24

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center
Wilmington, MA
Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	14.1	8.5	19.7	30.7	27.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1 1/2"	100.0	80.0 - 100.0	
3/4"	100.0		
1/2"	97.4	50.0 - 100.0	
#4	85.9	30.0 - 85.0	X
#8	79.0		
#20	68.0	15.0 - 60.0	X
#40	57.7		
#60	50.6	5.0 - 35.0	X
#200	27.0	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Silty SAND with Silt and Gravel (SM), mostly fine to medium, 27% fines, 14.1% fine subangular gravel, brown

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 6.6746 D_{85}= 4.3959 D_{60}= 0.4977
D_{50}= 0.2399 D_{30}= 0.0859 D_{15}=
D_{10}= C_u= C_c=

Remarks

Fill Sample.
Infiltrometer Test.

Date Received: 10/30/24 **Date Tested:** 10/31/24

Tested By: LC

Checked By: SG

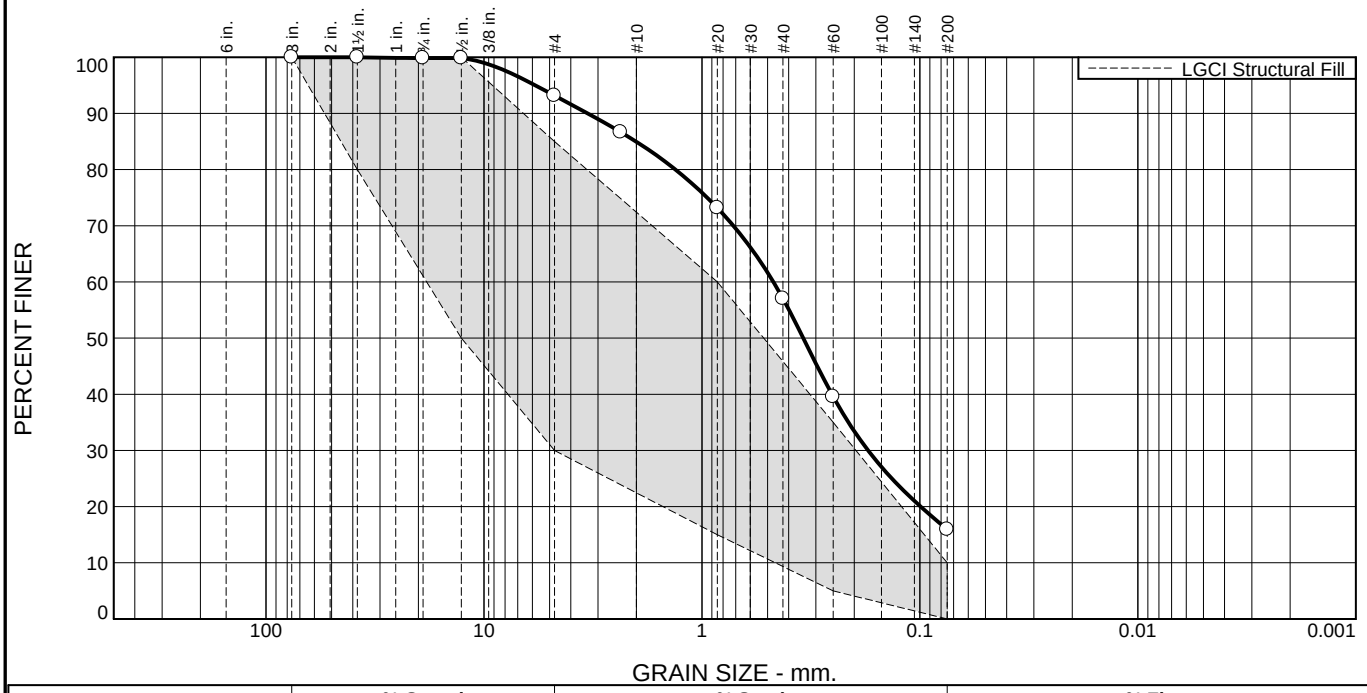
Location: TP-1
Sample Number: Infiltrometer **Depth:** 5'

Date Sampled: 10/30/24

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center
Wilmington, MA
Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.2	6.6	8.2	28.0	41.1	15.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1 1/2"	100.0	80.0 - 100.0	
3/4'	99.8		
1/2"	99.8	50.0 - 100.0	
#4	93.2	30.0 - 85.0	X
#8	86.7		
#20	73.2	15.0 - 60.0	X
#40	57.0		
#60	39.6	5.0 - 35.0	X
#200	15.9	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Silty SAND (SM), mostly fine to medium, 15.9% fines, 6.8% mostly fine subangular gravel, brown to orange

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 3.3438 D_{85}= 2.0080 D_{60}= 0.4704
D_{50}= 0.3428 D_{30}= 0.1729 D_{15}=
D_{10}= C_u= C_c=

Remarks

Fill Sample.
Infiltrometer Test.

Date Received: 10/30/24 **Date Tested:** 10/31/24

Tested By: LC

Checked By: SG

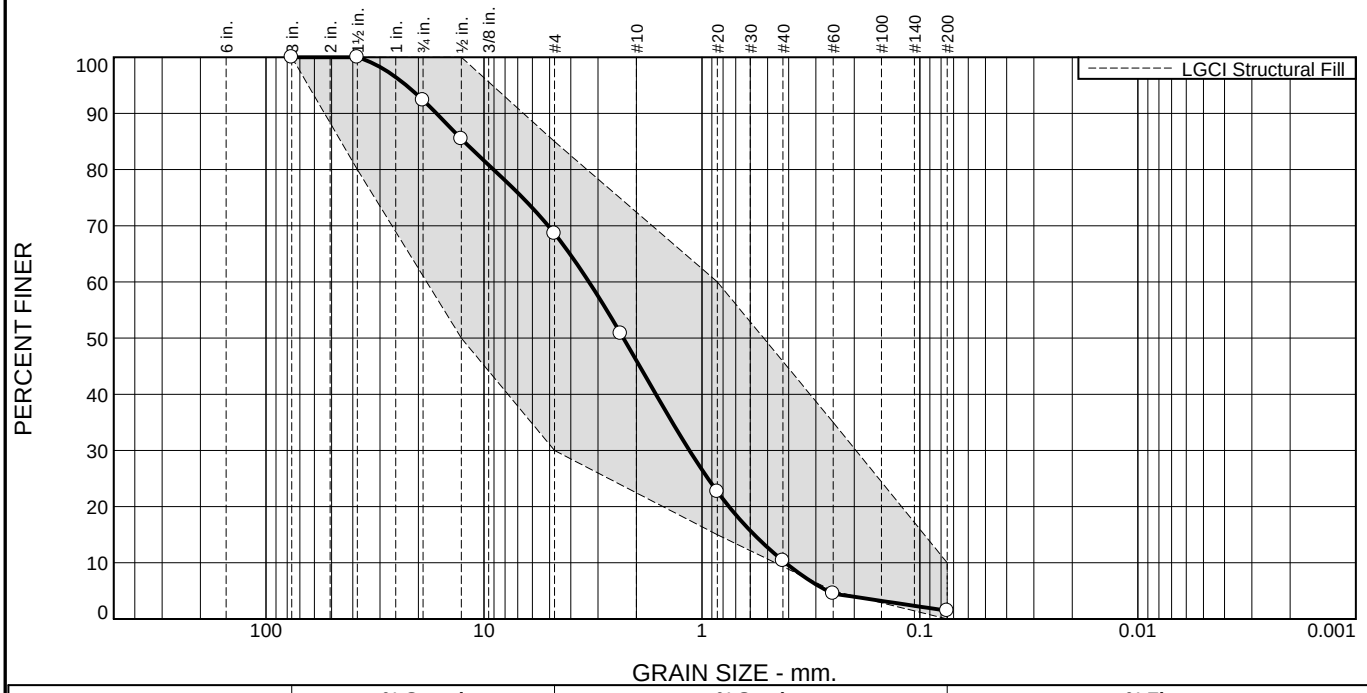
Location: TP-2
Sample Number: Infiltrometer **Depth:** 4'

Date Sampled: 10/30/24

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center
Wilmington, MA
Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	7.6	23.8	22.6	35.6	8.9	1.5	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1 1/2"	100.0	80.0 - 100.0	
3/4"	92.4		
1/2"	85.5	50.0 - 100.0	
#4	68.6	30.0 - 85.0	
#8	50.8		
#20	22.7	15.0 - 60.0	
#40	10.4		
#60	4.5	5.0 - 35.0	X
#200	1.5	0.0 - 10.0	

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Poorly Graded SAND with Gravel (SP), fine to coarse, 1.5% fines, 31.4% fine to coarse subangular gravel, light brown to orange

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 16.5194 D_{85}= 12.3470 D_{60}= 3.2999
D_{50}= 2.2934 D_{30}= 1.1409 D_{15}= 0.5758
D_{10}= 0.4140 C_u= 7.97 C_c= 0.95

Remarks

Sand and Gravel Sample.
Infiltrometer Test.

Date Received: 10/31/24 **Date Tested:** 10/31/24

Tested By: LC

Checked By: SG

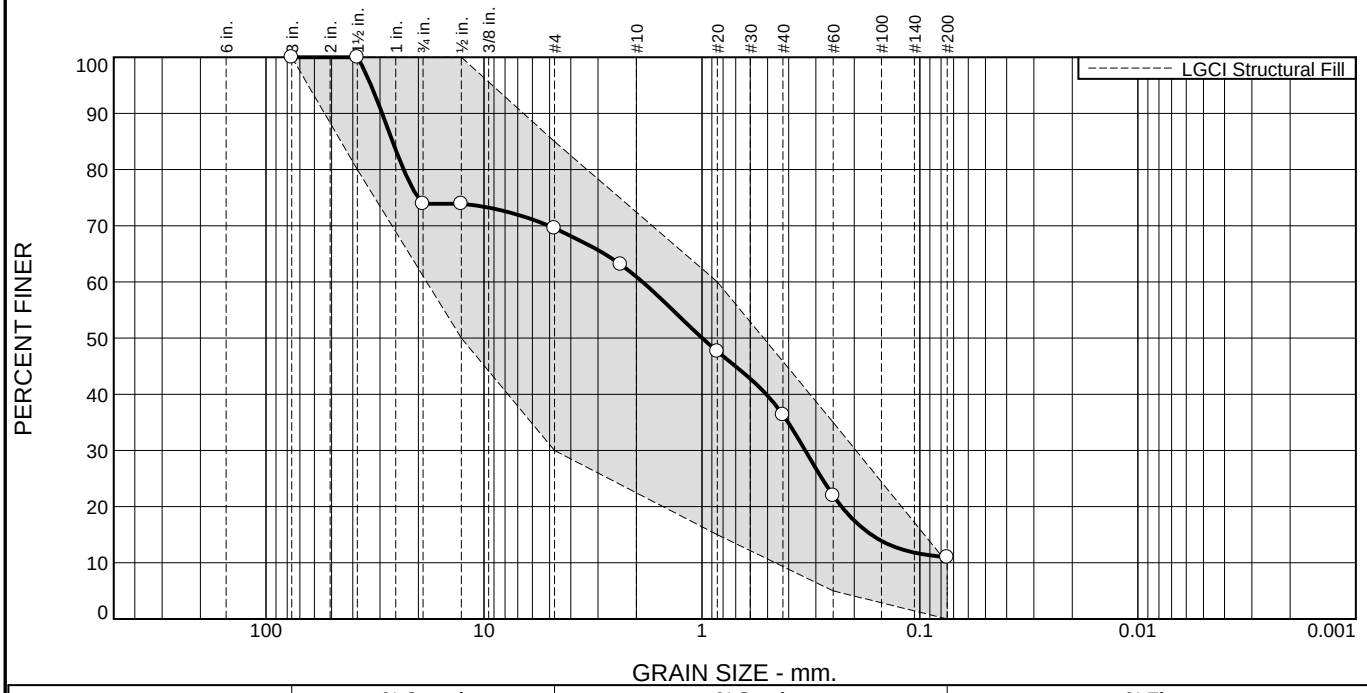
Location: TP-3
Sample Number: Infiltrometer **Depth:** 4'

Date Sampled: 10/31/24

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center
Wilmington, MA
Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	26.1	4.3	8.7	24.6	25.3	11.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1 1/2"	100.0	80.0 - 100.0	
3/4"	73.9		
1/2"	73.9	50.0 - 100.0	
#4	69.6	30.0 - 85.0	
#8	63.1		
#20	47.6	15.0 - 60.0	
#40	36.3		
#60	22.0	5.0 - 35.0	
#200	11.0	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Poorly Graded SAND with Silt and Gravel (SP-SM), mostly fine to medium, 11% fines, 30.4% fine to coarse subangular gravel, brown to orange

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 29.3481 D_{85}= 26.2822 D_{60}= 1.8746
D_{50}= 0.9972 D_{30}= 0.3357 D_{15}= 0.1671
D_{10}= C_u= C_c=

Remarks

Sand and Gravel Sample.
Infiltrometer Test.

Date Received: 10/31/24 **Date Tested:** 10/31/24

Tested By: LC

Checked By: SG

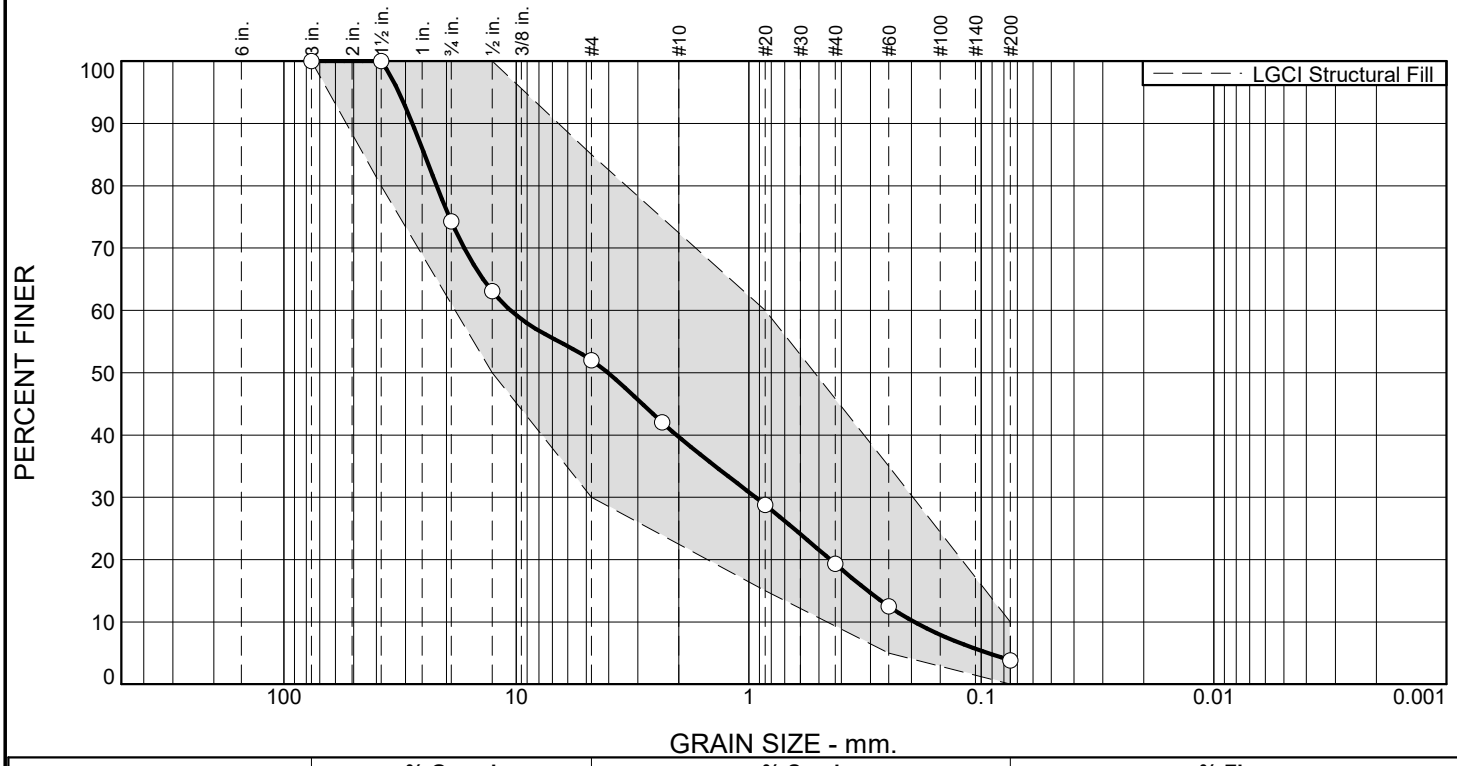
Location: TP-4
Sample Number: Infiltrometer **Depth:** 4.6'

Date Sampled: 10/31/24

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center
Wilmington, MA
Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	25.7	22.3	12.3	20.4	15.5	3.8	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1.5"	100.0	80.0 - 100.0	
0.75"	74.3		
0.5"	63.1	50.0 - 100.0	
#4	52.0	30.0 - 85.0	
#8	42.0		
#20	28.8	15.0 - 60.0	
#40	19.3		
#60	12.5	5.0 - 35.0	
#200	3.8	0.0 - 10.0	

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Well Graded SAND with Gravel (SW), fine to coarse, 3.8% fines, 48.0% fine to coarse subrounded gravel, brown

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 27.9804 D_{85}= 24.8028 D_{60}= 10.5705
D_{50}= 4.0417 D_{30}= 0.9352 D_{15}= 0.3078
D_{10}= 0.1939 C_u= 54.50 C_c= 0.43

Remarks

Fill sample.

Date Received: 11/14/25 **Date Tested:** 12/1/25

Tested By: NP

Checked By: AL

Location: Boring B-107
Sample Number: S2 **Depth:** 2.0'-4.0'

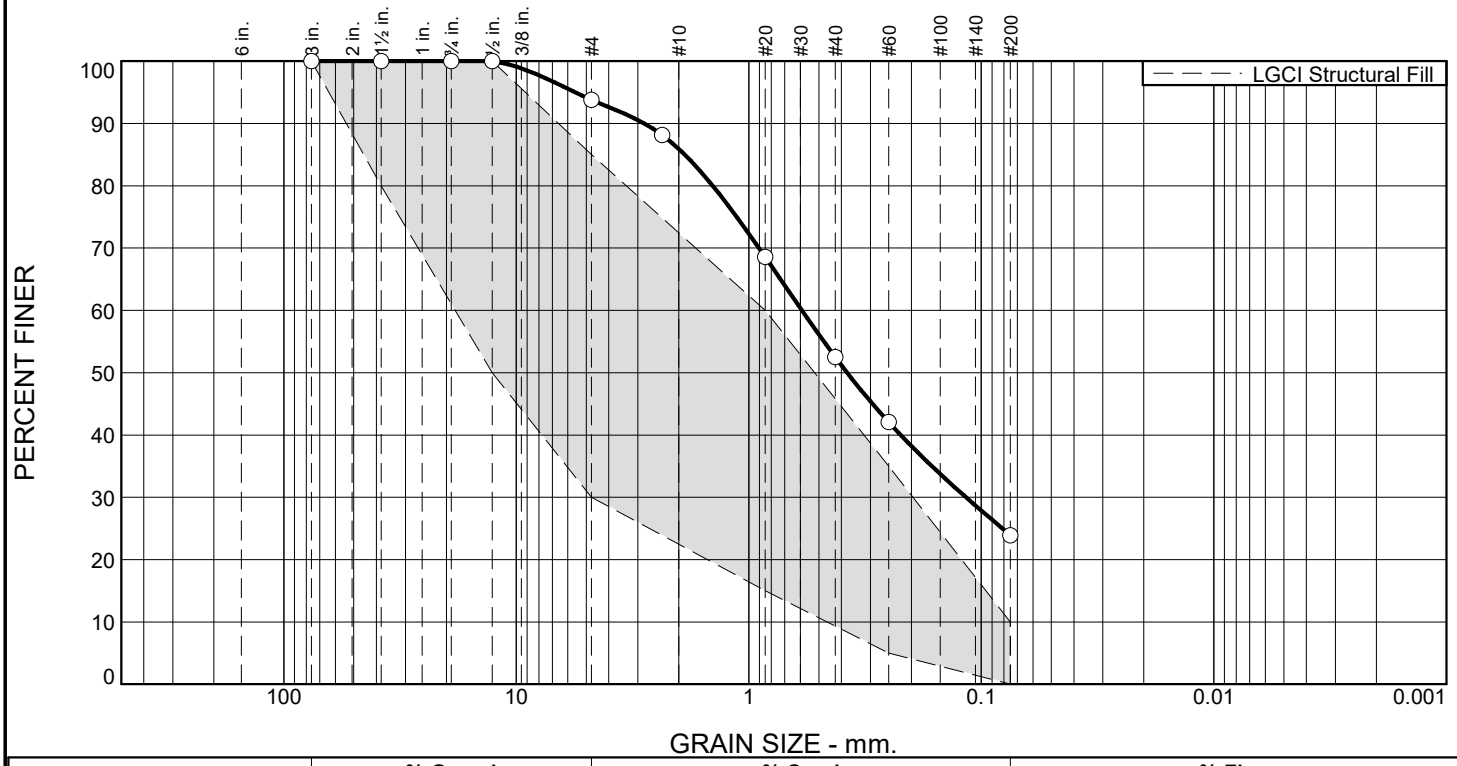
Date Sampled: 11/14/25

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center, Wilmington, MA

Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	6.2	7.9	33.4	28.6	23.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1.5"	100.0	80.0 - 100.0	
0.75"	100.0		
0.5"	100.0	50.0 - 100.0	
#4	93.8	30.0 - 85.0	X
#8	88.2		
#20	68.6	15.0 - 60.0	X
#40	52.5		
#60	42.1	5.0 - 35.0	X
#200	23.9	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Silty SAND (SM), mostly fine to medium, 23.9% fines, 6.2% fine subrounded gravel, brown

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 2.8128 D_{85}= 1.8859 D_{60}= 0.5910
D_{50}= 0.3773 D_{30}= 0.1162 D_{15}=
D_{10}= C_u= C_c=

Remarks

Fill sample.

Date Received: 11/13/25 **Date Tested:** 12/1/25

Tested By: NP

Checked By: AL

Location: Boring B-110
Sample Number: S2 **Depth:** 3.5'-5.0'

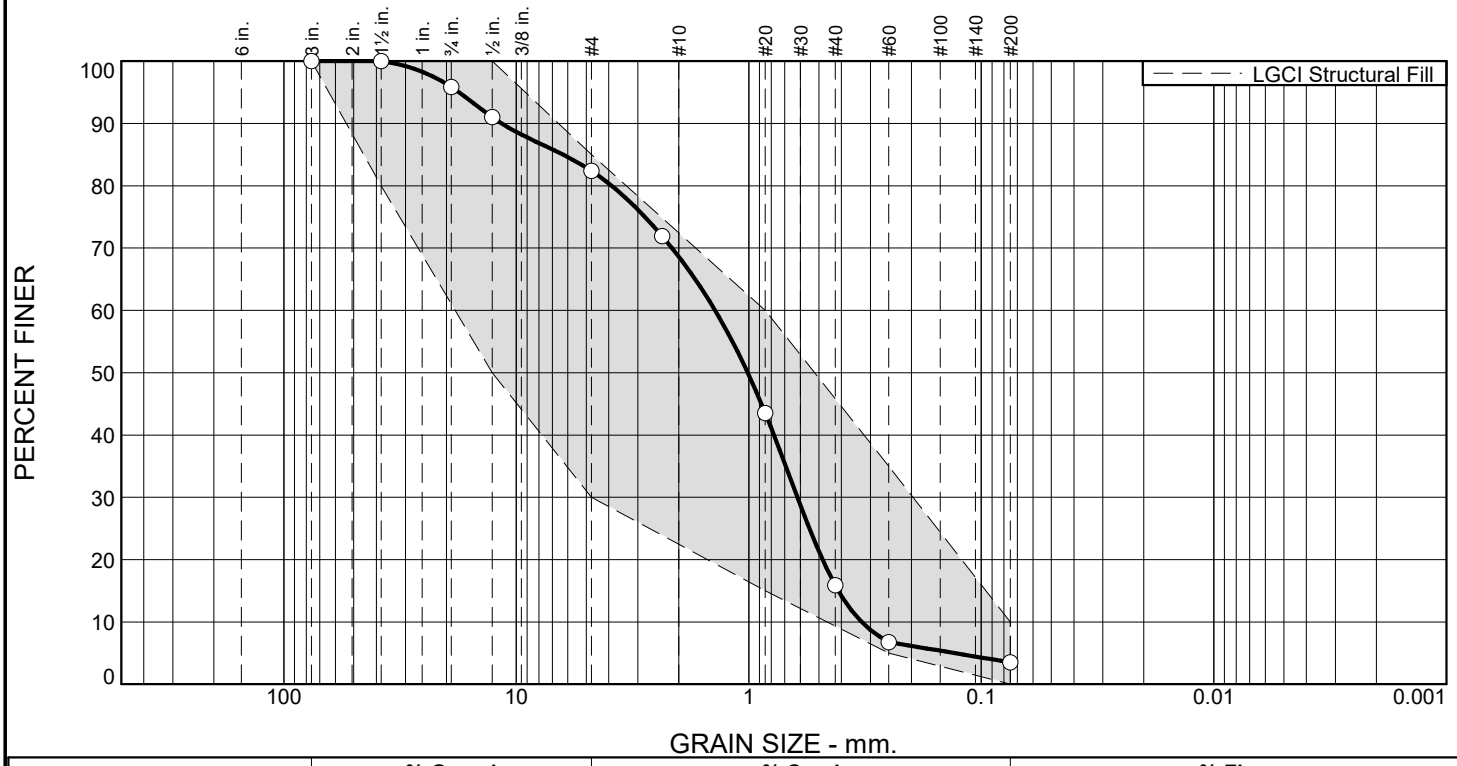
Date Sampled: 11/13/25

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center, Wilmington, MA

Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.1	13.5	13.8	52.7	12.4	3.5	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1.5"	100.0	80.0 - 100.0	
0.75"	95.9		
0.5"	91.0	50.0 - 100.0	
#4	82.4	30.0 - 85.0	
#8	71.9		
#20	43.5	15.0 - 60.0	
#40	15.9		
#60	6.8	5.0 - 35.0	
#200	3.5	0.0 - 10.0	

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Poorly Graded SAND with Gravel (SP), mostly medium, trace of fine and coarse, 3.5% fines, 17.6% fine to coarse subrounded gravel, brown

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 11.5419 D_{85}= 6.2933 D_{60}= 1.3953
D_{50}= 1.0101 D_{30}= 0.6182 D_{15}= 0.4119
D_{10}= 0.3265 C_u= 4.27 C_c= 0.84

Remarks

Infiltrometer test sample.

Date Received: 12/23/25 **Date Tested:** 12/29/25

Tested By: JA

Checked By: NP

Location: Test Pit TP-101
Sample Number: Infiltrometer **Depth:** 4.6'

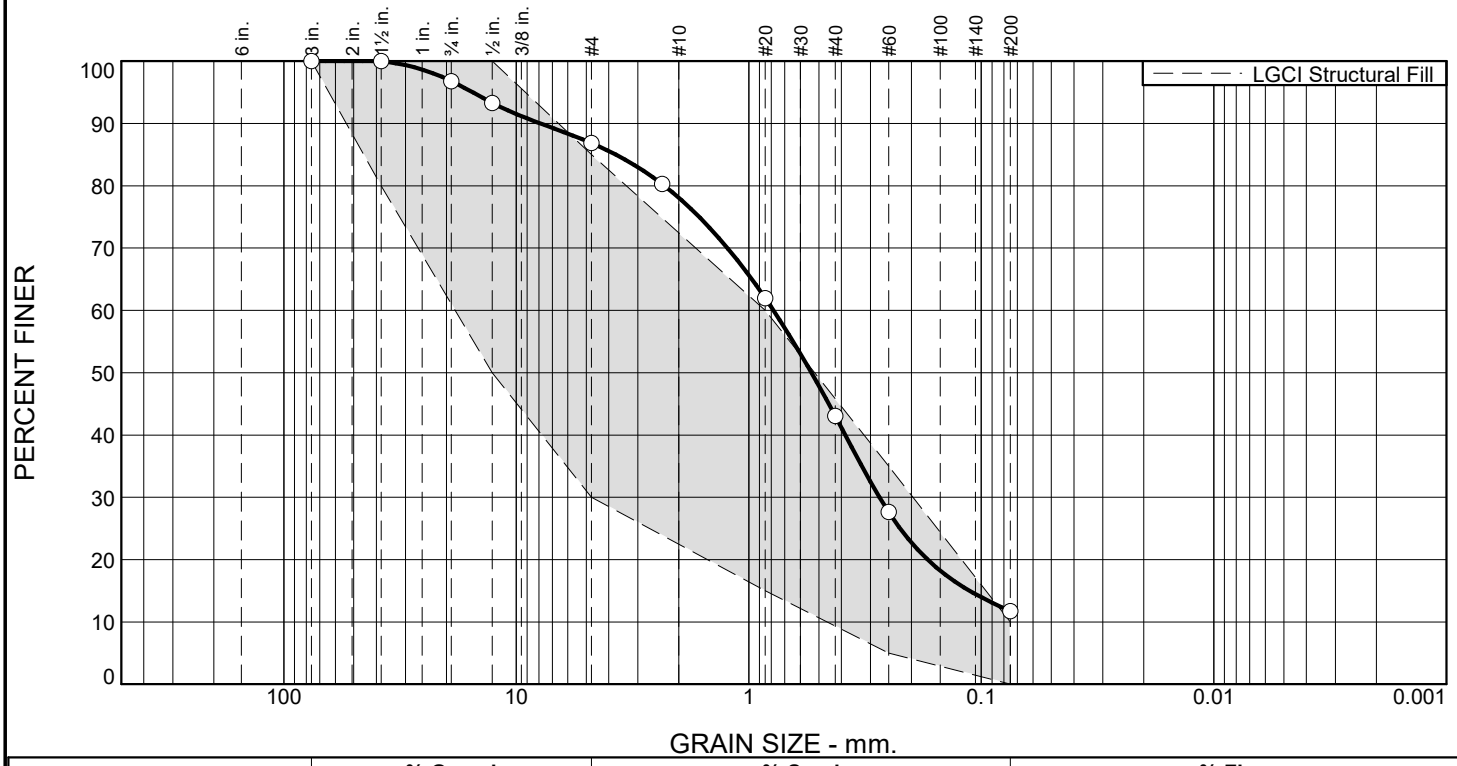
Date Sampled: 12/23/25

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center, Wilmington, MA

Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.2	9.9	8.8	35.0	31.4	11.7	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1.5"	100.0	80.0 - 100.0	
0.75"	96.8		
0.5"	93.3	50.0 - 100.0	
#4	86.9	30.0 - 85.0	X
#8	80.3		
#20	62.0	15.0 - 60.0	X
#40	43.1		
#60	27.6	5.0 - 35.0	
#200	11.7	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Poorly Graded SAND with Silt (SP-SM), fine to medium, trace of coarse, 11.7% fines, 13.1% fine to coarse subrounded gravel, brown

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 7.8670 D_{85}= 3.7298 D_{60}= 0.7836
D_{50}= 0.5381 D_{30}= 0.2740 D_{15}= 0.1123
D_{10}= C_u= C_c=

Remarks

Infiltrometer test sample.

Date Received: 12/24/25 **Date Tested:** 12/29/25

Tested By: JA

Checked By: NP

Location: Test Pit TP-105
Sample Number: Infiltrometer **Depth:** 4.5'

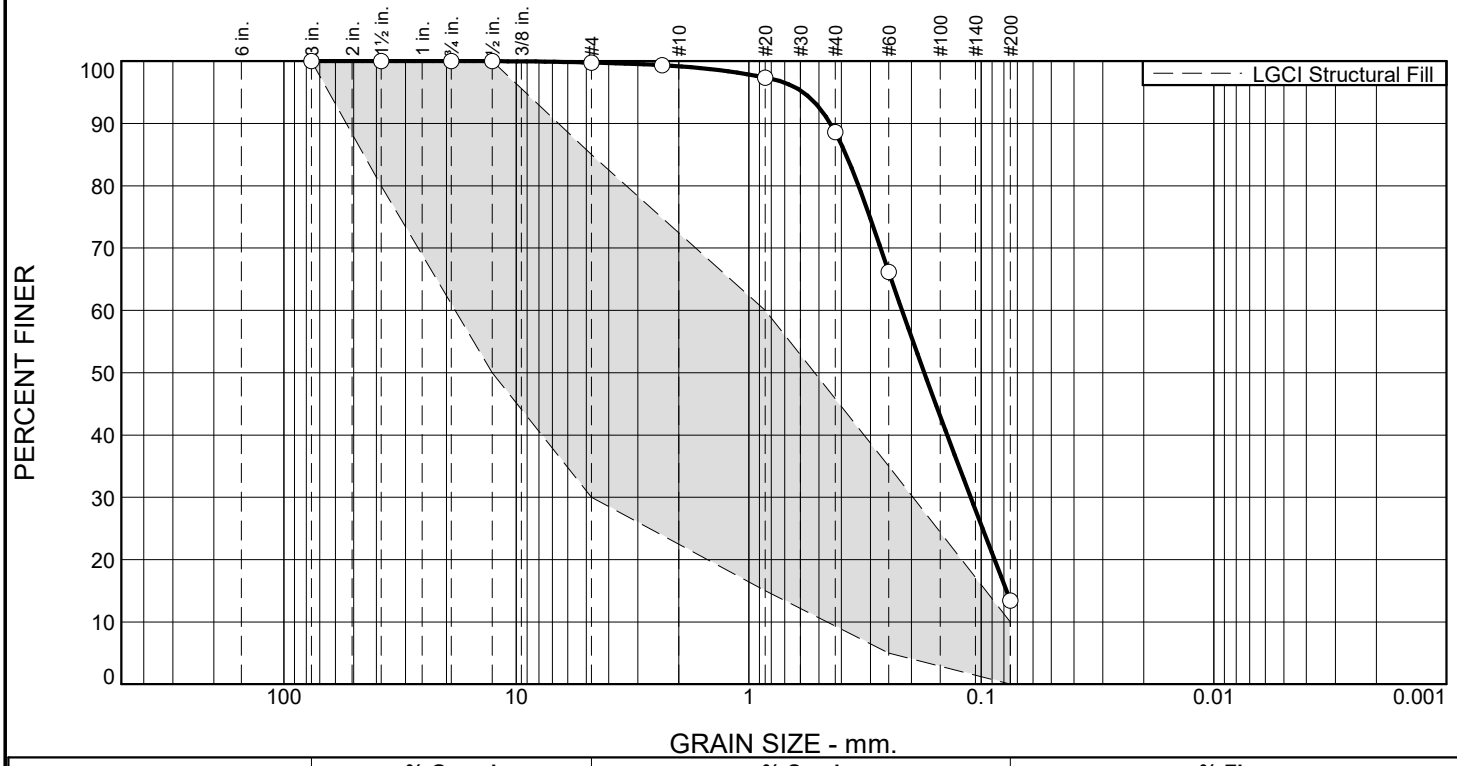
Date Sampled: 12/24/25

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center, Wilmington, MA

Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.2	0.6	10.6	75.2	13.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1.5"	100.0	80.0 - 100.0	
0.75"	100.0		
0.5"	100.0	50.0 - 100.0	
#4	99.8	30.0 - 85.0	X
#8	99.4		
#20	97.4	15.0 - 60.0	X
#40	88.6		
#60	66.2	5.0 - 35.0	X
#200	13.4	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Poorly Graded SAND with Silt (SP-SM), mostly fine, trace medium to coarse, 13.4% fines, 0.2% fine subrounded gravel, brown

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 0.4459 D_{85}= 0.3815 D_{60}= 0.2190
D_{50}= 0.1757 D_{30}= 0.1110 D_{15}= 0.0778
D_{10}= C_u= C_c=

Remarks

Infiltrometer test sample.

Date Received: 12/24/25 **Date Tested:** 12/29/25

Tested By: JA

Checked By: NP

Location: Test Pit TP-108
Sample Number: Infiltrometer **Depth:** 6.0'

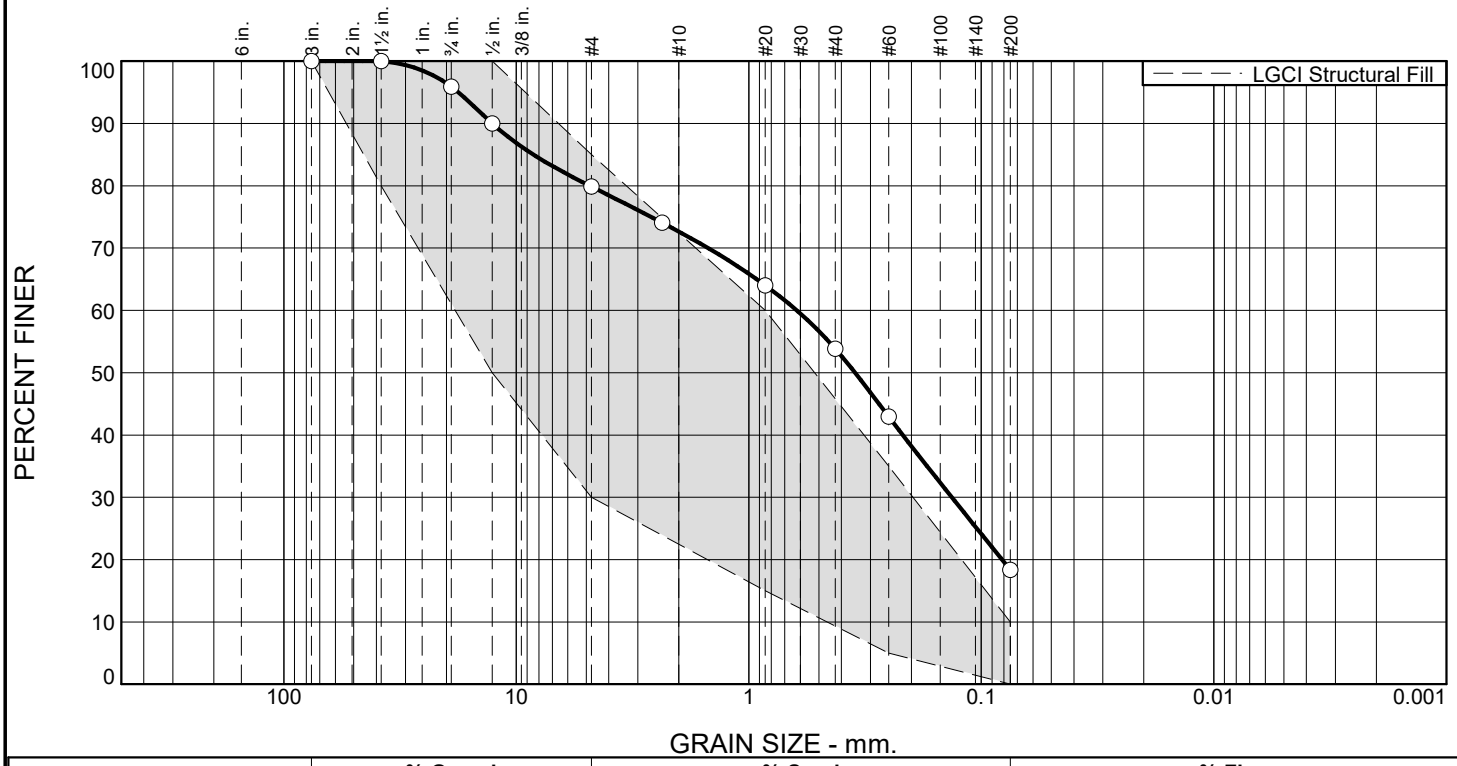
Date Sampled: 12/24/25

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center, Wilmington, MA

Project No: 2437 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.1	16.0	7.2	18.9	35.4	18.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3"	100.0	100.0	
1.5"	100.0	80.0 - 100.0	
0.75"	95.9		
0.5"	90.0	50.0 - 100.0	
#4	79.9	30.0 - 85.0	
#8	74.1		
#20	64.0	15.0 - 60.0	X
#40	53.8		
#60	43.0	5.0 - 35.0	X
#200	18.4	0.0 - 10.0	X

* LGCI Structural Fill

Material Description

ASTM (D 2488) Classification: Silty SAND with Gravel (SM), fine to medium, trace coarse, 18.4% fines, 20.1% mostly fine subrounded gravel, brown

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 12.6878 D_{85}= 8.4304 D_{60}= 0.6225
D_{50}= 0.3488 D_{30}= 0.1338 D_{15}=
D_{10}= C_u= C_c=

Remarks

Infiltrometer test sample.

Date Received: 12/30/25 **Date Tested:** 1/2/26

Tested By: NP

Checked By: AL

Location: Test Pit TP-111
Sample Number: Infiltrometer **Depth:** 3.3'

Date Sampled: 12/30/25

LGCI
Lahlaf Geotechnical Consulting, Inc.

Client: Dore and Whittier Architects, Inc.
Project: Proposed Wildwood Early Childhood Center, Wilmington, MA

Project No: 2437 **Figure**

Appendix D – Results of Double-ring Infiltrometer Tests

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Proposed Wilmington School, 320 Salem Street
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: TP-1

Test Procedure: General accordance with ASTM D 3385

Test Date 10/30/2024

LGCI Representative: BH

Weather Conditions: 60's / Cloudy

Test Depth: 5 feet

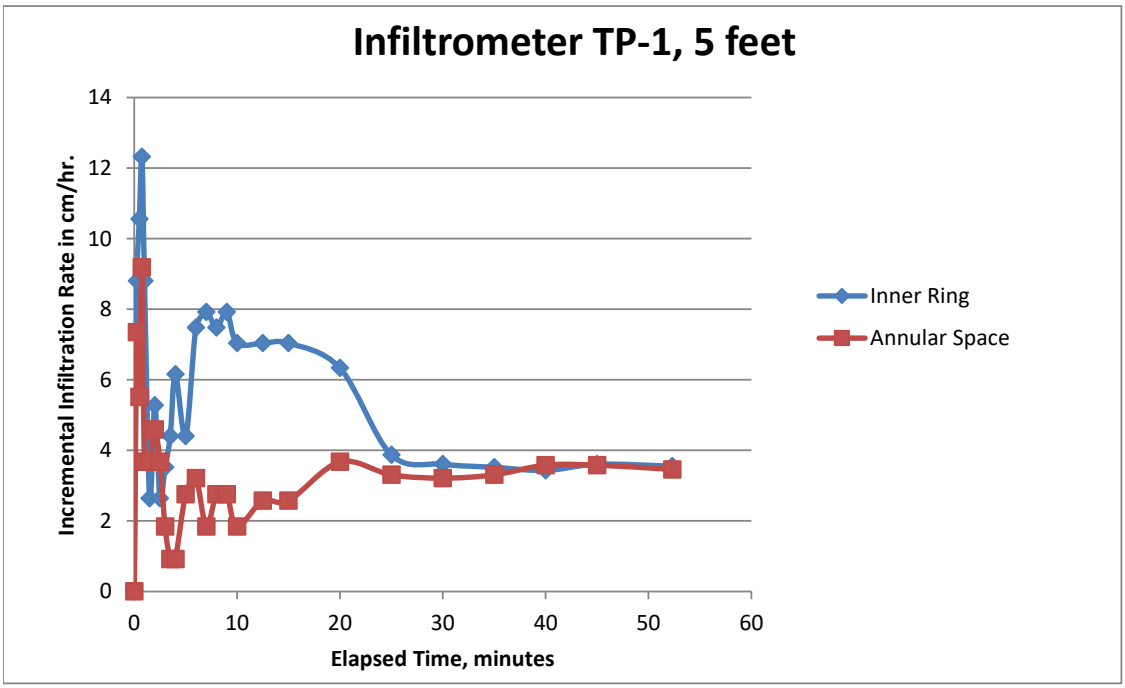
Groundwater Depth: 9.5 ft. / El. 82.5 ft. at the end of excavation

Soil Stratum: ASTM (D 2488) Classification: Silty SAND with Silt and Gravel (SM), mostly fine to medium, 27% fines, 14.1% fine gravel, brown

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	56.3	0	0	57.2	0	0
0.25	0.25	55.8	27	8.8	56.8	67	7.3
0.5	0.25	55.2	32	10.6	56.5	50	5.5
0.75	0.25	54.5	37	12.3	56.0	84	9.2
1	0.25	54.0	27	8.8	55.8	34	3.7
1.5	0.5	53.7	16	2.6	55.4	67	3.7
2	0.5	53.1	32	5.3	54.9	84	4.6
2.5	0.5	52.8	16	2.6	54.5	67	3.7
3	0.5	52.4	21	3.5	54.3	34	1.8
3.5	0.5	51.9	27	4.4	54.2	17	0.9
4	0.5	51.2	37	6.2	54.1	17	0.9
5	1	50.2	54	4.4	53.5	101	2.8
6	1	48.5	91	7.5	52.8	117	3.2
7	1	46.7	96	7.9	52.4	67	1.8
8	1	45.0	91	7.5	51.8	101	2.8
9	1	43.2	96	7.9	51.2	101	2.8
10	1	41.6	86	7.0	50.8	67	1.8
12.5	2.5	37.6	214	7.0	49.4	235	2.6
15	2.5	33.6	214	7.0	48.0	235	2.6
20	5	26.4	385	6.3	44.0	670	3.7
25	5	22.0	235	3.9	40.4	603	3.3
30	5	17.9	219	3.6	36.9	586	3.2
35	5	13.9	214	3.5	33.3	603	3.3
40	5	10.0	209	3.4	29.4	653	3.6
45	5	5.9	219	3.6	25.5	653	3.6
52.3	7.3	0.0	316	3.6	20.0	921	3.5

Notes:



Estimated K = 1.00E-03 cm/sec

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Proposed Wilmington School, 320 Salem Street
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: TP-2

Test Procedure: General accordance with ASTM D 3385

Test Date 10/30/2024

LGCI Representative: BH

Weather Conditions: 60's / Cloudy

Test Depth: 4 feet

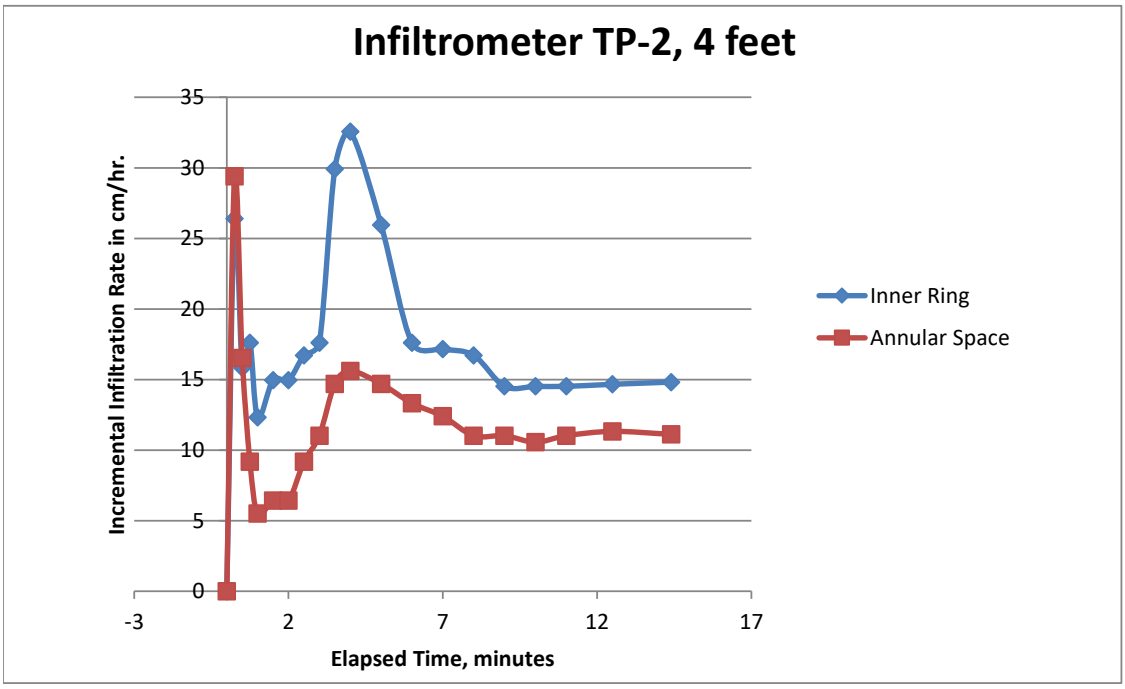
Groundwater Depth: Not Encountered

Soil Stratum: ASTM (D 2488) Classification: Silty SAND (SM), moslty fine to medium, 15.9% fines, 6.8% mostly fine subangular gravel, brown to orange

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	57.4	0	0	57.5	0	0
0.25	0.25	55.9	80	26.4	55.9	268	29.4
0.5	0.25	55.0	48	15.8	55.0	151	16.5
0.75	0.25	54.0	54	17.6	54.5	84	9.2
1	0.25	53.3	37	12.3	54.2	50	5.5
1.5	0.5	51.6	91	15.0	53.5	117	6.4
2	0.5	49.9	91	15.0	52.8	117	6.4
2.5	0.5	48.0	102	16.7	51.8	168	9.2
3	0.5	46.0	107	17.6	50.6	201	11.0
3.5	0.5	42.6	182	29.9	49.0	268	14.7
4	0.5	38.9	198	32.6	47.3	285	15.6
5	1	33.0	316	26.0	44.1	536	14.7
6	1	29.0	214	17.6	41.2	486	13.3
7	1	25.1	209	17.2	38.5	452	12.4
8	1	21.3	203	16.7	36.1	402	11.0
9	1	18.0	177	14.5	33.7	402	11.0
10	1	14.7	177	14.5	31.4	385	10.6
11	1	11.4	177	14.5	29.0	402	11.0
12.5	1.5	6.4	268	14.7	25.3	620	11.3
14.4	1.9	0.0	343	14.8	20.7	771	11.1

Notes:



Estimated K = 4.06E-03 cm/sec

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Proposed Wilmington School, 320 Salem Street
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: TP-3

Test Procedure: General accordance with ASTM D 3385

Test Date 10/31/2024

LGCI Representative: BH

Weather Conditions: 60's / Cloudy

Test Depth: 4 feet

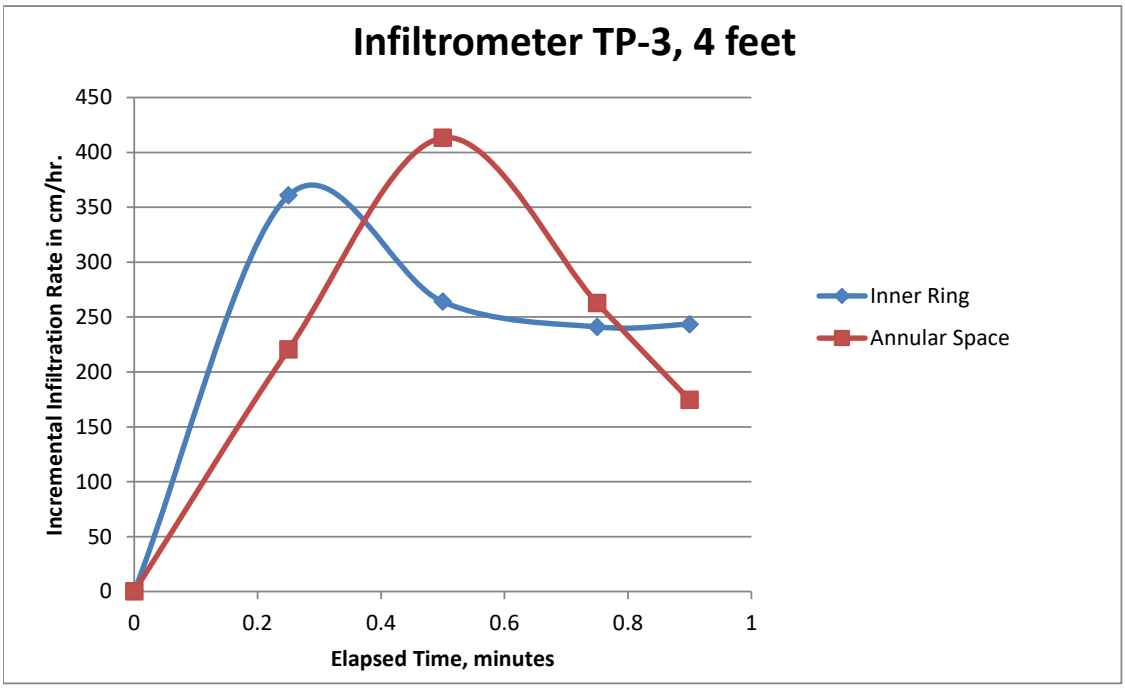
Groundwater Depth: Not Encountered

Soil Stratum: ASTM (D 2488) Classification: Poorly Graded SAND with Gravel (SP), fine to coarse, 1.5% fines, 31.4% fine to coarse subangular gravel, light brown to orange

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	57.5	0	0	57.5	0	0
0.25	0.25	37.0	1097	360.7	45.5	2010	220.4
0.5	0.25	22.0	803	263.9	23.0	3769	413.3
0.75	0.25	8.3	733	241.1	8.7	2396	262.7
0.9	0.15	0.0	444	243.4	3.0	955	174.5

Notes:



Estimated K 6.73E-02 cm/sec

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Proposed Wilmington School, 320 Salem Street
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: TP-4

Test Procedure: General accordance with ASTM D 3385

Test Date 10/31/2024

LGCI Representative: BH

Weather Conditions: 60's / Cloudy

Test Depth: 4.5 feet

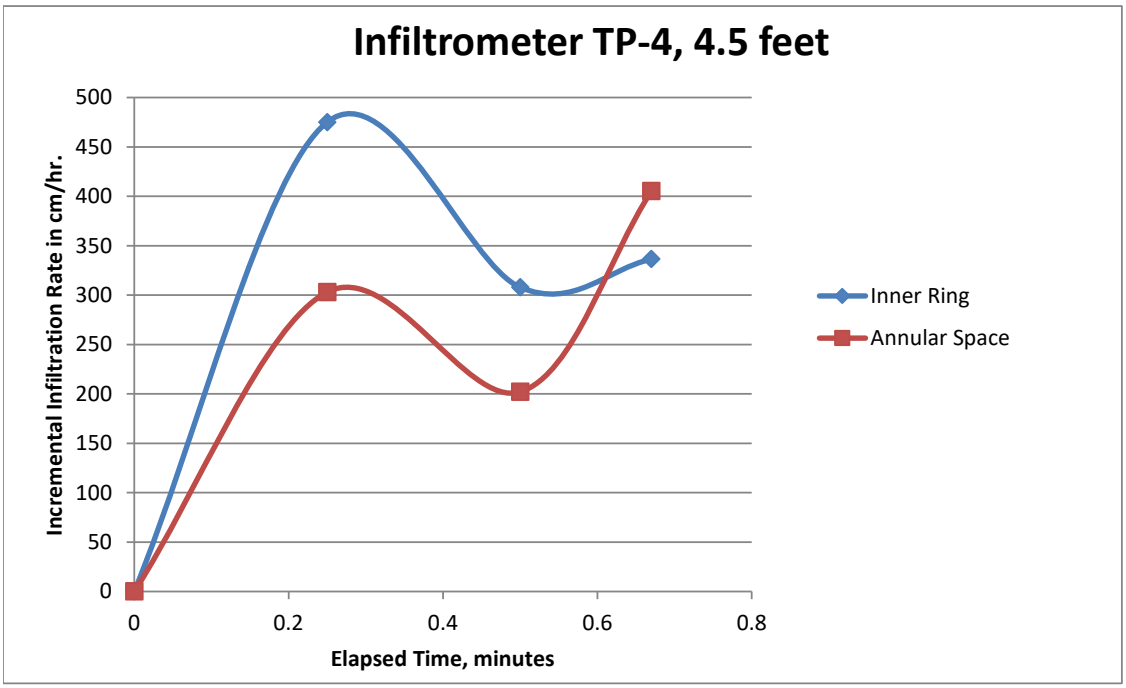
Groundwater Depth: Not Encountered

Soil Stratum: ASTM (D 2488) Classification: Poorly Graded SAND with Silt and Gravel (SP-SM), mostly fine to medium, 11% fines, 30.4% fine to coarse gravel, brown to orange

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	57.5	0	0	57.5	0	0
0.25	0.25	30.5	1445	475.1	41.0	2764	303.1
0.5	0.25	13.0	937	307.9	30.0	1843	202.0
0.67	0.17	0.0	696	336.4	15.0	2513	405.2

Notes:



Estimated K* = 8.95E-02 cm/sec

* Value may not be reliable to short time to complete test

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Prop. Wildwood Early Childhood Center
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: Test Pit TP-101

Test Procedure: General accordance with ASTM D 3385

Test Date 12/23/2025

LGCI Representative: OIL

Weather Conditions: 30's Cloudy

Test Depth: 4.6'

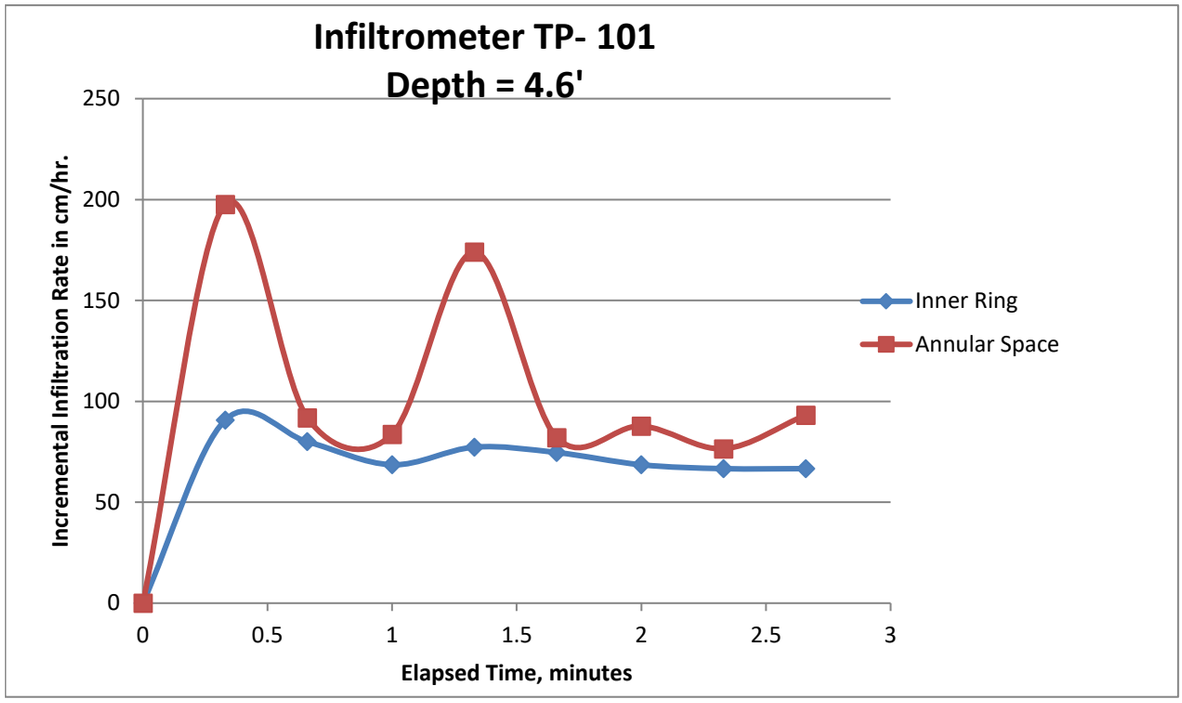
Groundwater Depth: NE

Soil Stratum: Poorly Graded SAND with Gravel (SP), mostly medium, trace of fine and coarse, 3.5% fines, 17.6% fine to coarse subrounded gravel, brown

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	58.3	0	0	58.2	0	0
0.33	0.33	51.5	364	90.6	44.0	2379	197.6
0.66	0.33	45.5	321	80.0	37.4	1106	91.8
1	0.34	40.2	284	68.6	31.2	1039	83.7
1.33	0.33	34.4	310	77.3	24.6	2094	173.9
1.66	0.33	28.8	300	74.6	18.7	988	82.1
2	0.34	23.5	284	68.6	12.2	1089	87.8
2.33	0.33	18.5	268	66.7	6.7	921	76.5
2.66	0.33	13.5	268	66.7	0.6	1122	93.2
3	0.34	9.9	193	46.6	0.0	101	8.1

Notes:



Estimated K = 1.67E-02 cm/sec.

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Prop. Wildwood Early Childhood Center
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: Test Pit TP-105

Test Procedure: General accordance with ASTM D 3385

Test Date 12/24/2025

LGCI Representative: OIL

Weather Conditions: 30's Cloudy

Test Depth: 4.5'

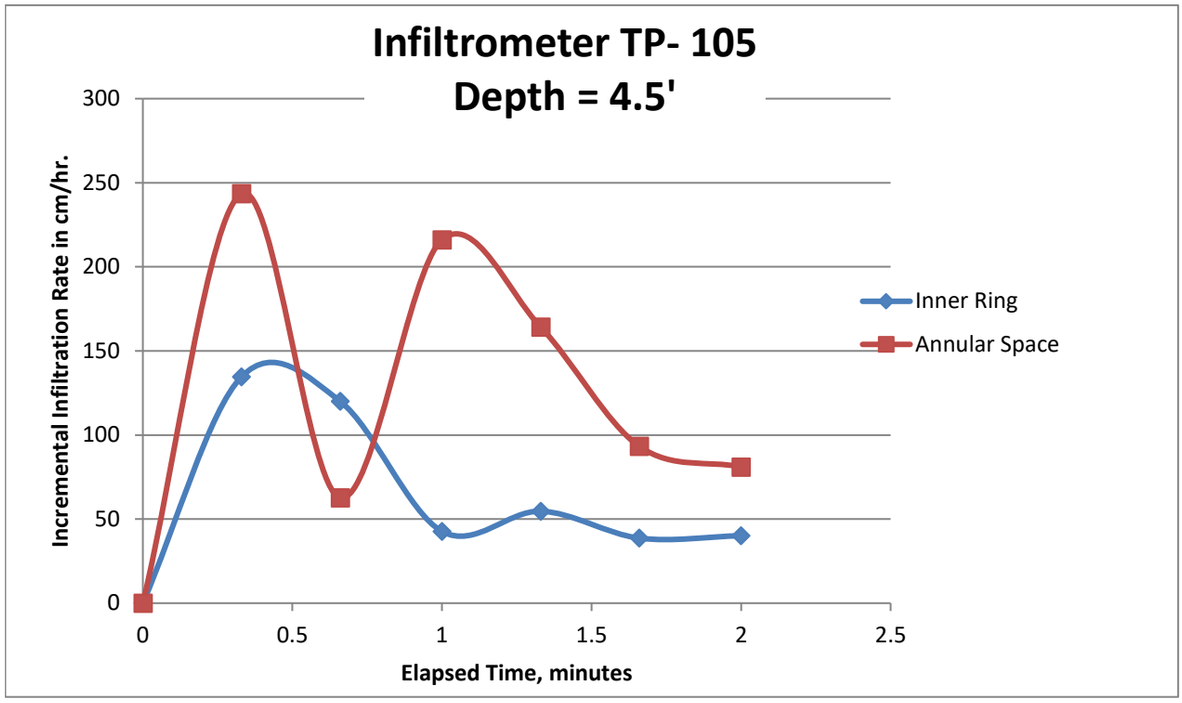
Groundwater Depth: 10.8

Soil Stratum: Poorly Graded SAND with Silt (SP-SM), fine to medium, trace of coarse, 11.7% fines, 13.1% fine to coarse subrounded gravel, brown

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	58.3	0	0	58.3	0	0
0.33	0.33	48.2	541	134.6	40.8	2932	243.5
0.66	0.33	39.2	482	120.0	36.3	754	62.6
1	0.34	35.9	177	42.7	20.3	2680	216.1
1.33	0.33	31.8	219	54.7	15.2	1977	164.2
1.66	0.33	28.9	155	38.7	8.5	1122	93.2
2	0.34	25.8	166	40.1	2.5	1005	81.0
2.33	0.33	24.4	75	18.7	0.0	419	34.8

Notes:



Estimated K = 8.16E-03 cm/sec.

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Prop. Wildwood Early Childhood Center
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: Test Pit TP-108

Test Procedure: General accordance with ASTM D 3385

Test Date 12/24/2025

LGCI Representative: OIL

Weather Conditions: 30's Cloudy

Test Depth: 6.0'

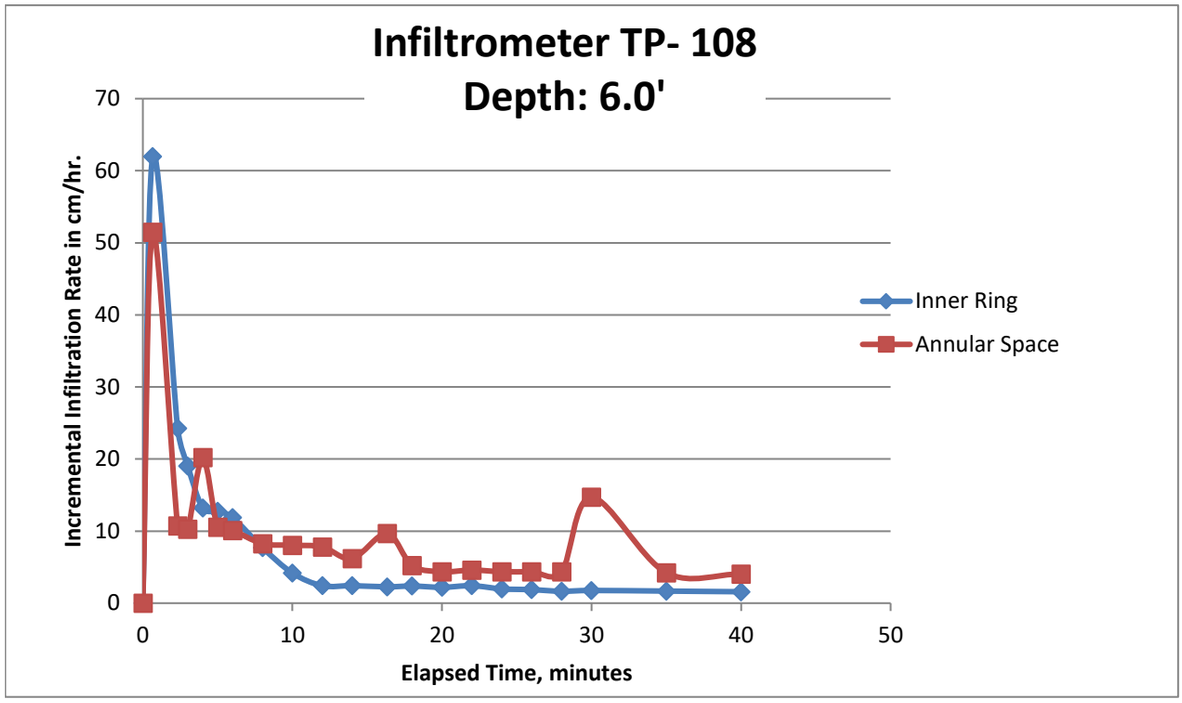
Groundwater Depth: 8.9

Soil Stratum: Poorly Graded SAND with Silt (SP-SM), mostly fine, trace medium to coarse, 13.4% fines, 0.2% fine subrounded gravel, brown

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	58.3	0	0	58.3	0	0
0.66	0.66	49.0	498	62.0	50.9	1240	51.5
2.33	1.67	39.8	492	24.2	47.0	653	10.7
3	0.67	36.9	155	19.0	45.5	251	10.3
4	1	33.9	161	13.2	43.4	737	20.2
5	1	31.0	155	12.8	41.1	385	10.6
6	1	28.3	145	11.9	38.9	369	10.1
8	2	24.8	187	7.7	35.3	603	8.3
10	2	22.9	102	4.2	31.8	586	8.0
12	2	21.8	59	2.4	28.4	570	7.8
14	2	20.7	59	2.4	25.7	452	6.2
16.33	2.33	19.5	64	2.3	22.7	821	9.7
18	1.67	18.6	48	2.4	20.8	318	5.2
20	2	17.6	54	2.2	18.9	318	4.4
22	2	16.5	59	2.4	16.9	335	4.6
24	2	15.6	48	2.0	15.0	318	4.4
26	2	14.8	45	1.9	13.1	318	4.4
28	2	14.0	40	1.6	11.2	318	4.4
30	2	13.2	43	1.8	9.4	1072	14.7
35	5	11.3	102	1.7	4.8	771	4.2
40	5	9.5	96	1.6	0.4	737	4.0

Notes:



Estimated K = 5.70E-04 cm/sec.

LGCI
Lahlaf Geotechnical Consulting, Inc.

Double Ring Infiltrometer Test

Project: Name: Prop. Wildwood Early Childhood Center
Location: Wilmington, MA
LGCI Project Number: 2437

Test Location: Test Pit TP-111

Test Procedure: General accordance with ASTM D 3385

Test Date 12/30/2025

LGCI Representative: OIL

Weather Conditions: 20's Cloudy

Test Depth: 3.3'

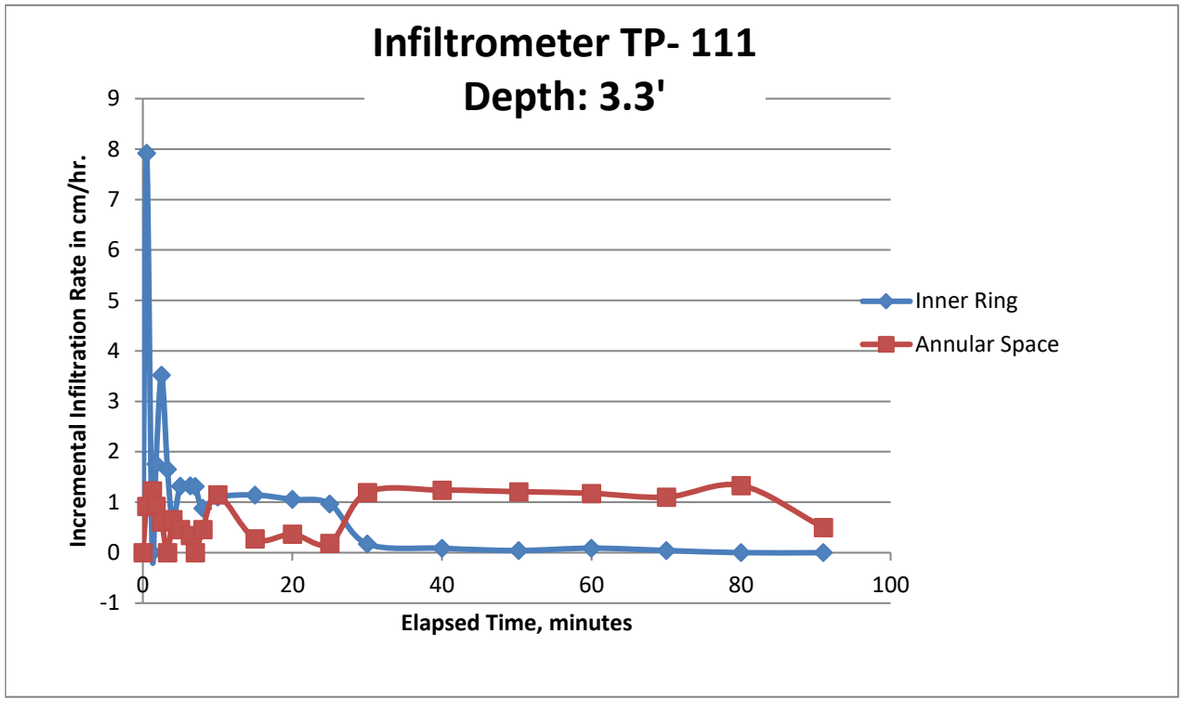
Groundwater Depth: NE

Soil Stratum: Silty SAND with Gravel (SM), fine to medium, trace coarse, 18.4% fines, 20.1% mostly fine subrounded gravel, brown

	Inner Ring	Annular Space
Area (sq. cm)	730	2189
Depth Driven (in)	3	3
Water Depth (in)	3	3
Mariotte tube (cc/div.)	53.52	167.53

Elapsed Time	Time Increment	Inner Ring			Annular Space		
		Reading	Volume	Infiltration Rate	Reading	Volume	Infiltration Rate
(min)	(min)	(div)	(cc)	(cm/hr.)	(div)	(cc)	(cm/hr.)
0	0	58.0	0	0	57.6	0	0
0.5	0.5	57.1	48	7.9	57.5	17	0.9
1.25	0.75	57.1	0	0.0	57.3	34	1.2
1.75	0.5	56.9	11	1.8	57.2	17	0.9
2.5	0.75	56.3	32	3.5	57.1	17	0.6
3.3	0.8	56.0	16	1.6	57.1	0	0.0
4	0.7	55.9	5	0.6	57.0	17	0.7
5	1	55.6	16	1.3	56.9	17	0.5
6.33	1.33	55.2	21	1.3	56.8	17	0.3
7	0.67	55.0	11	1.3	56.8	0	0.0
8	1	54.8	11	0.9	56.7	17	0.5
10	2	54.3	27	1.1	56.5	84	1.1
15	5	53.0	70	1.1	56.2	50	0.3
20	5	51.8	64	1.1	55.8	67	0.4
25	5	50.7	59	1.0	55.6	34	0.2
30	5	50.5	11	0.2	54.3	218	1.2
40	10	50.3	11	0.1	51.6	452	1.2
50.25	10.25	50.2	5	0.0	48.9	452	1.2
60	9.75	50.0	11	0.1	46.4	419	1.2
70	10	49.9	5	0.0	44.0	402	1.1
80	10	49.9	0	0.0	41.1	486	1.3
91	11	49.9	0	0.0	39.9	201	0.5

Notes:



Estimated K = 3.67E-05 cm/sec.

Note : Water froze in testing apparatus during the test. The test results may not be reliable.

Phase I Environmental Site Assessment

"Wildwood School at North Intermediate School"

320 Salem Street, Wilmington, Middlesex County, Massachusetts

November 30, 2025
PEER Project No. 8593



Prepared for:
DORE + WHITTIER
Newburyport, Massachusetts

Prepared by:
PEER Consultants, P.C.
Burlington, Massachusetts

PEER
CONSULTANTS, P.C.
Est. 1978

25 Mall Road, Suite 206 • Burlington, MA 01803
Phone: 781.238.8880 • Fax: 781.238.8884

Engineers • Scientists • Experts

November 30, 2025

DORE + WHITTIER
260 Merrimac Street
Newburyport, Massachusetts 01950

Attn: Rani Philip, Assoc. AIA
Project Manager
E: rphilip@DoreandWhittier.com

Re: Phase I Environmental Site Assessment
Wildwood School @ North Intermediate School Property
320 Salem Street, Wilmington, Middlesex County, Massachusetts 01887
PEER Project No. 8593

Dear Ms. Philip:

PEER Consultants, Inc. (PEER) is pleased to submit the enclosed ASTM 1527-21, Phase I environmental site assessment report for the above-referenced site. This assessment was performed in accordance with PEER Proposal No. 8593 dated July 30, 2024.

We appreciate the opportunity to be of assistance to you on this project. In addition to Phase I environmental site assessment environmental science consulting services, our professionals provide services for Water/Wastewater, Site Civil/Stormwater; Stream, Coastal, Asset Protection Design; Conservation and Renewable Energy; and Engineering Services During Construction on a wide variety of projects locally, regionally, and nationally. For more detailed information on all of PEER's services, please visit our website at www.PEERcpc.com. If there are any questions regarding this report or if we may be of further assistance, please contact us.

Sincerely,
PEER Consultants, P.C.

dave gorden

David Gorden, CPSS, CWS
Board Certified Environmental Scientist / Environmental Professional
/dg/ 8593

TABLE OF CONTENTS

Page No.

EXECUTIVE SUMMARY I
Findings and Opinions i
Conclusions iv
1.0 INTRODUCTION 1
1.1 Subject Property Identification 1
1.2 Scope of Work 6
1.3 Standard of Care 7
1.3.1 Use Not Limited to CERCLA 8
1.3.2 Residential Tenants / Purchasers and Others 8
1.3.3 Site Specific 8
1.4 Principles 8
1.4.1 Uncertainty Not Eliminated 9
1.4.2 Not Exhaustive 9
1.4.3 Level of Inquiry is Variable 9
1.4.4 Comparison with Subsequent Inquiry 9
1.4.5 Point in Time 10
1.5 Limiting Conditions, Deviations, Exceptions, Significant Assumptions, and Special Terms and Conditions 10
1.5.1 Data Failure 11
1.5.2 Data Gap 12
1.6 Reliance 14
2.0 USER PROVIDED INFORMATION 16
2.1 User Provided Information 16
3.0 SUBJECT PROPERTY RECONNAISSANCE 19
3.1 General Subject Property Information 20
3.2 Current Uses of the Subject Property 20
3.3 Past Uses of Subject Property 20
3.4 Current Uses of Adjoining Properties 20
3.5 Past Uses of Adjoining Properties 21
3.6 Current or Past Uses in the Surrounding Area 21
3.7 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions 22
3.8 Structures and Other Improvements at the Subject Property 22
3.9 Roads 23
3.10 Potable Water Supply 23
3.11 Sewage Disposal 23
3.12 Other Subject Property Characteristics: Site Reconnaissance 23
3.12.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses 24
3.12.2 Storage Tanks 25
3.12.3 Strong, Pungent, or Noxious Odors and Their Sources 26
3.12.4 Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products 26
3.12.5 Drums, Totes, and Intermediate Bulk Containers 26
3.12.6 Hazardous Substance and Petroleum Product Containers Not in Connection With Identified Uses 26

TABLE OF CONTENTS (continued)

3.12.7 Unidentified Substance Containers 26
3.12.8 PCB-Containing Items 27
3.12.9 Heating/Cooling 27
3.12.10 Stains or Corrosion on Floors, Walls, or Ceilings 28
3.12.11 Drains and Sumps 28
3.12.12 Pits, Ponds, or Lagoons 29
3.12.13 Stained Soil or Pavement 29
3.12.14 Stressed Vegetation 29
3.12.15 Solid Waste 29
3.12.16 Water/Wastewater 30
3.12.17 Wells 30
3.12.18 Septic Systems or Cesspools 30
3.13 Subject Property Summary 31
4.0 RECORDS REVIEW 33
4.1 Physical Setting 33
4.2 Historical Records Review 37
4.2.1 Aerial Photographs 37
4.2.2 Fire Insurance Maps 44
4.2.3 Local Street Directories 44
4.2.4 Topographic Maps 47
4.2.5 Building Department Records 53
4.2.6 Interviews 53
4.2.7 Property Tax Files 54
4.2.8 Zoning/Land Use Records 54
4.2.9 Other Historical Sources 55
Environmental Liens 56
Prior Assessments 56
4.3 Regulatory Records Review 59
4.3.1 Standard Government Environmental Record Resources 60
4.3.2 Federal Database and State / Tribal Database 60
4.3.3 Federal and/or State/Tribal Records Review Summary 71
4.3.4 Additional Government Environmental Record Sources 71
5.0 INTERVIEWS 72
5.1 Key Site Manager 72
5.2 Occupants 74
5.3 Major Occupants 75
5.4 Interviews with Past Owners, Operators, and Occupants 75
5.5 Interview Requirements for Abandoned Properties 76
5.6 Interviews with State and/or Local Government Officials 76
5.6.1 Local Fire Department 76
5.6.2 State and/or Local Health Agency 80
5.6.3 State and/or Local Environmental Agency 80
5.6.4 Local Building Permit Agency or Groundwater Use Permit Agency 80
5.7 Interviews Summary 80
6.0 NON-SCOPE SERVICES 82
7.0 FINDINGS AND OPINIONS 83
8.0 CONCLUSIONS 87
8.1 Non-Scope Services 88

8.2 Additional Investigation 89
8.3 Limiting Conditions, Deletions, Deviations, Data Gaps 90
9.0 ENVIRONMENTAL PROFESSIONAL STATEMENT 93
10.0 REFERENCES 94

APPENDICES

APPENDIX A SUBJECT PROPERTY FIGURES
Figure 1 – USGS Topographic Map
Figure 2 – Aerial Sketch – Subject Property
Figure 3 – Aerial Sketch – Adjoining Properties

APPENDIX B DESCRIPTION OF ABBREVIATION, ACRONYMS, AND TERMS
Abbreviations and Acronyms
Terms

APPENDIX C HISTORICAL RECORDS REVIEW
User Questionnaire (as Provided by User)
The EDR Aerial Photo Decade Package
Certified Sanborn ® Map Report
The EDR - City Directory Image Report
EDR Historical Topo Map Report with QuadMatch™

APPENDIX D The EDR Radius Map™ Report with GeoCheck®

APPENDIX E Photographs

APPENDIX F Credentials of Environmental Professional

EXECUTIVE SUMMARY

This Phase I environmental site assessment was performed in accordance with PEER Consultant's (PEER) proposal dated July 30, 2024, and was conducted consistent with the procedures included in ASTM E1527-21, *Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The environmental site assessment was conducted under the supervision or responsible charge of Mr. Dave Gorden, Board Certified Environmental Scientist and Environmental Professional with PEER. In addition, Mr. Gorden performed the Subject Property reconnaissance on October 29, 2025.

In general, the Subject Property consists of one parcel, addressed as "320 Salem Street", Wilmington, Middlesex County, Massachusetts, and is identified by Parcel ID 97/ /61/ / (Salem Street), and consists of approximately 12.145 acres. The parcel is owned by the Town of Wilmington and is mainly classified for assessment purposes as Town Education C with a public school style, commercial 1.5-story building, built about 1955, and having a brick/masonry exterior, and flat, tar and gravel roof cover.

In general, from a topographic high along the southern edge, the Subject Property slopes down radially to the northeast, north, west, and southwest. Topographic elevations on the Subject Property range from approximately 108 feet above mean sea level (msl) along the southern edge of the Property (near 314 Salem Street) at Salem Street to approximately 92 feet above msl both along the extreme northwestern corner of the Property (near 9 Arlene Drive), and along the extreme southwestern corner of the Property (near 5 Arlene Drive).

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THE USER OF THIS REPORT SHOULD RECOGNIZE THAT DETAILS WERE NOT INCLUDED AND / OR WERE NOT FULLY DEVELOPED IN THIS EXECUTIVE SUMMARY SECTION; THEREFORE, THE REPORT MUST BE READ AND CONSIDERED IN ITS ENTIRETY FOR A COMPREHENSIVE UNDERSTANDING OF THE INFORMATION CONTAINED HEREIN.

Findings and Opinions

This section identifies the presence of recognized environmental conditions, controlled recognized environmental conditions, historical recognized environmental conditions, or de minimis conditions.

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Consistent with ASTM E1527-21 Section 3.2.73, and for the purposes of this assessment, recognized environmental condition means (1) the presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment. The following REC has been identified associated with the Subject Property.

- North Intermediate School, 320 Salem Street, Wilmington, MA
  - Based on the results of the April 23, 1987 Petrotite Tank System Tightness Test, which indicated that the "front" tank was reported as "leaked at manhole cover", and which said steel tanks were reportedly removed and disposed of on August 18, 1989 with no additional observations noted in the documents; and based on the lack of Fire Department information between August 18, 1989 and August 22, 2003 for the Subject Property related to any underground storage tanks; and based on the documented service issues with the Veeder Root monitoring system between August 22, 2003 and May 21, 2013; and considering that Permit 2014-144 authorized a 10,000 gallon tank to be removed from 320 Salem Street by Petroleum Management Services, Inc. of Reading, MA, and be transported by Lighthouse Environmental Solutions, LLC to Allied Recycling in Walpole, MA with no additional observations noted in the documents; and considering that MA SPILLS database reported a spill of virgin petroleum to the soil on August 18, 1989, the suspected presence of petroleum impacted soil from a reported spill of virgin petroleum to the soil on August 18, 1989, and presumed to be located to the west southwest of Door 1 for the Building at the Subject Property is considered to be a REC to the Subject Property.

↔

Consistent with ASTM E1527-21 Section 3.2.17, a controlled recognized environmental condition is a "recognized environmental condition affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)".

This environmental site assessment did not identify Controlled RECs associated with the Subject Property.

↔

Consistent with ASTM E1527-21 Section 3.2.39, a historical recognized environmental condition is a "previous release of hazardous substances or petroleum products affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the Subject Property to any controls (for example, activity and use limitations or other property use limitations)". Please note that a historical recognized environmental condition is not a recognized environmental condition.

This environmental site assessment did not identify Historical RECs associated with the Subject Property.

↔

Consistent with ASTM E1527-21 Section 3.2.20, and for the purposes of this assessment, a de minimis condition is a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The following two de minimis conditions have been identified on or associated with the Subject Property.

- PEER observed stained bituminous pavement as follows: black stained bituminous pavement in the area of the employee parking lot along the eastern edge of the Subject Property; orange-red stained bituminous pavement in the area of the Casella metal trash container to the east of an exit door near the Kitchen for the Building at the Subject Property; and black stained bituminous pavement along the student drop off roadway to the south of the Main entrance to the Building at the Subject Property.

- PEER determined that based on analytical laboratory data that the arsenic concentration in soil from two samples collected above the groundwater table and two samples collected below the groundwater table as part of PEER's November 15, 2024 Limited Subsurface Soil Investigation Memorandum exceeded the reportable concentration (RC) in both S-1 and S-2 soils (310 CMR 40.00). In addition, PEER determined that based on analytical laboratory data that the arsenic concentration in soil from one sample collected above the groundwater table exceeded the criteria for acceptance at both a lined landfill and an unlined landfill. PEER understands that this portion of Wilmington is located within a naturally occurring arsenic (in bedrock) belt which causes "nearly all contamination of bedrock wells in the State by arsenic from a natural source". PEER further understands that the following releases and threats of release of oil and/or hazardous material are exempt from the notification requirements set forth in 310 CMR 40.0300: (22) arsenic, beryllium or nickel in Boston Blue Clay or arsenic in an area documented by the U.S.

Geological Survey or in other scientific literature as an area of elevated arsenic measured in soil or groundwater.

Conclusions

We have performed a Phase I environmental site assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of 320 Salem Street, Wilmington, Massachusetts, the Subject Property. Any exceptions to, or deletions from, this Practice are described in Section 1.5 of this report. This assessment has revealed the following recognized environmental conditions, and/or controlled recognized environmental conditions, and/or historical recognized environmental conditions, and/or de minimis conditions, and/or significant data gaps in connection with the Subject Property:

Subject Property

- 320 Salem Street, Wilmington, MA
  - One REC
  - No Historical RECs
  - No Controlled RECs
  - Two de minimis conditions

It is the opinion of the environmental professional that data gaps did not occur except for lack of or inability to obtain the following information required by this Practice despite good faith efforts by the environmental professional to gather such information:

- Limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks.

The environmental professional reviewed this data gap for significance, specifically whether other information and/or professional experience raises reasonable concerns involving the effects of this data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions.

The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks does not represent a significant data gap.

Observation of surficial soils was limited due to the presence of buildings, asphalt, cement, and other covered surfaces on the Subject Property. This is considered to be a data gap; however, considering a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and based on any future scope activities such as the previously project-authorized recommendation of a proposed additional subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), it may be expected that any stand-alone geo-environmental surface and subsurface soil investigation event on the Subject Property may be able to provide additional details at specific soil borings, but will not eliminate uncertainty concerning observations of surficial and sub-surficial soils on the Subject Property.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property does not represent a significant data gap.

Please note that PEER observed a soil-based floor within a crawl space with an access door from the boiler room in the “basement” of the elongated northeast to southwest portion of the Building. Though PEER opened this access door to the crawl space with the assistance of the Key Site Manager, since the crawl space had limited illumination, was labeled with “asbestos” signs, and was located beneath (i.e., air quality unknown) the Building, PEER did not assess this crawl space / did not access the crawl space in its entirety. Please refer to the above discussion related to the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property, as it relates to this crawl space.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

WILDWOOD SCHOOL AT NORTH INTERMEIDATE SCHOOL

320 SALEM STREET, WILMINGTON, MIDDLESEX COUNTY, MA

PEER Consultants, P.C. Project No. 8593

November 30, 2025

1.0 INTRODUCTION

The purpose of this Practice is to define good commercial and customary Practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. § 9601) and petroleum products. As such, this Practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the Practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary standards and Practices as defined at 42 U.S.C. § 9601(35)(B). Controlled substances are not included within the scope of this Practice. Persons conducting an environmental site assessment as part of an EPA Brownfields Assessment and Characterization Grant awarded under CERCLA 42 U.S.C. § 9604(k)(2)(B) must include controlled substances as defined in the Controlled Substances Act (21 U.S.C. § 802) within the scope of the assessment investigations to the extent directed in the terms and conditions of the specific grant or cooperative agreement. Additionally, an evaluation of business environmental risk (BER) associated with a parcel of commercial real estate may necessitate investigation beyond that identified in this Practice.

1.1 Subject Property Identification

This Phase I environmental site assessment was performed in accordance with PEER Consultant's (PEER) proposal dated July 30, 2024, and was conducted consistent with the procedures included in ASTM E1527-21, Standard Practice For Environmental Site Assessments: Phase I Environmental Site Assessment Process. The environmental site assessment was conducted under the supervision or responsible charge of Mr. David Gorden, Board Certified Environmental Scientist and Environmental Professional with PEER. In addition, Mr. Gorden performed the Subject Property reconnaissance on October 29, 2025.

The Subject Property consists of one parcel, addressed as "320 Salem Street", Wilmington, Middlesex County, Massachusetts, and is identified on the Wilmington, MA Vision Government

Solutions database by Parcel ID 97/ /61/ / (Salem Street), and consists of approximately 12.145 acres. The parcel is owned by the Town of Wilmington and is mainly classified for assessment purposes as Town Education C with a public school style, commercial 1.5-story building, built about 1955, and having a brick/masonry exterior, and flat, tar and gravel roof cover.

In general, from a topographic high along the southern edge, the Subject Property slopes down radially to the northeast, north, west, and southwest. Topographic elevations on the Subject Property range from approximately 108 feet above mean sea level (msl) along the southern edge of the Property (near 314 Salem Street) at Salem Street to approximately 92 feet above msl both along the extreme northwestern corner of the Property (near 9 Arlene Drive), and along the extreme southwestern corner of the Property (near 5 Arlene Drive).

In general, the Subject Property is bound to the north by 2232 Avalon Drive, 36 Ballardvale Street, 34 Ballardvale Street, 32 Ballardvale Street, 24 Ballardvale Street, and 18 Ballardvale Street; to the east by 26 Ballardvale Street, 24 Ballardvale Street, 18 Ballardvale Street, Ballardvale Street (and indirectly by 7 Ballardvale Street, 5 Ballardvale Street, Baland Road, 3 Ballardvale Street, 344 Salem Street, Salem Street); and to the west by 9 Arlene Avenue, 7 Arlene Avenue, 5 Arlene Avenue, 300R Salem Street, 314 Salem Street; and to the south by 298R Salem Street, 300R Salem Street, Salem Street (and indirectly by 317 Salem Street, 319 Salem Street, 321 Salem Street, 327 Salem Street, 337 Salem Street), in Wilmington, Massachusetts.

PEER has obtained a copy of the FY2020 Statement of Interest for the Town of Wilmington North Intermediate School, which was submitted to the MSBA by the Town of Wilmington. PEER has no information related to the accuracy of the information provided within the FY2020 Statement of Interest for the Town of Wilmington North Intermediate School, and is providing it herein as additional information only. Please refer to any statements in this environmental site assessment which may correct information previously included in the FY2020 Statement of Interest. According to the FY2020 Statement of Interest for the Town of Wilmington North Intermediate School:

> *The North Intermediate School was constructed in 1962 with no additions or renovations. The North Intermediate School is located on a 14-acre site at the corner of Salem and Ballardvale Streets near interstate 93. Playing fields and courts are located to the immediate north and northwest of the building. Landscaping is limited to a few trees along the road and play field edges. Otherwise the site is completely open. Grass typically covers all non-paved surfaces.*
>
> *The main entrance is accessed from the bus loop located on the south side of the building off Salem Street. The grade is steep for the access ramp at the main entry and is not ADA compliant. Parking is located in the northeast corner of Ballardvale Street. Parent drop off, staff parking, and deliveries all share the single parking lot which can create conflict and safety issues especially at drop off and pick up times. Staff parking (60 parking spaces with some overflow) is not an issue unless there is an event. This lot is also the only paved surface for the school which creates a connection between parking and play.*

The North Intermediate School is serviced with a 4-inch domestic waterline on the northeast side of the building. The type of pipe for the water service is unknown. A potential project on this site will likely require a new cement-lined ductile iron water line be installed to replace the existing water line to the building. The North Intermediate School does not have a sprinkler system. A potential project would require a new fire service line be installed for the future installation of a sprinkler system. Hydrant flow tests will be needed to determine the water system capacity and whether a fire pump will be required.

The North Intermediate School is serviced by an on-site septic system with pumps located behind the school. The septic system is pumped each year. Connection is available to the public sewer should the existing septic system fail. The North Intermediate School has an interior grease trap for kitchen waste only. An exterior grease trap should be installed to meet state code and local regulations.

There are no known capacity or surcharge issues with stormwater drainage. If new impervious areas (pavement/rooftop) are proposed, stormwater detention will be necessary to mitigate impacts to the existing system.

North Intermediate School is a brick and curtain wall building that serves grades 4 & 5 for roughly 280 students. Exposed foundation areas show deterioration and require repair. Otherwise, the brick veneer is in good condition. All openings have been very recently replaced during 2013 and 2015 including the curtain wall, Kalwall panels, and exterior doors. Most of the roof and roof trim have also been recently replaced in 2016.

The foundation walls are twelve (12) inch reinforced concrete with strip footings; the footings are typically shown on existing drawings as eight (8) inches deep by one foot eight Inches (1'-8") wide. The exterior walls are brick with concrete masonry unit (CMU) backup. In looking at existing drawings there does not appear to be any air space or insulation. There are no visible or reported infiltration issues at the brick walls; however the brick does have small cracks.

The current membrane roof is mechanically fastened and was installed in 2016. There are roof drains for the Cafetorium that drain through the high wall to roof drains on a lower roof. The current system cannot handle this volume of water during rain showers which leads to large amounts of water ponding against the schools foundation walls.

The heating system was upgraded in 2015. Three new gas fired high efficiency Camus boilers were installed. Boilers are sealed combustion type; flue venting is AL29-4C double wall venting to the outdoors with insulated ductwork for the combustion air. There are three floor mounted end suction pumps with variable frequency drives (VFD) to modulate pump speed based on system pressure. All other equipment associated with the boilers, such as expansion tank and air separator, were also replaced. The boilers service the domestic hot water needs of the building. Two oil fired hydronic boilers original to the building were replaced in 2015 with 3 high efficiency Nat. Gas fired boilers with new controls, pumps with VFD's and hot water storage tank.

The heating in all rooms is supplied by forced hot water unit ventilators fed from the three hot water pumps. The exhaust for each room is on the opposite side of room. Each room is individually controlled

by a thermostat in each space. Exhaust fans for all classrooms are combined and located on the roof of the building. These systems should be balanced to make sure the correct amount of outside air is being provided to each classroom to maintain proper ventilation rates and indoor air quality.

All controls to the heating system are pneumatic. The control system should be updated to current standards by replacing it with a Direct Digital Control (DDC) system. This will allow more flexibility in the control of systems and save the school district money by saving energy.

The air conditioning for the building consists of five (5) window mounted A/C units that feed the principal's office, nurse's office, physical education office, computer room and teacher's lounge. There are three (3) Split system units with their condensing units mounted on the roof. These systems feed rooms 100, 103, and 203. There are also (4) wall mounted split system units that supply air conditioning to rooms 102, 105, 107 and the music room. It is recommended that the window units be replaced by a central system. A central system is more energy efficient to run than the window air conditioning units.

For the plumbing, existing water service to the building is copper. It is connected to the municipality's water system. It enters the building as a 4" line. There is no Reduced Pressure Zone backflow prevention device (RPZ) installed on the system. There are propane tanks that feed the cafeteria. This system is also used to feed the science classrooms. All the science rooms have now been disconnected. Waste from the building is through ejector pumps to septic field on the property. These pumps are in good condition

For fire protection, there is no sprinkler system in the building. It is recommended that a sprinkler system be installed in the building.

For electrical, most of the existing electrical equipment is original to the building with some exceptions. The fire alarm system including the control panel, devices, door holders, and speaker/strobes are relatively new and meet the latest requirements. LED interior and exterior lighting was recently installed. Original equipment installed in 1962 is beyond its intended useful life. The electrical service runs underground to a building mounted meter. The service is rated at 800 Amps, 120/208 Volts, 3 Phase, 4 Wire. An 800 Ampere Main Circuit Breaker switchboard is located in the basement next to the boiler room and is in poor condition. The equipment is manufactured by Federal Pacific. The equipment is obsolete and has met its life expectancy and should be replaced. The lighting and power panels are Federal Pacific circuit breaker type and are located throughout the building. There is no TVSS (transient voltage suppressor) protection at the switchboard and remote plants. Circuits should be separated by load type and TVSS should be added to panels that serve computer equipment. The quantity of receptacles is minimum throughout the building. Kitchen receptacles are not GFI protected. Also, there are no Ansul system and EPOs (emergency power shut trap pushbuttons) installed in the kitchen.

The wiring and technology equipment rooms are not adequately sized or equipped to support the technology infrastructure and systems required to ensure that the school operates in a manner consistent with peer institutions. The server room at this school is located in the Art closet with inadequate HVAC and space and the UPS capacity is inadequate. The voice cabling is functioning adequately, but it is not of the capacity or configuration consistent with current practices and standards. The cabling system is category 5, and the installation practices are not in compliance with present code.

The data cabling is functioning adequately, but it is not of the capacity or configuration consistent with current practices and standards. The existing video cabling is mature and, in some places, problematic. The existing video cabling does not address the coverage and functionality required by the school going forward.

Within the interior of the Building, sections of terrazzo flooring have remained in good condition. Most of the flooring is 9" x 9" vinyl composite tile (VCT), which likely contains asbestos, and is in fair to poor condition with worn or chipped areas throughout the building. Replacement VCT has been made with newer 12" x 12" tiles. The gymnasium features a resilient wood flooring system that is in good condition. Concrete floors in the boiler rooms, art rooms, locker rooms and some toilet rooms vary in condition. The boiler room and bathroom floors indicate deterioration of the surface.

Walls are typically painted CMU which is mostly in good condition. There is wood paneling in the entry/office area and glazed ceramic tile over CMU in the toilet rooms, both in fair condition. Corridors are lined with functioning metal lockers. Classrooms commonly feature an operable partition between rooms, all of which are closed the majority of the time. These are in fair condition; however, they could present acoustical separation issues, and limit flexibility in terms of classroom arrangement and location of equipment that require power and data. The walls at the opposite end of classrooms feature acoustic wall panels above the storage closets that contain asbestos. Many areas have 12" x 12" glued-on or concealed spline ceiling panels. Some of the spaces include painted, suspended acoustic panel systems with 2' x 4' spacing and exposed tee system. Many of the ceilings are in poor condition, as panels show water stains and marks from leaks and other damage. The areas with most damage include the Library and Nurses Room. Plaster ceilings in bathrooms and other spaces may require removal based on possible asbestos content. Water damage to the plaster finish is frequently seen.

Lighting fixtures are LED surface mount and were installed in 2018. The existing interior doors vary in condition based on their location and frequency of use. Overall, the door leafs are solid core wood, and in fair to good condition. The doors feature a mix of styles, and some understandably feature vision panels and louvers.

Not all door locations feature fire rating labels and associated hardware as would be required by current codes. Hardware on the doors is not compliant with current barrier-free codes, as they feature knobs instead of the lever trim. Many of the ·corridor doors do not feature closers, and some were seen held open with stops or by other mechanical methods. Door frames at the interior are hollow metal, and frequently in need of repainting. The majority of the loose furnishings throughout the educational spaces have been adapted to fit the need which they serve. Some furnishings have been adapted to fit the classroom needs, but do not meet the needs of the application well. Access to the chalk/bulletin boards in rooms are blocked by furniture.

Storage in the classrooms is provided through built-in metal shelving integral to the exterior wall mechanical equipment. While much of the shelving is in fair condition, some counters show signs of water damage from window leaks. At the gymnasium, the motor operated pocket divider wall is old. Wall pads are not properly adhering to walls. The kitchen is sizeable and was recently renovated.

The table below further details the Subject Property description.

Subject Property Description

Subject Property Name	North Intermediate School
Location/Address	320 Salem Street, Wilmington, Massachusetts 01887
Land Area	12.145 acres
Improvements	According to the Vision Government Solutions database for Wilmington, MA, The Subject Property consists of one parcel, addressed as "320 Salem Street", Wilmington, Middlesex County, Massachusetts, and is identified by Parcel ID 97/ /61/ / (Salem Street), and consists of approximately 12.145 acres. The parcel is owned by the Town of Wilmington and is mainly classified for assessment purposes as Town Education C with a public school style, commercial 1.5-story building, built about 1955, and having a brick/masonry exterior, and flat, tar and gravel roof cover.

The Subject Property location is depicted on Figure 1 – USGS Topographic Map, within Appendix A, which was reproduced from a portion of the Wilmington Quadrangle (2021) USGS 7.5-minute series topographic map. An Aerial Sketch – Subject Property is provided as Figure 2, and an Aerial Sketch – Adjoining Properties is provided as Figure 3, both within Appendix A. Acronyms, abbreviations, and terms, which may have been used in this report, are described in Appendix B.

1.2 Scope of Work

The purpose of this Phase I environmental site assessment is to support the user's ability to qualify for the landowner liability protections (LLPs). The LLPs is a defense to CERCLA available to bona fide prospective purchasers, contiguous property owners, and innocent landowners. See 42 U.S.C. §§ 9601(35)(A), 9601(40), 9607(q), and 9607(r). This Phase I environmental site assessment was performed in accordance with PEER Proposal No. 8162 dated July 30, 2024, and was conducted consistent with the procedures included in ASTM E1527-21, Standard Practice (this "Practice") for environmental site assessments: Phase I environmental site assessment Process (the "Process"). The goal of the Process established by this Practice is to identify recognized environmental conditions. The term recognized environmental condition means:

(1) the presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment;
(2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or

(3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment.

Please note that this Practice defines a "de minimis condition" as "a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a "de minimis condition" is neither a recognized environmental condition nor a controlled recognized environmental condition.

This purpose was undertaken through user-provided Information (when provided by the user), Site Reconnaissance (including general subject property setting, interior and exterior observations, and uses and conditions of the Subject Property and adjoining properties), Records Review (including physical setting resources, standard government environmental record resources and additional government environmental record sources, and historical use information regarding the Subject Property and surrounding area), and Interviews (including interviews with past and present owners and occupants, and interviews with state and local government officials). Specific limiting conditions, deviations, exceptions, significant assumptions, and special terms and conditions may be noted in the applicable sections of the report.

1.3 Standard of Care

This environmental site assessment was performed in accordance with generally accepted Practices of this profession, undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care, but it may be limited by conditions encountered during performance, a client-driven scope of work, or inability to review information not received by the report date. Where appropriate, these limitations are discussed in the text of the report, and an evaluation of their significance with respect to our findings has been conducted.

Environmental site assessments, such as the one performed at the Subject Property, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous substances, toxic substances, petroleum substances, and/or any other oil and hazardous materials are present and/or have been released at the Subject Property beyond what has been identified through the limited scope of services included in PEER's proposal as part of this environmental site assessment.

In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed. It should be recognized that environmental conditions and environmental concerns may be documented in public records that were not reviewed. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the Subject Property or otherwise uses the report for any other purpose. These risks may be further evaluated – but

not eliminated – through additional research and/or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.3.1 Use Not Limited to CERCLA

In general, this Practice is designed to assist the user in developing information about the environmental condition of a subject property and as such has utility for a wide range of persons, including those who may have no actual or potential CERCLA liability and/or may not be seeking the LLPs.

1.3.2 Residential Tenants / Purchasers and Others

No implication is intended that it is currently customary Practice for residential tenants of multifamily residential buildings, tenants of single-family homes or other residential real estate, or purchasers of dwellings for one's own residential use, to conduct an environmental site assessment in connection with these transactions. Thus, these transactions are not included in the term commercial real estate transactions, and it is not intended to imply that such persons are obligated to conduct an environmental site assessment in connection with these transactions for purposes of all appropriate inquiries or for any other purpose. In addition, no implication is intended that it is currently customary Practice for environmental site assessments to be conducted in other unenumerated instances (including but not limited to many commercial leasing transactions, many acquisitions of easements, and many loan transactions in which the lender has multiple remedies). On the other hand, anyone who elects to do an environmental site assessment of a subject property may, in such a person's judgment, use this Practice.

1.3.3 Site Specific

This Practice is site-specific in that it relates to the assessment of environmental conditions for specific commercial real estate. Consequently, this Practice does not address many additional issues raised in transactions such as purchases of business entities, or interests therein, or of their assets, that may well involve environmental liabilities pertaining to properties previously owned or operated or other off-site environmental liabilities.

1.4 Principles

The following principles are an integral part of this Practice and are intended to be referred to in resolving any ambiguity or exercising such discretion as is accorded the user or environmental professional in conducting an environmental site assessment or in judging whether a user or environmental professional has conducted appropriate inquiry or has otherwise conducted an adequate environmental site assessment.

1.4.1 Uncertainty Not Eliminated

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a subject property. Performance of this Practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a subject property, and this Practice recognizes reasonable limits of time and cost.

1.4.2 Not Exhaustive

All appropriate inquiries does not mean an exhaustive assessment of a property. There is a point at which the cost of information obtained, or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this Practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information.

1.4.3 Level of Inquiry is Variable

Not every property will warrant the same level of assessment. Consistent with good commercial and customary standards and Practices as defined at 42 U.S.C. § 9601(35)(B), the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, future intended uses of the Subject Property disclosed to the environmental professional, and the information developed in the course of the inquiry.

1.4.4 Comparison with Subsequent Inquiry

It should not be concluded or assumed that an inquiry was not all appropriate inquiries merely because the inquiry did not identify recognized environmental conditions in connection with a subject property. Environmental site assessments must be evaluated based on the reasonableness of judgments made at the time and under the circumstances in which they were made. Subsequent environmental site assessments should not be considered valid standards to judge the appropriateness of any prior assessment based on hindsight, new information, use of developing technology or analytical techniques, or other factors.

1.4.5 Point in Time

The environmental site assessment is based upon conditions at the time of completion of the individual environmental site assessment elements.

1.5 Limiting Conditions, Deviations, Exceptions, Significant Assumptions, and Special Terms and Conditions

Based upon the agreed-on scope of services, as per PEER's proposal, this environmental site assessment did not include activities such as subsurface or other invasive assessments, vapor intrusion assessments or indoor air quality assessments (i.e., evaluation of the presence of vapors within a building structure), business environmental risk evaluations, or other such services not particularly identified and discussed herein.

The credentials of the company performing the scope of services (i.e., a statement of qualifications) have not been included in this Report but are available upon request. Pertinent documents are referred to in the text of this Report, and where applicable, a separate reference section may also have been included. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested may not have been available or may not have been received by the issuance date of the report. Information obtained for this environmental site assessment was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder.

There may have been limiting conditions (general limitations and basis of review, including limitations imposed by physical obstructions such as adjacent buildings, bodies of water, asphalt, or other paved areas, and other physical constraints, such as weather), and/or deletions, and/or deviations, and/or exceptions, and/or significant assumptions, and/or special terms and conditions (together, the "Limitations") to this Practice, which may have been encountered during this project.

An evaluation of the significance of these Limitations and missing and/or incomplete information with respect to our findings has been conducted, and where appropriate, significant data gaps have been identified, including the resources and/or sources of information that were consulted to address the significant data gaps.

Since a data gap may only be considered significant if other information and/or professional experience raises reasonable concerns involving the effects of that data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions, it should be recognized that an evaluation of the significance of data gaps is based on

the information readily available to the environmental professional at the time of report issuance. Therefore, an evaluation of the significance of data gaps based on information which may have been received after the report issuance date may result in a modification to our Findings, and/or our Opinions, and/or our Conclusions, and/or our Recommendations (if recommendations have been included in this Report).

We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional scope of services, regardless of whether the information would affect any findings, and/or opinions, and/or conclusions, and/or recommendations in the report. This disclaimer specifically applies to any information that has not been provided by the user. We understand that if the person to be interviewed is the user, the user has an obligation to answer all questions in good faith and to the extent of their actual knowledge, or to designate a key site manager to do so. If answers to questions are unknown or partially unknown to the user or such key site manager, this interview section of the Phase I environmental site assessment shall not thereby be deemed incomplete.

This report represents our scope of services to you as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings, opinions, and conclusions in this report are based upon the current use of the Subject Property, information visually and/or physically observed from the most recent reconnaissance, and from other environmental site assessment activities as described herein. Therefore, such information, including findings, opinions, and conclusions are subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, not observable, or not present during the most recent reconnaissance and may have subsequently become observable (such as after property renovations, building demolition, new development on the property, and/or redevelopment on the property). Further, our scope of services are not to be construed as legal interpretation or legal advice.

1.5.1 Data Failure

Data failure occurs when all of the standard historical resources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objective has not been met. Data failure is not uncommon in trying to identify historical uses at five-year intervals back to first use or 1940 (whichever is earlier). Notwithstanding a data failure, standard historical resources may be excluded if: (1) the resources are not reasonably ascertainable or (2) if past experience indicates that the resources are not likely to be accurate or complete in terms of satisfying the objective (for example, if a particular historical data source is known to have insufficient data for the particular subject area).

Data failure reviewed the failure to achieve the historical research objective (such as compiling and analyzing historical property information and developing a history of the previous uses of the Subject Property, adjoining properties, and surrounding area).

Data failure reviewed the failure to achieve the historical research objective (such as aerial photographs, fire insurance maps, local street directories, topographic maps, building department records, interviews, property tax files, zoning/land use records).

It is the opinion of the environmental professional that data failure did not occur except for with the review of the following historical research records:

- Limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks.

Furthermore, the historical research objective for the Subject Property was traced back to at least **1888**.

Based on a review of aerial photographs, the Subject Property has been used as a school since at least **1963**.

Based on a review of fire insurance maps, the Subject Property has no coverage.

Based on a review of local street directories, the Subject Property has been used as a school since at least **2010**.

Based on a review of topographic maps, the Subject Property has been used as a school since at least **1943**.

In summary, through historical research records, the Subject Property appears to have been utilized as an educational facility / school and associated purposes from at least 1943 through at least October 29, 2025, the date of the most recent site reconnaissance. Therefore, it is the opinion of the environmental professional that any perceived lack of the historical resources being able to identify historical uses at five-year intervals back to the first use or 1940 (whichever is earlier) should not represent a data failure within this environmental site assessment.

1.5.2 Data Gap

Data gap is the lack of or inability to obtain information required by this Practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this Practice, including, but not limited to, site

reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.

It is the opinion of the environmental professional that data gap did not occur except for lack of or inability to obtain the following information required by this Practice despite good faith efforts by the environmental professional to gather such information:

- Limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks.

The environmental professional reviewed this data gap for significance, specifically whether other information and/or professional experience raises reasonable concerns involving the effects of this data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks does not represent a significant data gap.

Observation of surficial soils was limited due to the presence of buildings, asphalt, cement, and other covered surfaces on the Subject Property. This is considered to be a data gap; however, considering a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and based on any future scope activities such as the previously project-authorized recommendation of a proposed additional subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), it may be expected that any stand-alone geo-environmental surface and subsurface soil investigation event on the Subject Property may be able to provide additional details at specific soil borings, but will not eliminate uncertainty concerning observations of surficial and sub-surficial soils on the Subject Property.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the inability to view surface soils in

areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property does not represent a significant data gap.

Please note that PEER observed a soil-based floor within a crawl space with an access door from the boiler room in the "basement" of the elongated northeast to southwest portion of the Building. Though PEER opened this access door to the crawl space with the assistance of the Key Site Manager, since the crawl space had limited illumination, was labeled with "asbestos" signs, and was located beneath (i.e., air quality unknown) the Building, PEER did not assess this crawl space / did not access the crawl space in its entirety. Please refer to the above discussion related to the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property, as it relates to this crawl space.

To the best of the Environmental Professional's knowledge and belief, no other limitations, except as noted, imposed by physical obstructions such as adjacent buildings, bodies of water, or other limiting conditions (e.g., snow, rain, wind, etc.), associated with the Subject Property, were encountered during the environmental site assessment.

1.6 Reliance

Please note that an environmental professional is not required to verify independently the information provided but may rely on information provided unless the environmental professional has actual knowledge that certain information is incorrect or unless it is obvious that certain information is incorrect based on other information obtained in the Phase I environmental site assessment or otherwise actually known to the environmental professional.

This environmental site assessment report has prepared for the exclusive use and reliance of DORE + WHITTIER and the Town of Wilmington (the "Authorized Parties"). Use or reliance by any other party is prohibited without the written authorization of DORE + WHITTIER, the Town of Wilmington, and PEER Consultants, P.C (PEER).

Reliance on the environmental site assessment by the user and the Authorized Parties will be subject to the terms, conditions and limitations stated in the PEER proposal, environmental site assessment report, and/or PEER's Agreement for Services. The limitation of liability (i.e., the total cost for Task 1.1) defined in the PEER July 30, 2024 proposal and/or PEER's Agreement for Services is the aggregate limit of PEER's liability to the user, client, and all relying parties.

The environmental site assessment is based upon conditions at the time of completion of the individual environmental site assessment elements, as follows.

Presumed viability: Subject to Section 4.8 of the Practice and the user's responsibilities set forth in Section 6 of the Practice, an environmental site assessment meeting or exceeding this Practice

is presumed to be viable when it is conducted within 180 days prior to the date of acquisition (defined as the date on which a person acquires title to the property) of the Subject Property (or, for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). The dates of the following components include:

Interviews with owners, operators, and occupants occurred on:

[**October 29, 2025**]

Reviews of federal, tribal, state, and local government records occurred on:

[**November 1, 2025**]

Visual inspections of the Subject Property and of adjoining properties occurred on:

[**October 29, 2025**]

The declaration by the environmental professional responsible for the environmental site assessment occurred on:

[**November 30, 2025**]

Therefore, This Environmental Site Assessment May Be Presumed Viable (i.e., The Presumed Viability) Until:

April 26, 2026

2.0 USER PROVIDED INFORMATION

2.1 User Provided Information

To qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must conduct the following inquiries required by 40 C.F.R. §§ 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The user should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

Prior to the site reconnaissance, the User was asked to provide the environmental professional with the following user questionnaire information as described in ASTM E1527-21 Section X3.

User Questionnaire Responses

User Questionnaire Item	User Did Not Respond	User's Response	
		Yes	No
(1.) Environmental liens that are filed or recorded against the *subject property* (40 C.F.R. § 312.25). Did a search of *land title records* (or judicial records where appropriate, see **Note 1** below) identify any *environmental liens* filed or recorded against the *subject property* under federal, tribal, state, or local law? **Note 1** – In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that *environmental liens* and *AULs* be filed in judicial records rather than in *land title records*. In such cases judicial records shall be searched for *environmental liens* and *AULs*.			■[1]
(2.) *Activity and use limitations* that are in place on the *subject property* or that have been filed or recorded against the *subject property* . Did a search of *land title records* (or judicial records where appropriate, see **Note 1** above) identify any *AULs*, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the *subject property* and/or have been filed or recorded against the *subject property* under federal, tribal, state or local law?			■[2]

User Questionnaire Item	User Did Not Respond	User's Response	
		Yes	No
(3.) Specialized knowledge or experience of the person seeking to qualify for the *LLP* (40 C.F.R. § 312.28). Do you have any specialized knowledge or experience related to the *subject property* or nearby *properties*? For example, are you involved in the same line of business as the current or former *occupants* of the *subject property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?			■[3]
(4.) Relationship of the purchase price to the fair market value of the *subject property* if it were not contaminated (40 C.F.R. § 312.29). Does the purchase price being paid for this *subject property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *subject property*?	(see below)[4]		
(5.) Commonly known or *reasonably ascertainable* information about the *subject property* (40 C.F.R. § 312.30). Are you aware of commonly known or *reasonably ascertainable* information about the *subject property* that would help the *environmental professional* to identify conditions indicative of *releases* or threatened *releases*?			■[5]
(a.) Do you know the past uses of the *subject property*?		■[5a]	
(b.) Do you know of specific chemicals that are present or once were present at the *subject property*?	(see below)[5b]		
(c.) Do you know of spills or other chemical *releases* that have taken place at the *subject property*?	(see below)[5c]		
(d.) Do you know of any environmental cleanups that have taken place at the *subject property?*	(see below)[5d]		
(6.) The degree of obviousness of the presence or likely presence of contamination at the *subject property*, and the ability to detect the contamination **by appropriate investigation (40 C.F.R. § 312.31).** Based on your knowledge and experience related to the *subject property*, are there any *obvious* indicators that point to the presence or likely presence of *releases* at the *subject property*?			■[6]

Notes:

1. No environmental liens were found to be filed or recorded against the subject property.
2. *No Activity and Use Limitations (AUL) were identified.*
3. *No; the subject property has been used exclusively as the site of a public school since 1868, is Zoned for R-20 Residential, and is surrounded by residential properties.*

4. *Not applicable; the subject property has been, and continues to be, owned by the Town of Wilmington.*
5. *(a). Yes, the subject property has been used continuously for public education since 1868. (b). There are no records of specific chemicals that are present or were present at the subject property. (c). There are no records of spills or chemical releases at the subject property. (d). There are no records of environmental cleanups at the subject property.*
6. *There are no obvious indicators that point to the presence or likely presence of releases at the subject property.*

The User Questionnaire has been included in Appendix C.

3.0 SUBJECT PROPERTY RECONNAISSANCE

This section includes site reconnaissance observations, including general subject property setting, interior and exterior observations, and uses and conditions of the Subject Property and adjoining properties.

The purpose of the site reconnaissance was to collect information and make observations to help identify recognized environmental conditions in connection with the Subject Property. The environmental professional visually and/or physically observed the Subject Property and any structure(s) located on the Subject Property (to the extent that areas on the Subject Property did not have limitations imposed by physical obstructions such as adjacent buildings, bodies of water, asphalt, or other paved areas, and other physical constraints (such as snow, rain, flooding, wetlands, etc.; and to the extent that areas on the Subject Property were humanly accessible when considering all health and safety regulations, policies, and guidelines).

The environmental professional systematically walked through functional spaces within the structure(s); then, the environmental professional systematically assessed locations within the structure(s) identified by the Key Site Manager (Mr. Dennis Kelley, Superintendent of Public Buildings) as being used for the storage of oil and hazardous materials; then the environmental professional systematically walked the exterior spaces on the Subject Property; then the environmental professional systematically walked exterior spaces of public thoroughfares associated with adjoining and/or nearby properties.

The methodology for the site reconnaissance may have included one or more of the following considerations.

- The periphery of the Subject Property as well as the periphery of all structures on the Subject Property shall be visually and/or physically observed.
- The interior of structures at the Subject Property shall be visually and/or physically observed including accessible common areas (such as lobbies, hallways, utility rooms, recreation areas, etc.); areas where hazardous substances or petroleum products are or may have been stored, used, treated, discharged, or disposed; maintenance and repair areas; boiler rooms; and a representative sample of occupant spaces.
- Adjoining properties and the surrounding area shall be observed during observation of the periphery of the Subject Property, from public thoroughfares adjacent to or traveled on the way to the Subject Property, and from buildings and structures otherwise accessed during the site reconnaissance.

3.1 General Subject Property Information

PEER conducted a site reconnaissance on the Subject Property on October 29, 2025. Specifically, information contained in this section is based on methodology for the site reconnaissance as described above, and references the Subject Property, addressed at 320 Salem Street, Wilmington, Middlesex County, Massachusetts.

Photographs of the Subject Property and Adjoining/Nearby Properties, as of the date of the site reconnaissance are provided in Appendix E – Photographs. The credentials of the environmental professional who conducted the site reconnaissance is included in Appendix F – Credentials of Environmental Professional.

3.2 Current Uses of the Subject Property

The use, treatment, storage, disposal, or generation of hazardous substances or petroleum products was considered for current uses of the Subject Property.

The Subject Property is located at 320 Salem Street, Wilmington, Middlesex County, Massachusetts. As of the date of the reconnaissance (October 29, 2025), the Subject Property appeared to be occupied by an intermediate school (i.e. Grades 4-5) within the Town of Wilmington Public School System, and utilized for educational purposes as part of the North Intermediate School, and included typical associated exterior educational and recreational areas, such as a playground, tennis court, basketball court, baseball field, soccer field, and associated play areas.

3.3 Past Uses of Subject Property

The likely past use, treatment, storage, disposal, or generation of hazardous substances or petroleum products was considered for the Subject Property.

Information regarding past uses of the Subject Property, which were visually and/or physically observed during the site reconnaissance, have been included in the historical use section of this report, where applicable.

3.4 Current Uses of Adjoining Properties

Visual observations of adjoining properties (from Subject Property boundaries) are summarized below.

Adjoining Properties – Current Uses

Direction	Description
North	→ 2232 Avalon Drive (apartments/residential), 36 Ballardvale Street (residential), 34 Ballardvale Street (residential), 32 Ballardvale Street (residential), 24 Ballardvale Street (residential), and 18 Ballardvale Street (residential).
East	→ 26 Ballardvale Street (residential), 24 Ballardvale Street (residential), 18 Ballardvale Street (residential), Ballardvale Street [and indirectly by 7 Ballardvale Street (residential), 5 Ballardvale Street (residential), Baland Road, 3 Ballardvale Street (residential), 344 Salem Street (residential), Salem Street].
West	→ 9 Arlene Avenue (residential), 7 Arlene Avenue (residential), 5 Arlene Avenue (residential), 300R Salem Street (residential), 314 Salem Street (residential).
South	→ 298R Salem Street (residential), 300R Salem Street (residential), Salem Street [and indirectly by 317 Salem Street (residential), 319 Salem Street (residential), 321 Salem Street (residential), 327 Salem Street (residential), 337 Salem Street (residential)].

Separate from any items described and discussed in Section 4.3 of this report, and considering distance, direction, and anticipated groundwater flow beneath the Subject Property, PEER did not observe RECs associated with the adjoining properties to the Subject Property during the adjoining properties reconnaissance.

During the site reconnaissance pursuant to this Practice, the Subject Property was visually and/or physically observed, in that observations were made by visual, auditory, or olfactory means while performing the site reconnaissance, to the extent possible, as per Section 3.12 of this report.

3.5 Past Uses of Adjoining Properties

Past uses of adjoining properties were not visually and/or physically observed during the Subject Property visit. Information related to likely past uses of adjoining properties may be found in Section 4.0 of this report.

3.6 Current or Past Uses in the Surrounding Area

Current uses of properties in the surrounding area are shown in Figure 3. Past uses of properties in the surrounding area were not visually and/or physically observed during the site reconnaissance. Information related to likely current or past uses of properties in the surrounding areas, when known, may be found in Section 4.0 of this report.

3.7 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

Geologic, hydrogeologic, hydrologic, and topographic conditions includes the Subject Property as well as the general topography of the area surrounding the Subject Property. If observations made during the site reconnaissance indicate there likely is or was a release of hazardous substances or petroleum products at a nearby property that may migrate to the Subject Property, geologic, hydrogeologic, hydrologic, topographic, and other environmental information may have been evaluated to determine whether the release is likely to result in a recognized environmental condition at the Subject Property.

3.8 Structures and Other Improvements at the Subject Property

Please note that this section includes, for example, a general description of the building or buildings, including the number of buildings; number of stories each; approximate age of buildings; and ancillary structures. The general Subject Property information is as follows:

General Subject Property Information

Subject Property				
Field Personnel	Dave Gorden (PEER Consultants)			
Site Reconnaissance Date	October 29, 2025			
Weather Conditions	Cloudy, 50^0F			
Site Contact/Title	Dennis Kelley / Superintendent of Public Buildings (978-658-3017)			
Building Description				
Building Identification	**Building Use**	**Approximate Construction Date**	**Number of Floors**	**Approximate Size**
North Intermediate School	Education / Intermediate School	“1955”	First Floor Upper Story	32,738 gross square feet 12,929 gross square feet
Subject Property Utility Provider				
Drinking Water	Town of Wilmington - through Town Groundwater Wells and the MWRA			
Wastewater	Town of Wilmington			
Electricity	Reading Municipal Light			
Natural Gas	National Grid			

“1955”: PEER notes that Vision Government Solutions cites 1955 as the built date, and the FY2020 Statement of Interest for the Town of Wilmington North Intermediate School cites 1962 as the built date, and the historical topographic maps show a “school symbol” on the Subject Property in 1943.

3.9 Roads

Roads, streets, and parking facilities on the Subject Property, and public thoroughfares adjacent to the Subject Property were considered.

A bituminous asphalt-paved parking lot, with an entrance off of Ballardvale Street, and located along the east central edge, serves as the parking facility for the Subject Property. The Subject Property also has a turnaround / drop off bituminous asphalt-paved roadway off of Salem Street along the southern edge. The Subject Property may also be accessed on foot along the following streets: Avalon Drive, Ballardvale Street, Salem Street, and Arlene Avenue.

3.10 Potable Water Supply

The Subject Property and associated building currently receives potable water from the Town of Wilmington, through groundwater drinking water wells, and through source provided by the Massachusetts Water Resources Authority (MWRA).

3.11 Sewage Disposal

The Subject Property and associated Building currently eliminates waste through sanitary lines under the management of the Town of Wilmington, and through a connection at Ballardvale Street.

PEER notes that the Key Site Manager indicated that the septic tank was removed in 2015, and that the sanitary sewer connection to the Town of Wilmington occurs at Ballardvale Street. In addition, according to Jamie Magaldi, Public Works Director for the Town of Wilmington, “we tied the North (Intermediate School) into town sewer, which connects to the line in Ballardvale Street, passing behind the playground. My understanding is the leaching field is likely still intact, but the pump chamber and septic tank are both crushed per Title 5 standard. I copied Jerry (Lawrenson) on this email for clarification, as he converted the school over to town sewer around 2014. Therefore, according to Jamie Lawrenson, “I can confirm that the septic tank and pump chambers at The North Intermediate (School) were crushed on site. The leaching field was never removed during the tie over to sewer. To my knowledge it is still in place.”

3.12 Other Subject Property Characteristics: Site Reconnaissance

The northern edge of the Subject Property is separated from the residential properties by eastern white pine trees and vinyl or metal fencing, except for a foot pathway from the Subject Property to Avalon Drive near courts, including three court tennis courts and one basketball court. The

central portion of the Subject Property contains grass fields, which appear to be utilized for baseball, soccer, and general outdoor activities. These grass fields are irrigated by ground-flush sprinkler heads, with groundwater understood to be obtained from a deep bedrock-based groundwater well, which is located in a structure along the western edge of the Subject Property. Numerous catch basins were observed within the grass fields.

The eastern edge of the Subject Property contains a playground with evidence of suspect bedrock outcrops located north of the Subject Property, and on 18 Ballardvale Street. An employee parking area adjoins the playground to the south. The southern edge of the Subject Property contains the school building (and main entrance to the school), associated concrete sidewalks, grassed areas, and the bituminous asphalt-paved student drop off roadway. The western edge of the Subject Property also contains grass fields, with a grassed foot path to Arlene Drive.

3.12.1 Hazardous Substances and Petroleum Products in Connection with Identified Uses

The approximate number of containers and a general description of the contents, capacity, types of containers, and the storage conditions were considered for inclusion in the report; however, please note that the Practice does not require a detailed inventory.

Within the Building, PEER observed hazardous substances and petroleum products in connection with identified uses (general cleaning and custodial maintenance activities). These hazardous substances were located on the second floor of the Building in Custodial Closet 21, on the First Floor in the Custodial Closet outside Corridor 35 and in the Storage Room adjoining the Lobby and Platform for the Stage, and in the Basement associated with the Boiler Room and Custodial Storage Room 235.

In general, these hazardous substances and petroleum products in connection with identified uses, were observed to be stored on metal or wooden shelves above a Terrazzo floor or above a concrete floor or above a 9-inch by 9-inch resilient floor tile over concrete floor, in containers less than 3 gallons, with minor spills (based on the automatic refill system) on the shelf and minor spills on the concrete-based floor; or with no obvious spills or releases to the exposure or migration pathways.

Typical hazardous substances and petroleum products in connection with identified uses included hazardous substances such as the following: Certo Waterbase Cleaner, 350 Gym Finish, A-Glow, Ajax Ultra, Air Savors Morning Fresh, Alcohol Foaming Hand Sanitizer, Bioesque Botanical Disinfectant Solutions, Brilliance Aerosol, Champion Sprayon Water-Based Stainless Steel Polish & Cleaner, Clean N' Wipe, Cleanfoam Hand Soap, Clorox Commercial Solutions Clorox Urine Remover For Stains & Odors, CLR Calcium, Lime & Rust Remover, D & G Protect It, Defoamex,

D-Stroy Morning Fresh, Durahold Aerosol Adhesive, Dylek II Aerosol Electrical Cleaner, Emulsifier Floor Stripper - H.T. Berry, End Zone, Erase Super Duty Cleaner, Fathom EF, Floor Wizard Residue Remover, Granular Deodorant - For Dumpsters Only, Green Scapes Ice Melt, Heavy Duty Carpet Stain Remover, HGP - Aerosol Protectant Spray, Ice Beeter Ice Melt, KaiBlooey, Magic Mats Morning Fresh, Misty Furniture Polish, Misty Goodbye Stain And Mark Eraser, Misty Stainless Steel Cleaner-Polish, Mold Zapper, Neutralizer 18, Nightowl Floor Finish Line, Non-Acid Restroom Disinfectant-Cleaner #19, PEN Penetrating Oil, Purple Flame Commercial Ice Melter, Quick Bright Green Liquid Cream Cleaner, Re-Juv-Nai, Respond RTU Disinfectant Cleaner, Safe-T-Therm HD, Simple Hygiene Foaming Hand Sanitizer, Suprox - Glass & Floor Peroxide Cleaner #39, TEL-X Plus Aerosol Lubricant PTFE, Top Notch Foaming Hand Soap, Top Notch Floor Maintainer, Vanilla Delight, WinterClean 365, XXV Floor Wax, Zenamax General Purpose Cleaning, Zenamax, Zenex ZenaSpot Direct Carpet Spotter, Multi-Purpose Latex Paint.

Within the Boiler Room, PEER observed three 5-gallon containers of Top Notch Emulsifier Extra Floor Stripper on a metal shelf over a concrete floor. Within a Flammable Materials Storage Cabinet on a concrete floor in the Boiler Room, PEER observed materials such as one 5-gallon capacity gasoline container, one 2-gallon capacity gasoline container, one 1-gallon capacity gasoline container, and one 12-ounce gasoline enzyme treatment.

The presence of these hazardous substances and petroleum products in connection with identified uses is not considered to be a REC to the Subject Property.

3.12.2 Storage Tanks

Aboveground storage tanks, or underground storage tanks, vent pipes, fill pipes, or access ways indicating underground storage tanks at the Subject Property were considered for inclusion in the report. The description of these tanks, when the information was available, may have included details such as tank construction (for example, single-wall steel, fiberglass, etc.), contents, capacity, and age.

PEER did not observe aboveground storage tanks, underground storage tanks, vent pipes, fill pipes, or access ways during the Site Visit.

PEER understands that available blueprints (no date shown on photographic copy provided to PEER) identify the words “Fuel Tank” twice, at a location west-southwest of Door 1, along Salem Street at the Subject Property. PEER understands that the FY2020 Statement of Interest for the Town of Wilmington North Intermediate School cites that “there are propane tanks that feed the cafeteria” and that the Fire Department Record for May 21, 2013 cites that for propane, there is

an “underground tank located in grass by rear parking lot for kitchen”. The Key Site Manager indicated that the propane tanks were removed. Please also refer to Section 5.6.1 of this report.

3.12.3 Strong, Pungent, or Noxious Odors and Their Sources

PEER did not observe strong, pungent, or noxious odors during the Site Visit.

3.12.4 Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products

PEER did not observe standing surface water and pools or sumps containing liquids likely to be hazardous substances or petroleum products during the Site Visit.

3.12.5 Drums, Totes, and Intermediate Bulk Containers

The approximate number of containers and a general description of the contents, capacity, types of containers, and the storage conditions were considered for inclusion in the report; however, please note that the Practice does not require a detailed inventory.

PEER did not observe drums, totes, and intermediate bulk containers during the Site Visit.

3.12.6 Hazardous Substance and Petroleum Product Containers Not in Connection With Identified Uses

The approximate number of containers and a general description of the contents, capacity, types of containers, and the storage conditions were considered for inclusion in the report; however, please note that the Practice does not require a detailed inventory.

PEER did not observe hazardous substance and petroleum product containers not in connection with identified uses during the Site Visit.

3.12.7 Unidentified Substance Containers

The approximate quantities, the types of containers, and conditions, and the approximate number of containers and a general description of the contents, capacity, types of containers, and the storage conditions were considered for inclusion in the report; however, please note that the

Practice does not require a detailed inventory. PEER did not observe unidentified substance containers during the Site Visit.

3.12.8 PCB-Containing Items

Electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs were considered for inclusion in the report; however, please note that the Practice does not require a detailed inventory.

Please note that fluorescent light ballasts, caulk, paint, or other materials that may contain PCBs, and are located inside and are part of the building or structure, are outside the scope of this Practice.

Materials potentially containing PCBs (for example, fluorescent light ballasts, paint, caulk) that are not part of the structure and that are not solely within the structure were considered for inclusion in the report; however, please note that the Practice does not require a detailed inventory.

PEER did not observe PCB-containing items on the Subject Property during the Site Visit. PEER observed one pole-mounted transformer along Salem Street near 321 Salem Street labeled 37.5 / 120 / 240 at Pole 23, and three pole-mounted transformers on the Property in a grassed area south of the employee parking lot. The transformers contained a label of “50”, along with a label of 3034, 5841, and 3036. No pole number was listed on the telephone pole.

These transformers are likely owned and serviced by Reading Municipal Light, an electrical utility provider. Some transformers contain mineral oil which may contain PCBs. Reading Municipal Light maintains responsibility for the transformers, and if the transformers were “PCB contaminated,” the utility company is not required to replace the transformer fluids until a release is identified.

PEER did not observe a spill or release to the exposure or migration pathways associated with these transformers.

3.12.9 Heating/Cooling

Where reasonable accessible during the site reconnaissance, the means of heating and cooling the building(s) on the Subject Property, including the fuel source (example: natural gas furnace, heating oil fueled boiler, electric baseboards, municipally supplied steam, etc.) was considered for inclusion in the report.

Based on information provided by the Town of Wilmington in their FY2020 Statement of Interest for the Town of Wilmington North Intermediate School, PEER understands the following: Three new gas fired high efficiency Camus Hydronics Ltd. boilers were installed in 2015 (replacing the two oil-fired hydronic boilers). The boilers are sealed combustion type; and flue venting is AL29-4C double wall venting to the outdoors with insulated ductwork for the combustion air. There are three floor mounted end suction pumps with VFD to modulate pump speed based on system pressure. All other equipment associated with the boilers, such as expansion tank and air separator, were also replaced. The boilers also service the domestic hot water needs of the building.

The heating in all rooms is supplied by forced hot water unit ventilators fed from the three hot water pumps. The exhaust for each room is on the opposite side of room. Each room is individually controlled by a thermostat in each space. Exhaust fans for all classrooms are combined and located on the roof of the building. All controls to the heating system are pneumatic.

The air conditioning for the building consists of five (5) window mounted A/C units that feed the principal's office, nurse's office, physical education office, computer room and teacher's lounge. There are three (3) split system units with their condensing units mounted on the roof. These systems feed rooms 100, 103, and 203. There are also (4) wall mounted split system units that supply air conditioning to rooms 102, 105, 107 and the music room.

During the Site Visit, PEER observed the three DynaFlame Series Camus Hydronics Ltd. boilers.

3.12.10 Stains or Corrosion on Floors, Walls, or Ceilings

Except for staining from water (precipitation) or other interior suspect water-based issues on the floors, and/or walls, and/or ceilings at certain locations within the basement, first floor, and second floor of the Building, and except for staining from water (boiler related) on the floor of the basement, PEER did not observe stains or corrosion on floors, walls, and ceilings during the Site Visit.

3.12.11 Drains and Sumps

PEER observed numerous floor drains, primarily associated with bathrooms, custodial areas, locker rooms, the boiler room, and the kitchen at the Building. PEER also observed a sump with three red-coated pipes entering the sump and located within the boiler room, which was next to the Camus Hydronics Ltd. boilers. PEER understands that the Key Site Manager has indicated that certain drains have been sealed with concrete at the floor surface; else other drains and/or

sumps within the Building currently flow to the Town of Wilmington sanitary system for the Building.

The presence of these drains and sumps are not considered to be a REC to the Subject Property.

3.12.12 Pits, Ponds, or Lagoons

PEER did not observe pits, ponds, or lagoons during the Site Visit.

3.12.13 Stained Soil or Pavement

PEER did not observe stained soil during the Site Visit; however, the only visible soil was located in areas associated within the grassed playing fields or associated with the sandy infield for the baseball diamond. PEER observed stained bituminous pavement as follows: black stained bituminous pavement in the area of the employee parking lot along the eastern edge of the Subject Property; orange-red stained bituminous pavement in the area of the Casella metal trash container to the east of an exit door near the Kitchen for the Building at the Subject Property; and black stained bituminous pavement along the student drop off roadway to the south of the Main entrance to the Building at the Subject Property. These observations are considered **de minimis conditions**.

3.12.14 Stressed Vegetation

PEER did not observe stressed vegetation during the Site Visit except for the following areas:

- An area directly east of 5 Arlene Ave, 7 Arleen Ave., and 9 Arlene Ave., each in Wilmington, MA, and believed to be caused from the presence of an extended period of standing water on grass
- A rectangular area understood to be located above the leaching field northwest of the Building on the Subject Property.

The presence of this stressed vegetation is not considered to be a REC to the Subject Property.

3.12.15 Solid Waste

Areas that are apparently graded by non-natural causes (or filled with fill of unknown origin) suggesting trash, construction debris, demolition debris, or other solid waste disposal; and mounds or depressions suggesting trash or other solid waste disposal were considered for inclusion in the report.

PEER notes that certain areas on the Subject Property were covered with a Building or with bituminous asphalt-pavement. PEER did not observe solid waste disposal during the Site Visit.

3.12.16 Water/Wastewater

Wastewater or other liquid (including stormwater) discharged from or to the Subject Property were considered for inclusion in the report.

PEER understands that wastewater, such as sanitary wastewater, is managed by the Town of Wilmington through a connection at Ballardvale Street. PEER observed that stormwater appeared to be managed by catch basins along the western edge of the grassed field, and PEER observed that stormwater appeared to be managed by catch basins along the eastern edge of the grassed field near the playground. PEER observed catch basins along the western edge of the employee parking lot. PEER observed stormwater, which may occur on the adjoining streets, appeared to be managed through gutter-based catch basins.

3.12.17 Wells

Dry wells, irrigation wells, injection wells, monitoring wells, abandoned wells, or other wells were considered for inclusion in the report.

PEER did not observe dry wells and did not observe injection wells on the Subject Property. PEER understands that based on an “Existing Conditions Plan” for the Subject Property, dated 12/27/2024 and provided by Nitsch Engineering, the catch basins on the Subject Property appear to be connected, and therefore do not appear to be considered dry wells. According to Jamie Magaldi, Public Works Director, the Subject Property has two irrigation well points associated with the Pump House. PEER observed the Pump House, and located within a brick structure along the western edge of the Subject Property. PEER observed that there were sprinkler heads within the grassed fields. PEER understands that this Pump House and the two irrigation well points are sourced from a deep bedrock-based groundwater well, and services the Subject Property.

The presence of this irrigation well in and of itself is not considered to be a REC to the Subject Property; however, please refer to Section 4.2.9 of this report.

3.12.18 Septic Systems or Cesspools

PEER did not observe a septic system or cesspool during the Site Visit. PEER observed an elevated rectangular landform with stressed vegetation (grass). PEER understands that the

Subject Property and associated Building currently eliminates waste through sanitary lines under the management of the Town of Wilmington, and through a connection at Ballardvale Street.

PEER notes that the Key Site Manager indicated that the septic tank was removed in 2015, and that the sanitary sewer connection to the Town of Wilmington occurs at Ballardvale Street. In addition, according to Jamie Magaldi, Public Works Director for the Town of Wilmington, "we tied the North (intermediate School) into town sewer, which connects to the line in Ballardvale Street, passing behind the playground. My understanding is the leaching field is likely still intact, but the pump chamber and septic tank are both crushed per Title 5 standard. I copied Jerry (Lawrenson) on this email for clarification, as he converted the school over to town sewer around 2014. Therefore, according to Jamie Lawrenson, "I can confirm that the septic tank and pump chambers at The North Intermediate (School) were crushed on site. The leaching field was never removed during the tie over to sewer. To my knowledge it is still in place."

PEER understands that the leaching field is likely beneath this elevated rectangular landform with stressed vegetation (grass).

PEER also observed four metal manhole covers, one bolted manhole cover labeled "sewer", and one stick-up vent pipe along the southwestern edge of the Subject Property, within an area identified as "abandoned leach field" on the "Existing Conditions Plan" for the Subject Property.

3.13 Subject Property Summary

PEER conducted a visual reconnaissance on the Subject Property on October 29, 2025. PEER conducted its visual reconnaissance by viewing the interior and exterior environment associated with the Subject Property. Based on the information contained in the above paragraphs, and during the reconnaissance, PEER did not identify a REC associated with the Subject Property during the reconnaissance.

PEER observed one (1) condition during the site reconnaissance, which may be considered a **de minimis condition**.

Observation of surficial soils was limited due to the presence of buildings, asphalt, cement, and other covered surfaces on the Subject Property. This is considered to be a data gap; however, considering a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and based on any future scope activities such as the previously project-authorized recommendation of a proposed additional subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), it may be expected that any stand-alone geo-environmental surface and subsurface soil investigation event on the Subject Property may be able to provide additional details at specific soil borings, but will not eliminate uncertainty concerning observations of surficial and sub-surficial soils on the Subject Property.

- The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property does not represent a significant data gap.

4.0 RECORDS REVIEW

This section presents a review of physical setting resources, standard government environmental record resources and additional government environmental record sources, and historical use information regarding the Subject Property and surrounding area. The Records Review is segregated into separate report sections, including (1) Physical Setting, (2) Historical Records Review, and (3) Regulatory Records Review. The purpose of the records review is to obtain and review records that will help identify RECs in connection with the Subject Property.

4.1 Physical Setting

Physical settings include the sources that provide information about the geologic, hydrogeologic, hydrologic, or topographic characteristics of the area that includes the Subject Property. The mandatory standard physical setting sources which were reviewed include the following:

- USGS - Most Recent 7.5 Minute Topographic Map (or equivalent) showing contour lines
- USGS and/or State Geological Survey - Bedrock Geology Maps
- USGS and/or State Geological Survey - Surficial Geology Maps
- National Cooperative Soil Survey - Soil Survey Maps
- USGS and/or State Geological Survey - Groundwater Maps
- Site-specific physical setting information obtained pursuant to agency file review
- Discretionary and Non-Standard Physical Setting Resources
- Other Physical Setting Resources (reasonably credible and reasonably ascertainable)

Physical Setting Information

Topography

Topography		
Subject Property Elevation	In general, from a topographic high along the southern edge, the Subject Property slopes down radially to the northeast, north, west, and southwest. Topographic elevations on the Subject Property range from approximately 108 feet above mean sea level (msl) along the southern edge of the Property (near 314 Salem Street) at Salem Street to approximately 92 feet above msl both along the extreme northwestern corner of the Property (near 9 Arlene Drive), and along the extreme southwestern corner of the Property (near 5 Arlene Drive).	A,C,D,X

Topography		
Overland Flow / Topographic Gradient	Visually, surface water runoff and stormwater appeared to be managed for certain areas on the Subject Property, and unmanaged for other areas on the Subject Property. PEER observed that stormwater appeared to be managed by catch basins along the western edge of the grassed field, and PEER observed that stormwater appeared to be managed by catch basins along the eastern edge of the grassed field near the playground. PEER observed catch basins along the western edge of the employee parking lot. PEER observed stormwater, which may occur on the adjoining streets, appeared to be managed through gutter-based catch basins. The potential interconnection of the underground stormwater collection system with any Town drainage system was not included in the scope of this environmental site assessment and was not further investigated during the reconnaissance portion of this environmental site assessment.	A,B,C,D
Nearest Surface Water Body	The nearest surface water body, an "inundated area" within the ramp interchange for Route 93 occurs approximately 1,460 feet southeast of the southeastern most edge of the Subject Property. PEER understands that a deciduous wooded swamp is shown on MassMapper to occur on both 298R Salem Street and 300R Salem Street.	A,C,D

Note: A = MassGIS Bureau of Geographic Information MassMapper, accessed 11/1/2025
B = The EDR Radius Map ™ Report with GeoCheck®, dated 10/30/2025
C = Site Reconnaissance, conducted October 29, 2025
D = USGS Topographic Map, Wilmington, MA 2021
X = Demolition and Erosion Control Plan, Wilmington Elementary School, CDW, 2/20/2025

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Physical Setting Information

USGS and/or State Geological Survey - Bedrock Geology Maps

USGS and/or State Geological Survey - Bedrock Geology Maps		
Category	Plutonic and Intrusive Rocks	B
Era	Paleozoic	B
System	Ordovian	B
Series	Lower Paleozoic granitic rocks	B
Code	Pzg1	B

Note: B = The EDR Radius Map ™ Report with GeoCheck®, dated 10/30/2025

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Physical Setting Information

USGS and/or State Geological Survey - Surficial Geology Maps

USGS and/or State Geological Survey - Surficial Geology Maps		
Coarse Deposits	Gravel deposits, sand and gravel deposits, and sand deposits	A,C,Z
Bedrock	Visually suspected at surface associated with 24 Ballardvale Street. Suspected at below the ground surface along the northeastern edge of Subject Property, and associated with borings B-3 (9 feet), B-4 (9 feet), and B-5 (9 feet), though Reference Z. notes this in the boring logs as a “boulder or rock”.	C,W

Note: A = MassGIS Bureau of Geographic Information MassMapper, accessed 11/1/2025
C = Site Reconnaissance, conducted October 29, 2025
W = Preliminary Geotechnical Report, Proposed Wildwood Early Childhood Center, LGCI, dated 12/10/2024
Z = Surficial Materials Map of Wilmington Quadrangle, Massachusetts; compiled by Byron D. Stone, Janet R. Stone, and Mary L. DiGiacomo-Cohen, Scientific Investigation Map 3402, Quadrangle 113 – Wilmington, 2018.

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Physical Setting Information

National Cooperative Soil Survey - Soil Survey Maps

National Cooperative Soil Survey - Soil Survey Maps		
Soil Series	Deerfield loamy fine sand, 0 to 3% slopes (256A) – Northern Edge of Subject Property, and Udorthents, sandy (653) – Central and Southern Edge of Subject Property	A,C
Description	Deerfield loamy fine sand, 0 to 3% slopes consist of sandy outwash derived from granite, gneiss, and/or quartzite. Udorthents consists of loamy alluvium and/or sandy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy marine deposits and/or loamy basal till and/or loamy lodgment till.	A,C,Y

Note: A = MassGIS Bureau of Geographic Information MassMapper, accessed 11/1/2025
C = Site Reconnaissance, conducted October 29, 2025
Y = Natural Resource Conservation Service, Web Soil Survey, accessed 11/1/2025

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Physical Setting Information

USGS and/or State Geological Survey - Groundwater Maps

USGS and/or State Geological Survey - Groundwater Maps		
Estimated Groundwater Depth	According to the December 10, 2024 Preliminary Geotechnical Report, groundwater was encountered in all borings except for B-3 and in test pits TP-1 and TP-2A at depths ranging between 9.0 and 14.0 feet beneath the ground surface.	C,D,W
Groundwater Flow Direction	No groundwater observation wells have been installed on the Subject Property. Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information. It may be expected that groundwater may flow – in general - northwest, toward the largest MassMapper-indicated wetland system nearest the Subject Property.	C,D

Note: C = Site Reconnaissance, conducted October 29, 2025
D = USGS Topographic Map, Wilmington, MA 2021
W = Preliminary Geotechnical Report, Proposed Wildwood Early Childhood Center, LGCI, dated 12/10/2024

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Physical Setting Information

Site Specific Physical Setting Information

Discretionary and Non-Standard Physical Setting Resources

Other Physical Setting Resources

Site Specific Physical Setting Information		
Zone II	Approved Wellhead Protection Areas (Zone II): That area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation). It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries	A
Discretionary and Non-Standard Physical Setting Resources		
	Not Applicable	
Other Physical Setting Resources		
	Not Applicable	

Note: A = MassGIS Bureau of Geographic Information MassMapper, accessed 11/1/2025

4.2 Historical Records Review

The objective of compiling and analyzing historical property information and developing a history of the previous uses of the Subject Property, adjoining properties, and surrounding area is to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the Subject Property. The environmental professional shall exercise professional judgment and consider the possible releases that might have occurred at the Subject Property, adjoining properties, and surrounding area in light of the historical uses and, in concert with other relevant information gathered as part of the Phase I process, use this information to assist in identifying recognized environmental conditions in connection with the Subject Property.

All obvious uses of the Subject Property shall be identified from the present, back to the Subject Property's first developed use, or back to 1940, whichever is earlier. The term "developed use" includes agricultural uses and placement of fill dirt, and other uses that may not involve structures. The report shall describe all identified uses, justify the earliest date identified for the Subject Property's first developed use (for example, records showed no development of the Subject Property prior to the specific date), and explain the reason for any gaps in the history of use (for example, data failure).

Data failure occurs when all of the standard historical resources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objective has not been met. Data failure is not uncommon in trying to identify historical uses at five-year intervals back to first use or 1940 (whichever is earlier). Notwithstanding a data failure, standard historical resources may be excluded if: (1) the resources are not reasonably ascertainable or (2) if past experience indicates that the resources are not likely to be accurate or complete in terms of satisfying the objective (for example, if a particular historical data source is known to have insufficient data for the particular subject area).

Please refer to Section 1.5.1 of this report for a discussion on data failure.

4.2.1 Aerial Photographs

Selected aerial photographs, which were taken from an aerial platform with sufficient resolution to allow identification of development and activities associated with the Subject Property, were reviewed at approximately 10 to 15 year intervals to obtain information concerning the history of development on and near the Subject Property. The evaluation of these aerial photographs may be limited by the aerial photograph's quality, scale, as well as the density of development within the area of the Subject Property. Selected aerial photographs, along with the name of the entity that produced an aerial photograph or series of photographs, and date or year that the photograph was taken are summarized below.

- 2023 1"=500' Flight Year: 2023 USDA/NAIP
- 2018 1"=500' Flight Year: 2018 USDA/NAIP
- 2014 1"=500' Flight Year: 2014 USDA/NAIP
- 2010 1"=500' Flight Year: 2010 USDA/NAIP
- 1995 1"=500' Acquisition Date: March 29, 1995 USGS/DOQQ
- 1986 1"=500' Flight Date: March 30, 1986 USDA
- 1980 1"=500' Flight Date: September 19, 1980 USDA
- 1978 1"=500' Flight Date: April 23, 1978 USGS
- 1965 1"=500' Flight Date: April 6, 1965 USGS
- 1963 1"=500' Flight Date: August 27, 1963 USGS
- 1938 1"=500' Flight Date: November 10, 1938 USGS

Historical Aerial Photographs

Direction	Description
Subject Property	2023 – Baseball diamond, then courts including three tennis courts and one basketball court, then sandy suspect baseball area (or track and field practice area), then playground, then asphalt-paved employee parking lot with vehicles, then school with four distinct roof sections and suspect white tent off of the northern edge of the school, then asphalt-paved student drop off area with associated concrete sidewalks; else green grass as lawn or green grass as fields. 2018 – Baseball diamond, then courts including three tennis courts and one basketball court, then sandy suspect baseball area (or track and field practice area), then playground, then asphalt-paved employee parking lot with vehicles, then school with four distinct roof sections, then asphalt-paved student drop off area with associated concrete sidewalks; else green grass as lawn or green grass as fields, including soccer goal nets, or rectangular shape of browning grass in west central field (presumed to be septic system leach field). 2014 – Baseball diamond, then courts including three tennis courts and one basketball court, then sandy suspect baseball area (or track and field practice area), then playground, then asphalt-paved employee parking lot with vehicles, then school with non-distinct roof sections, then asphalt-paved student drop off area with associated concrete sidewalks; else light green to green grass as lawn or light green to green grass as fields, including suspect septic system surface box and associated leach field (as per User) west of gym/boiler portion of Building.. 2010 – Baseball diamond, then courts including three tennis courts and one basketball court, then sandy suspect baseball area (or track and field practice area), then playground, then asphalt-paved employee parking lot, then school with four distinct roof sections, then asphalt-paved student drop off area with associated concrete sidewalks; else light green to brown grass as lawn surrounding the Building or green grass as fields, including suspect septic system surface pump chamber box and associated leach field (as per User) west of gym/boiler portion of Building..

Direction	Description
	1995 – Baseball diamond, then courts assumed to include three tennis courts and one basketball court, then a circular light colored area (suspect to be sand or track and field practice area), then asphalt-paved employee parking lot with vehicles, then school with four distinct roof sections, then suspect asphalt-paved student drop off area with associated concrete sidewalks; else suspect grass as lawn grass or grass as fields, including suspect septic system surface pump chamber box and associated leach field (as per User) west of gym/boiler portion of Building, as shown on a black and white aerial photograph. 1986^ – Baseball diamond, then courts assumed to include three tennis courts and a suspect additional court, then a circular light gray colored area (suspect to be sand or track and field practice area), then asphalt-paved employee parking lot, then school with light gray roof sections, then suspect asphalt-paved student drop off area; then an additional baseball diamond in the central portion of the field; else suspect grass as lawn or grass as fields with a light pink to red coloration on the aerial, including black, darker field colorations along the western edge of the Subject Property. 1980 – Courts assumed to include three tennis courts and a suspect additional court, then a circular light gray colored area with two smaller circular gray areas along the eastern edge (suspect to be sand or track and field practice area), then asphalt-paved employee parking lot with vehicles present, then school with four distinct light gray roof sections, then a baseball diamond in the central portion of the field; else suspect grass as lawn or grass as fields, including suspect septic system surface pump chamber box and associated leach field (as per User) west of gym/boiler portion of Building, as shown on a black and white aerial photograph. 1978 – Image not discernible. 1965 – Employee parking lot with vehicles, then school with light gray and black colored roofs, then student drop off area; else suspect grass as lawn or grass as fields in various shades of gray to black, including suspect septic system surface pump chamber box and associated leach field (as per User) west of gym/boiler portion of Building, as shown on a black and white aerial photograph. 1963 – Employee parking lot with vehicles, then school with light gray colored roofs, then student drop off area; else suspect grass as lawn or grass as fields in various shades of gray to black, including suspect septic system surface pump chamber box and associated leach field (as per User) west of gym/boiler portion of Building, as shown on a black and white aerial photograph. 1938 – Two elongated house like structures with either a hedge row or a drainage ditch between the structures along the eastern edge of the Subject Property near Ballardvale Street/Salem Streer, else light colored suspect grass fields elsewhere except for darker vegetation (shrubs/trees) along the northwestern edge where a dark-colored drainage ditch connects, and with additional daker / wet ground signatures along the western edge of the Subject Property.

Direction	Description
North	2023 – Trees, then from west to east an apartment complex along Avalon Drive, and six residential-like structures with additional out structures and vegetation (trees/grass), driveways, and three visible pools associated with Ballardvale Street. 2018 – Trees, then from west to east an apartment complex along Avalon Drive, and six residential-like structures with additional out structures and vegetation (trees/grass), driveways, and one visible pool associated with Ballardvale Street. 2014 – Trees, then from west to east an apartment complex along Avalon Drive, and six residential-like structures with additional out structures and vegetation (trees/grass), driveways, and two visible pools associated with Ballardvale Street. 2010 – Trees, then from west to east an apartment complex along Avalon Drive, and six residential-like structures with additional out structures and vegetation (trees/grass), driveways, and two visible pools associated with Ballardvale Street. 1995 – Trees (forested), then four suspect residential-like structures with additional out structures and vegetation (sparse trees / grass), and one visible pool associated with Ballardvale Street. 1986^ – Trees - forested (bright red) and light brown vegetation areas (suspect herbaceous land), then four suspect residential-like structures with additional out structures and vegetation (sparse dark red trees / light pink grass), and one visible pool associated with Ballardvale Street. 1980 – Trees (forested) and lower vegetation areas (suspect herbaceous land), then four suspect residential-like structures with additional out structures and vegetation (sparse trees / grass), and one visible pool associated with Ballardvale Street. 1978 – Image not discernible. 1965 – Narrow line of trees then lower vegetation areas (suspect herbaceous land or fields), then four suspect residential-like structures with additional out structures and vegetation (very sparse trees / grass) along Ballardvale Street. 1963 – Narrow line of trees then lower vegetation areas (suspect herbaceous land or fields), then five suspect residential-like structures with additional out structures and vegetation (very sparse trees / grass) along Ballardvale Street. 1938 – Narrow line of trees then shaped, vegetation areas (suspect fields) with darker ground signatures and suspect drainage ditches, and suspect square-shaped pen feature, then three suspect residential-like structures with additional out structures and vegetation (grass) northeast of the Subject Property, along Ballardvale Street.
East	*This description excludes the three residential-like structures along Ballardvale Street (#18, #24, #26 Ballardvale Street) already discussed in the description of "North", above.* 2023 – Ballardvale Street, then three residential-like structures with additional out structures (including one pool) along Ballardvale Street, and one residential-like structure with additional out structures along Salem Street, and including Baland Road and Salem Street.

Direction	Description
	2018 – Ballardvale Street, then three residential-like structures with additional out structures along Ballardvale Street, and one residential-like structure with additional out structures along Salem Street, and including Baland Road and Salem Street. 2014 – Ballardvale Street, then three residential-like structures with additional out structures along Ballardvale Street, and one residential-like structure with additional out structures along Salem Street, and including Baland Road and Salem Street. 2010 – Ballardvale Street, then three residential-like structures with additional out structures (including one pool) along Ballardvale Street, and one residential-like structure with additional out structures along Salem Street, and including Baland Road and Salem Street. 1995 – Image not focused. Ballardvale Street, then at least two residential-like structures with additional out structures along Ballardvale Street, and including Baland Road and Salem Street. 1986^ – Ballardvale Street, then three residential-like structures with additional out structures along Ballardvale Street, and one residential-like structure with additional out structures along Salem Street, and including Baland Road and Salem Street. 1980 – Ballardvale Street, then three residential-like structures with additional out structures along Ballardvale Street, and including Baland Road and Salem Street. 1978 – Image not discernible. 1965 – Ballardvale Street, then three residential-like structures with additional out structures along Ballardvale Street, and one residential-like structure with additional out structures along Salem Street, and including Baland Road and Salem Street. Includes a suspect hedge row, or drainage ditch from west to east between Baland Road and Salem Street. 1963 – Ballardvale Street, then three residential-like structures with additional out structures along Ballardvale Street, and one residential-like structure with additional out structures along Salem Street, and including Baland Road and Salem Street. 1938 – Ballardvale Street, then one residential-like structure with additional out structures along Salem Street, with suspect grassed field with both light and dark aerial signatures within the fields.
West	2023 – Four residential-like structures with additional out structures along Arlene Avenue (one pool visible) and three residential-like structures with additional out structures along Salem Street (one pool visible), Grass and sparse trees along Arlene Avenue, with grass and trees along Salem Street. 2018 – Four residential-like structures with additional out structures along Arlene Avenue (two pools visible) and three residential-like structures with additional out structures along Salem Street, Grass and sparse trees along Arlene Avenue, with grass and trees along Salem Street. 2014 – Four residential-like structures with additional out structures along Arlene Avenue (two pools visible) and three residential-like structures with additional out structures along Salem Street (one pool visible), Grass and sparse trees along Arlene Avenue, with grass and trees along Salem Street.

Direction	Description
	2010 – Four residential-like structures with additional out structures along Arlene Avenue (two pools visible) and three residential-like structures with additional out structures along Salem Street (one pool visible), Grass and sparse trees along Arlene Avenue, with grass and trees along Salem Street. 1995 – Four residential-like structures with additional out structures along Arlene Avenue (two pools visible) and one residential-like structure with additional out structures along Salem Street, Grass and sparse trees along Arlene Avenue, with grass and trees, and a suspect depression/water body (dark aerial feature) to the east of 3 Arlene Avenue. 1986^ – Four residential-like structures with additional out structures along Arlene Avenue (two pools visible), and light brown to red ground signatures; and one residential-like structure with additional out structures along Salem Street. Grass along Arlene Avenue, with light brown ground signatures and dark red tree signatures, and a suspect depression/water body (dark aerial feature) to the west of dark brown tree signatures and to the east of 3 Arlene Avenue. 1980 – Four residential-like structures with additional out structures along Arlene Avenue (two pools visible) and one residential-like structure with additional out structures along Salem Street, Grass and sparse trees along Arlene Avenue, with grass and trees along Salem Street. 1978 – Image not discernible. 1965 – Four residential-like structures surrounded by grass areas along Arlene Avenue, and one residential-like structure with additional out structures along Salem Street. Suspect depression/water body (dark aerial feature) to the west of a ground disturbance feature and a rectangular ground disturbance feature (suspect filled depression/water body) to the east of 3 Arlene Avenue. 1963 – Four residential-like structures surrounded by grass areas along Arlene Avenue with “Rita Road” occurring between the northern two houses and the southern two houses, and one residential-like structure with additional out structures along Salem Street. Suspect depression/water body (dark aerial feature) to the west of a ground disturbance feature (suspect filled depression/water body) and to the east of 3 Arlene Avenue. 1938 – Grassed field with light gray to dark ground signatures, and a southwest to northeast oriented drainage ditch. Other residential structures along Salem Street (not including residential structure present adjoining in 1963). Depression/water body (dark circular aerial feature) and depression/water body (dark oval aerial feature) visible to the east.
South	*This description excludes the three residential-like structures along Salem Street (#298R, #300R, #314 Salem Street) already discussed in the description of “West”, above.* 2023 – Salem Street, then three residential-like structures with additional out structures and associated grass vegetation with trees directly along Salem Street,

Direction	Description
	and two additional residential-like structures with additional out structures and associated grass vegetation set back off of Salem Street. 2018 – Salem Street, then three residential-like structures with additional out structures and associated grass vegetation with trees directly along Salem Street, and two additional residential-like structures with additional out structures and associated grass vegetation set back off of Salem Street. 2014 – Salem Street, then three residential-like structures with additional out structures and associated grass vegetation with trees directly along Salem Street, and two additional residential-like structures with additional out structures and associated grass vegetation set back off of Salem Street. 2010 – Salem Street, then at least two residential-like structures with at least one additional out structures and associated trees directly along Salem Street, and two additional residential-like structure with additional out structures and associated grass and tree vegetation set back off of Salem Street. 1995 – Salem Street, then at least one residential-like structure with additional out structures and associated trees (and/or trees obscuring any additional houses) directly along Salem Street, and an additional residential-like structure with additional out structures and associated grass and a pool set back off of Salem Street. 1986^ – Salem Street, then at least two residential-like structures with additional out structures, a suspect pool, and associated grass (light pink) and trees (dark red), which may be obscuring any additional houses directly along Salem Street, and an additional residential-like structure with additional out structures and associated grass and a pool set back off of Salem Street. 1980 – Salem Street, then at least two residential-like structures with additional out structures, and associated grass (dominated by trees), which may be obscuring any additional houses directly along Salem Street, and an additional residential-like structure with additional out structures and associated grass set back off of Salem Street. 1978 – Image not discernible. 1965 – Salem Street, then at least three residential-like structures with additional out structures, two with associated grass and sparse trees, and one with sparse grass and dense trees directly along Salem Street. 1963 – Salem Street, then at least two residential-like structures with additional out structures, two with associated grass and sparse trees, and one with sparse grass and dense trees directly along Salem Street. 1938 – Salem Street, then at least two residential-like structures with additional out structures, with associated grass fields and very sparse trees, and one area for Salem Stret at Ballardvale Street with dense trees.

^Color-infrared (CIR) aerial photography--often called "false color" photography because it renders the scene in colors not normally seen by the human eye, and is therefore used for interpretation of natural resources. Live vegetation is almost always associated with red tones. Very intense reds indicate dense, vigorously growing vegetation. As plant vigor decreases, the vegetation appears as lighter shades of red and pink, various shades of greens, and possibly tans. Bare soils appear as shades of white, blue, or green in most

agricultural regions. In general, darker shades of each color indicate moist soil. Man-made features appear in tones that relate to the materials with which they are made. Asphalt roads, for example, are dark blue or black; gravel or dirt roads are lighter colors depending on their composition; and clean concrete roads are light in tone. The colors of buildings are similarly dependent on the materials used to create them. Water appears as shades of blue, varying from nearly black (clean, clean water) to very pale blue (increasing amounts of sediment). The color of very shallow water is often determined by the material present at the bottom of the water. This occurs for the photograph year 1986.

Each of the selected aerial photographs reviewed do not appear, in and of itself, to represent a REC to the Subject Property.

4.2.2 Fire Insurance Maps

Fire insurance maps are maps originally produced for fire insurance purposes that indicate uses of properties at specified dates, and include the Subject Property. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others, which track historical property usage. Based upon inquiries to the provider of the Certified Sanborn® Map Report, EDR determined that maps for the Subject Property or for portions of the Subject Property were not available; therefore, the Subject Property and adjoining properties are “UNMAPPED”.

Please note that the unmapped property certification has been provided within Appendix C – Fire Insurance Maps.

Fire Insurance Maps

Direction	Description
Subject Property	The Certified Sanborn Map Report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.
North	Unmapped Property.
East	Unmapped Property.
West	Unmapped Property.
South	Unmapped Property.

4.2.3 Local Street Directories

Local street directories are those directories published by private or government entities that list the occupant(s) of a specific address at the time the occupant data were collected, typically within a year of the publication date of the directory.

Reasonably ascertainable information related to the local street directory for the street the Subject Property is on, and one adjoining/nearby street was reviewed.

EDR's City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals. EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

Based upon inquiries to the provider of The EDR – City Directory Image Report, EDR determined that local street directories for the Subject Property or for portions of the Subject Property were available for the years: EDR Digital Archive [2022]; Cole Information [2014; 2010; 2005; 2000; 1995; 1992]; Cole Criss-Cross Directory [1989; 1984].

For the purposes of assisting in potentially identifying the likelihood of past uses having led to recognized environmental conditions in connection with the Subject Property, the address of "320 Salem Street" was utilized as part of the local street directory search. In addition, adjoining and/or nearby addresses along "Ballardvale Street" (which may have included addresses between 3 Ballardvale Street and 64 Ballardvale Street) were also searched for the same years. A summary of the information identified in the local street directory, specific to the likelihood of past uses having led to recognized environmental conditions in connection with the Subject Property, is presented below.

Local Street Directories

Direction	Description
Subject Property	2022 – For 320 Salem Street: Christine McMenimen, Diana Fay, Frank Ferriero, Holly Banusiewicz, Jessica Barry, North Intermediate School, Patty Boggia, Shawsheen Elementary School, Stephen Bjork, West Intermediate School, Wildwood Early Childhood Center, Wilmington Middle School, Wilmington Public Schools, Wilmington Public Schools Wilmington High School Wilmington Middle School, Woburn Street Elementary School.
	2014 – For 320 Salem Street: Not Listed
	2010 – For 320 Salem Street: North Intermediate School
	2005 – For 320 Salem Street: Not Listed
	2000 – For 320 Salem Street: Not Listed
	1995 – For 320 Salem Street: Not Listed
	1992 – For 320 Salem Street: Not Listed
	1989 – For 320 Salem Street: Not Listed

Direction	Description
	1984 – For 320 Salem Street: Not Listed
Adjoining and/or Nearby Properties	2022 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 2022 – For 3, 5, 7, 18, 19, 24, 25 (Charles River Laboratories International, Inc.), 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 2014 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 2014 – For 3, 5, 7, 18, 19, 24, 25, 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 2010 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 2010 – For 3, 5, 7, 18, 19, 24, 25, 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 2005 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 2005 – For 3, 5, 7, 18, 19, 24, 25, 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 2000 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 2000 – For 3, 5, 7, 18, 19, 24, 25, 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 1995 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 1995 – For 3, 5, 7, 18, 19, 24, 25, 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 1992 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 1992 – For 3, 5, 7, 18, 19, 24, 25, 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 1989 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 1989 – For 3, 5, 7, 18, 19, 24, 25, 26 (Zambernardi Construction), 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings. 1984 – For 298R, 300R, 314, 317, 321, 327, 337, 343, 344 Salem Street, for addresses which were listed, only suspect residential listings. 1984 – For 3, 5, 7, 18, 19, 24, 25, 26, 31, 32, 33, 34, 36, 56, 64 Ballardvale Street, for addresses which were listed, only suspect residential listings.

For 22 Ballardvale Street, for the year 2022, based on the visual appearance of this nearby property as a residential house, the listing of "Charles River Laboratories International, Inc." for the address is expected to be an error as Charles River Laboratories International, Inc. appears through an electronic search to be located at 251 Ballardvale St, Wilmington, Massachusetts.

Each of the selected city directories reviewed do not appear, in and of itself, to represent a REC to the Subject Property.

4.2.4 Topographic Maps

Topographic maps are graphic representation delineating natural and man-made features of an area or region in a way that shows their relative positions and elevations. Topographic maps showing the Subject Property at an appropriate scale such that the contour labels are visible, and the topography can be visualized, were reviewed. Topographic maps were reviewed for historical land use research purposes at a published scale that allows the environmental professional to distinguish land surface elevation contour lines, hydrological features, place names, and various cultural features.

Based upon inquiries to the provider of EDR Historical Topo Map Report with QuadMatch™, EDR determined that topographic maps for the Subject Property or for portions of the Subject Property were available for the years: 2021, 2018; 2015; 2012; 1987; 1979; 1977; 1965; 1950; 1947; 1944; 1943; 1918; 1893; and 1888.

Selected topographic maps, along with the name of the entity that produced the topographic map, and date or year that the topographic map was developed, are summarized below.

- Wilmington, 2021, 7.5-Minute; 24,000
- Wilmington, 2018, 7.5-Minute; 24,000
- Wilmington, 2015, 7.5-Minute; 24,000
- Wilmington, 2012, 7.5-Minute; 24,000
- Reading, 1987, 7.5-Minute; 25,000 (Photo-Revised 1978)
- Wilmington, 1979, 7.5-Minute; 25,000 (Photo-Revised 1977)
- Wilmington, 1977, 7.5-Minute; 25,000 (Photo-Revised 1977)
- Wilmington, 1965, 7.5-Minute; 24,000 (Photo-Revised 1939)
- Wilmington, 1950, 7.5-Minute; 24,000
- Wilmington, 1947, 7.5-Minute; 25,000
- Wilmington, 1944, 7.5-Minute; 31,680
- Lowell, 1943, 30-Minute; 125,000
- Lawrence, 1918, 15-Minute; 62,500
- Lawrence, 1915, 15-Minute; 62,500
- Lawrence, 1893, 15-Minute; 62,500
- Lawrence, 1888, 15-Minute; 62,500

Historical Topographic Maps

Direction	Description
Subject Property	2021 – Rectangular box with flag school symbol shown, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with white map coloration next to a “100” brown contour. 2018 – Rectangular box with flag school symbol shown, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with white (presumed grassland) map coloration next to a “100” brown contour at south, and a brown contour at north. 2015 – Rectangular box with flag school symbol shown, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with white (presumed grassland) map coloration next to a brown contour at south, and a brown contour at north. 2012 – Ballardvale Street and Salem Street with remainder of Subject Property with white (presumed grassland) map coloration. 1987 – Rectangular plan view hatched polygon with flag school symbol shown and label of North Intermediate Sch, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with white (presumed grassland) map coloration next to a brown contour at south, and a brown contour at north. 1979 – Rectangular plan view solid black polygon with flag school symbol shown and label of Wilmington Intermediate Sch, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with minimal light green (woodland) map coloration, but white (presumed grassland) map coloration next to a brown contour at south, and a brown contour depression at west along the western edge of the Subject Property. 1977 – EDR has included an aerial image for this topographic year. 1965 – Rectangular plan view solid black polygon with flag school symbol shown and label of Wilmington Intermediate Sch, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with minimal green (woodland) map coloration, but white (presumed grassland) map coloration next to a brown contour at south, and a brown contour depression at west along the western edge of the Subject Property. 1950 – Square box with flag school symbol shown and label of North Sch along Salem Street, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with minimal green (woodland) map coloration, but white (presumed grassland) map coloration next to a brown contour at south, and a brown contour extending west off site from the western edge of the Subject Property. Small black square box east of school symbol, and unimproved road from Salem Street through two off site water features, and then north onto the western edge of the Subject Property. 1947– Square box with flag school symbol shown and label of North Sch along Ballardvale Street, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with minimal light green (woodland) map coloration, but white (presumed grassland) map coloration next to a brown contour at south, and a brown contour extending west off site from the western edge of the Subject Property. Small

Direction	Description
	black square box south of school symbol, and unimproved road from Salem Street through two off site water features, and then north onto the western edge of the Subject Property. 1944 – Square box with flag school symbol shown and label of North Sch along Ballardvale Street, adjoining Ballardvale Street and Salem Street with remainder of Subject Property with minimal light green (woodland) map coloration, but white (presumed grassland) map coloration next to a brown contour at south, and a brown contour extending west off site from the western edge of the Subject Property. Small black square box south of school symbol, and unimproved road from Salem Street through two off site water features, and then north onto the western edge of the Subject Property. 1943 – Scale of EDR imposed property boundary does not align with scale of topographic map; however, a square box with flag school symbol shown. 1918 – One small square box along Ballardvale Street and one small square box along Salem Street, else light brown map coloration with minor shrub land and with red letters “S.H.”, adjoining Ballardvale Street and Salem Street. 1915 – One small square box along Ballardvale Street and one small square box along Salem Street, else off-white map coloration with minor shrub land and with red letters “S.H.”, adjoining Ballardvale Street and Salem Street. 1893 – Yellow map coloration adjoining Ballardvale Street and Salem Street. 1888 – Yellow map coloration adjoining Ballardvale Street and Salem Street.
North	2021 – White map coloration, then Avalon Drive, then wooded marsh / swamp symbols within a contour. 2018 – White map coloration, then Avalon Drive, then wooded marsh / swamp symbols within a contour. 2015 – White map coloration, then Avalon Drive, then light green (woodland) map coloration within a contour. 2012 – Light green (woodland) map coloration, then Avalon Drive, then light green (woodland) map coloration. 1987 – Light green (woodland) and white (presumed grassland) map coloration. 1979 – White (presumed grassland) and light green (woodland) map coloration. 1977 – EDR has included an aerial image for this topographic year. 1965 – White (presumed grassland) and green (woodland) map coloration. 1950 – White (presumed grassland) and green (woodland) map coloration. 1947 – White (presumed grassland), then brown contour. 1944 – Light brown (presumed grassland on discolored map) map coloration, then brown contour. 1943 – Scale of EDR imposed property boundary does not align with scale of topographic map; however, green (woodland) map coloration shown.

Direction	Description
	1918 – Light brown (presumed grassland on discolored map) map coloration, then shrub land. 1915 – Light brown (presumed grassland on discolored map) map coloration, then shrub land. 1893 – Yellow map coloration. 1888 – Yellow map coloration.
East	2021 – White (presumed grassland) map coloration or Ballardvale Street, then white (presumed grassland) map coloration and Baland Rd and Salem Street. 2018 – White (presumed grassland) map coloration or Ballardvale Street, then white (presumed grassland) map coloration and Baland Rd and Salem Street. 2015 – White (presumed grassland) map coloration or Ballardvale Street, then white (presumed grassland) map coloration and Baland Rd and Salem Street. 2012 – White (presumed grassland) map coloration or Ballardvale Street, then white (presumed grassland) map coloration and Baland Rd and Salem Street. 1987 – White (presumed grassland) map coloration with three small square buildings; or Ballardvale Street (secondary highway), then two small square buildings on white (presumed grassland) map coloration and one small square building on light green (woodland) map coloration; and Baland Rd and Salem Street. 1979 – White (presumed grassland) map coloration with three small square buildings; or Ballardvale Street, then two small square buildings on white (presumed grassland) map coloration; and Baland Rd and Salem Street. 1977 – EDR has included an aerial image for this topographic year. 1965 – White (presumed grassland) map coloration with three small square buildings; or Ballardvale Street, then two small square buildings on white (presumed grassland) map coloration; and Baland Rd and Salem Street. 1950 – White (presumed grassland) map coloration with one small square building; or Ballardvale Street, then white (presumed grassland) map coloration; and Salem Street. 1947 – White (presumed grassland) map coloration; or Ballardvale Street, then white (presumed grassland) map coloration; and Salem Street. 1944 – Light brown (presumed grassland on discolored map) map coloration; or Ballardvale Street, then white (presumed grassland) map coloration; and Salem Street. 1943 – Scale of EDR imposed property boundary does not align with scale of topographic map; however, light brown (presumed grassland on discolored map) map coloration; or Street shown. 1918 – Light brown (presumed grassland on discolored map) map coloration; or light duty road (Ballardvale Road), then light brown (presumed grassland on discolored map) map coloration with shrub land and one small square building; and an additional light duty road (Salem Street).

Direction	Description
	1915 – Light brown (presumed grassland on discolored map) map coloration; or light duty road (Ballardvale Road), then light brown (presumed grassland on discolored map) map coloration with shrub land and one small square building; and an additional light duty road (Salem Street). 1893 – Yellow map coloration. 1888 – Yellow map coloration.
West	2021 – White (presumed grassland) map coloration or Ballardvale Street, then Rita Road (perpendicular), and Arlene Avenue (parallel); or white (presumed grassland) map coloration at a “100” contour. 2018 – White (presumed grassland) map coloration or Ballardvale Street, then Rita Road (perpendicular), and Arlene Avenue (parallel); or white (presumed grassland) map coloration at a “100” contour or marsh / swamp symbol. 2015 – White (presumed grassland) map coloration or Ballardvale Street, then Rita Road (perpendicular), and Arlene Avenue (parallel); or white (presumed grassland) map coloration at a “100” contour. 2012 – White (presumed grassland) map coloration or Ballardvale Street, then Rita Road (perpendicular), and Arlene Avenue (parallel); or white (presumed grassland) map coloration. 1987 – White (presumed grassland) map coloration beneath four small square buildings, then Arlene Avenue; and white (presumed grassland) map coloration and light green (woodland) map coloration with two small square building northwest of Salem Street (secondary highway). 1979 – White (presumed grassland) map coloration beneath four small square buildings, then Arlene Avenue; and white (presumed grassland) map coloration with two small square building northwest of Salem Street (highway). 1977 – EDR has included an aerial image for this topographic year. 1965 – White (presumed grassland) map coloration beneath four small square buildings, then Arlene Avenue; and white (presumed grassland) map coloration with two small square buildings northwest of Salem Street (highway). 1950 – White (presumed grassland) map coloration alongside a brown contour; or two water-filled ponds; or white (presumed grassland) map coloration with one small square building northwest of Salem Street (secondary highway). 1947 – White (presumed grassland) map coloration alongside a brown contour; or two water-filled ponds between an unimproved road; or white (presumed grassland) map coloration with one small square building northwest of Salem Street (secondary highway). 1944 – Light brown (presumed grassland on discolored map) map coloration alongside a brown contour; or two water-filled ponds between an unimproved road; or white (presumed grassland on discolored map) map coloration with one small square building northwest of Salem Street (secondary highway).

Direction	Description
	1943 – Scale of EDR imposed property boundary does not align with scale of topographic map; however, light brown (presumed grassland on discolored map) map coloration, and green (woodland) map coloration. 1918 – Light brown (presumed grassland on discolored map) map coloration, with shrub land. 1915 – Light brown (presumed grassland on discolored map) map coloration, with shrub land. 1893 – Yellow map coloration. 1888 – Yellow map coloration.
South	2021 – Salem Street, then white (presumed grassland) map coloration within a “100” contour. 2018 – Salem Street, then white (presumed grassland) map coloration within a “100” contour. 2015 – Salem Street, then white (presumed grassland) map coloration within a contour. 2012 – Salem Street, then white (presumed grassland) map coloration. 1987 – Salem Street (secondary highway), then one small square building within a white (presumed grassland) map coloration, and two small square buildings within a light green (woodland) map coloration. 1979 – Salem Street (highway), then three small square buildings within a light green (woodland) map coloration; else, minor white (presumed grassland) map coloration. 1977 – EDR has included an aerial image for this topographic year. 1965 – Salem Street (highway), then three small square buildings within a light green (woodland) map coloration; else, minor white (presumed grassland) map coloration within a contour. 1950 – Salem Street (secondary highway), then two small square buildings within a light green (woodland) map coloration; else, minor white (presumed grassland) map coloration within a contour. 1947 – Salem Street (secondary highway), then one small square building within a light green (woodland) map coloration; else, minor white (presumed grassland) map coloration within a contour. 1944 – Salem Street (secondary highway), then one small square building within a light green (woodland) map coloration; else, minor light brown (presumed grassland on discolored map) map coloration within a contour. 1943 – Scale of EDR imposed property boundary does not align with scale of topographic map; however, light brown (presumed grassland on discolored map) map coloration south of (presumed) Salem Street. 1918 – Light duty road (presumed Salem Street), then one small square building on light brown (presumed grassland on discolored map) map coloration, with scrub land present.

Direction	Description
	1915 – Light duty road (presumed Salem Street), then one small square building on light brown (presumed grassland on discolored map) map coloration, with scrub land present. 1893 – Yellow map coloration. 1888 – Yellow map coloration.

Each of the selected historical topographic maps reviewed do not appear, in and of itself, to represent a REC to the Subject Property.

4.2.5 Building Department Records

Building Department records considered may include those records of the local government in which the Subject Property is located, indicating permission of the local government to construct, alter, or demolish improvements to the Subject Property.

In response to the questions of "are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, and are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products", Al Spaulding, Building Inspector for the Town of Wilmington, indicated "no, to the best of my knowledge."

PEER requested to review building department records which may indicate a recognized environmental condition at the Subject Property. PEER only received the above response to the questions.

4.2.6 Interviews

Interviews may occur with one or more persons knowledgeable about the past uses of the Subject Property, adjoining properties, or surrounding area may provide information about the past uses of the Subject Property and adjoining properties. **Please refer to Section 5.0 of this report for the interviews conducted during this environmental site assessment.**

4.2.7 Property Tax Files

Property Tax Files considered may include the files kept for property tax purposes by the local jurisdiction which may include records of past ownership, appraisals, maps, sketches, photographs, or other information.

Based on a review of information obtained from the Wilmington Assessor's Office and Vision Government Solutions, the Subject Property is comprised of one parcel, which contains approximately 12.145 acres. The parcel is owned by the Town of Wilmington and is mainly classified for assessment purposes as Town Education C with a public school style, commercial 1.5-story building, built about 1955, and having a brick/masonry exterior, and flat, tar and gravel roof cover, and owned as described in the below table.

Property Tax Files

Parcel	Address	Current Owner
97/ /61/ /	Salem Street (320 Salem Street)	Town of Wilmington North Intermediate School 121 Glen Road, Wilmington, MA 01887 Book 01356 / Page 0094 Sale Date – 11/19/1956

The Wilmington Assessor's Office does not provide (did not have) sales information (prior owner information) for the Subject Property. Information on prior owners may be stored in the Registry of Deeds by researching property title history.

A review of land title records, such as those records that affect the title of real estate, which may include, among other things, deeds, mortgages, leases, land contracts, court orders, easements, liens, and AULs recorded within the recording systems or land registration systems created by state statute, was NOT completed by PEER as part of this environmental site assessment. PEER presumes that the user may be completing this review of land title records separate from this environmental site assessment.

4.2.8 Zoning/Land Use Records

Zoning/Land Use Records considered may include those records of the local government in which the Subject Property is located indicating the uses permitted by the local government in particular zones within its jurisdiction, and may consist of maps and/or written records.

In response to the questions of "are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, and are you

aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products", Valerie Gingrich, Director of Planning and Conservation for the Town of Wilmington, indicated "no, to the best of my knowledge."

PEER requested to review zoning, land use, and planning records which may indicate a recognized environmental condition at the Subject Property. PEER only received the above response to the questions.

4.2.9 Other Historical Sources

Other Historical Sources considered may include a resource or resources other than those designated in Section 4.2.1 through Section 4.2.8 above, that are credible to a reasonable person and that identify past uses of properties. This category includes, but is not limited to miscellaneous maps, news articles, books about the history of the area being researched, imagery, land title records, and a variety of other resources that may provide information about past land uses. These other resources may be found in sources such as prior assessments, newspaper archives, internet sites, community organizations, local libraries, historical societies, government agencies, current owners or occupants of surrounding properties, or records in the files and/or personal knowledge of owners and/or occupants. Other historical resources may be used to satisfy the objective of the Historical Research, but checking other historical resources is not required to comply with this Practice.

PEER requested that the Town of Wilmington provide other historical resources such as those which may be available from Town Departments such as: Assessor's Office; Board of Health; Conservation Commission; Health Department; Public Building Department; Recreation Commission; Water and Sewer Department.

PEER also requested that each of the Town Departments listed above respond to the following three part question: "Are you aware of (1) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, (2) and pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?"

In response to the three part question, Karen Rassias, Principal Assessor, Chairman Board of Assessors for the Town of Wilmington, indicated "no, to the best of my knowledge."

In response to the three part question, Shelly Newhouse, Director of Public Health for the Town of Wilmington, indicated “no, to the best of my knowledge.”

In response to the three part question, Dennis Kelly, Superintendent of Public Buildings for the Town of Wilmington, indicated “no, to the best of my knowledge.”

In response to the three part question, Brett Sawin, Recreation Director for the Town of Wilmington, indicated “no, to the best of my knowledge.”

In response to the three part question, Jamie Magaldi, Public Works Director for the Town of Wilmington, indicated “no, to the best of my knowledge.”

PEER requested to review records from each of the above departments which may indicate a recognized environmental condition at the Subject Property. PEER only received the above response to the questions.

Title Search

At the direction of the Client and user, a title search was not included as part of the scope of services. Unless notified otherwise, we assume that the user is evaluating this information outside the scope of this report.

Environmental Liens

Environmental lien records recorded against the Subject Property were not provided by the Client. At the direction of the Client and the user, performance of a review of these records was not included as part of the scope of services and unless notified otherwise, we assume that the user is evaluating this information outside the scope of this report.

Prior Assessments

As per Section 5.0 of this report, PEER requested a copy of any of the listed prior assessments. As of this report date, PEER was provided with no copies of prior assessments except for the following:

Preliminary Geotechnical Report, Proposed Wildwood Early Childhood Center, North Intermediate School – 320 Salem Street Site, Wilmington, MA, by Lahlaf Geotechnical Consulting, Inc., dated December 10, 2024.

- This Preliminary Geotechnical Report (PGR) indicated the presence of top soil, fill, buried organic soil, buried subsoil, silt, clay, swamp deposits, sand, sand and gravel, and weathered rock. This PGR described the "fill" as well graded sand, poorly graded sand, and silty sand, with traces of organic soil and roots. In addition, when groundwater was encountered, in general, it occurred between 9 feet and 14 feet below the ground surface.

The presence of top soil, fill, buried organic soil, buried subsoil, silt, clay, swamp deposits, sand, sand and gravel, and weathered rock is not considered in and of itself to be a REC to the Subject Property; however, please refer to the additional prior assessment information below.

↔

Limited Subsurface Soil Investigation Memorandum, Wildwood School @ North Intermediate School, 320 Salem Street, Wilmington, MA 01887, November 15, 2024, by PEER Consultants, P.C.

- According to the Limited Subsurface Soil Investigation Memorandum (LSSIM), PEER collected nine (9) separate, composited soil samples from specific boring depths, and/or from across multiple nearby borings, and related to an investigation for the presence or absence of pesticides and/or herbicides in Topsoil (TS) material, and related to an investigation of soil conditions for disposal pre-characterization purposes in Dry Native / Reworked Native / Suspected Imported Similar (DRY) material, and related to an investigation of soil conditions for disposal pre-characterization purposes in Wet Native (WET) material.

- PEER selected soil from the dry (not within the groundwater table) native soil / reworked native soil / suspect imported similar soil to be analyzed for Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), Metals, Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) {C10-C28}, and TPH Gasoline Range Organics (GRO) {C6-C10}, and for General Chemistry parameters such as Percent Solids, Conductivity, Corrosivity (pH), Flashpoint/Ignitability, Reactive Cyanide, and Reactive Sulfide.

- PEER also selected soil from the presumed wet (due to groundwater) native soil to be analyzed for VOCs, SVOCs, Metals, PCBs, TPH DRO, TPH GRO, and for General Chemistry parameters such as Percent Solids, Conductivity, Corrosivity (pH), Flashpoint/Ignitability, Reactive Cyanide, and Reactive Sulfide.

- PEER determined that based on analytical laboratory data the arsenic concentration in soil from two samples collected above the groundwater table and two samples collected below the groundwater table exceeded the reportable concentration (RC) in both S-1 and S-2 soils (310 CMR 40.00). In addition, PEER determined that based on analytical laboratory data that the arsenic concentration in soil from one sample collected above the

groundwater table exceeded the criteria for acceptance at both a lined landfill and an unlined landfill.

- The LSSIM determined that this portion of Wilmington is located within a naturally occurring arsenic (in bedrock) belt which causes "nearly all contamination of bedrock wells in the State by arsenic from a natural source".

- The LSSIM further noted that according to 310 CMR 40.0317: Releases and Threats of Release Which Do Not Require Notification, that notwithstanding the provisions of 310 CMR 40.0311 through 310 CMR 40.0315, the following releases and threats of release of oil and/or hazardous material are exempt from the notification requirements set forth in 310 CMR 40.0300: (22) arsenic, beryllium or nickel in Boston Blue Clay or arsenic in an area documented by the U.S. Geological Survey or in other scientific literature as an area of elevated arsenic measured in soil or groundwater that - (a) is consistently present in the environment at and in the vicinity of the sampling location; (b) is solely attributable to natural geologic or ecologic conditions; and (c) has not been mobilized or transferred to another environmental medium or increased in concentration in an environmental medium as a result of anthropogenic activities.

PEER understands that though arsenic in soil beneath the Property exceeds certain regulatory limits, since the definition of a REC means (1) the presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment, by definition, it does not appear that the presence of arsenic in soil beneath the Property exceeds those certain regulatory limits would be considered a REC to the Subject Property.

PEER notes that this Practice defines a "de minimis condition" as "a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

Therefore, though the presence of this arsenic may be considered a "de minimis condition" under this Practice, the presence of this arsenic may be more important to consider when the user makes decisions as to the on-site relocation of surface and/or subsurface soil on the Property during any proposed redevelopment of the Property, and the presence of this arsenic may be more important to consider when the user makes decisions as to the off-site disposal of surface and/or subsurface soil on the Property during any proposed redevelopment of the Property.

Any prior assessments related to any additional information obtained through the Regulatory Records Review may have been summarized below in Section 4.3 of this report.

4.3 Regulatory Records Review

Regulatory records review database information was provided by LightBox Environmental Data Resources (EDR), a contract information services company. The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the Subject Property. Information in this section is subject to the accuracy and completeness of the data provided by the information services company and the date at which the information is updated.

Please note that the accuracy and completeness of record information varies among information sources, including governmental sources. Record information is often inaccurate or incomplete. Neither the user nor the environmental professional is obligated to identify mistakes or insufficiencies in the information provided. However, the environmental professional reviewing records shall make a reasonable effort to compensate for mistakes or insufficiencies in the information reviewed that are obvious in light of other information of which the environmental professional has actual knowledge.

Availability of record information varies from information source to information source, including governmental jurisdictions. The user or environmental professional is not obligated to identify, obtain, or review every possible record that might exist with respect to a property. The user or environmental professional is required to review only record information that is reasonably ascertainable (i.e., publicly available, obtainable from its source within reasonable time and cost constraints, and practically reviewable) from those standard sources in the Practice.

Information that is obtainable within reasonable time and cost constraints means that the information will be provided by the source within 20 calendar days of receiving a written, telephone, or in-person request at no more than a nominal cost intended to cover the source's cost of retrieving and duplicating the information. Information that can only be reviewed by a visit to the source is reasonably ascertainable if the visit is permitted by the source within 20 calendar days of request.

Alternative sources may be used instead of standard sources if they are of similar or better reliability and detail, or if a standard source is not reasonably ascertainable. If records are not reasonably ascertainable from standard sources or alternative sources, the environmental professional shall attempt to obtain the requested information by other means specified in this Practice, such as questions posed to the current owner or occupant(s) of the Subject Property or appropriate persons available at the source at the time of the request.

4.3.1 Standard Government Environmental Record Resources

The scope of services herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

In some of the following subsections, the words upgradient, cross gradient, and downgradient refer to the presumed topographic gradient in relation to the Subject Property. Therefore, for example, an adjoining or nearby facility listed as “upgradient” may have a topographic contour on that property higher than a topographic contour on the Subject Property. As stated previously, the groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of a detailed on-site groundwater monitoring well system throughout the Subject Property, and surveyed to a datum, groundwater depth and flow direction beneath the Subject Property cannot be directly ascertained.

If a groundwater flow direction survey was included for the Subject Property (or an adjoining property) based on any listing of the Subject Property (or listing of an adjoining property) on a Federal or State Database, this information may be presented below.

4.3.2 Federal Database and State / Tribal Database

Listed below are the facility listings identified on the Federal Databases and the State / Tribal Databases within the Practice-required approximate minimum search distance (in miles), as measured from the nearest Subject Property boundary.

Some records to be reviewed pertain not just to the Subject Property but also pertain to properties within an additional approximate minimum search distance in order to help assess the likelihood of an impact to the Subject Property from migrating hazardous substances or petroleum products. The approximate minimum search distance for a particular record may be adjusted in the discretion of the environmental professional. Factors to consider in adjusting the approximate minimum search distance include: (1) the density (for example, urban, rural, or suburban) of the setting in which the Subject Property is located; (2) the distance that the hazardous substances or petroleum products are likely to migrate based on local geologic or hydrogeologic conditions; (3) the property type, (4) existing or past uses of surrounding properties, and (5) other reasonable factors. The justification for each adjustment and the approximate minimum search distance actually used for any particular record shall be explained in the report.

The EDR Radius Map™ Report with GeoCheck® for the approximate Subject Property boundary was run for the polygon, which included demarcated limits around the property boundary (excluding Rita Road) for the Subject Property, in Wilmington, Massachusetts, and as shown in the EDR Radius Map™ Report with GeoCheck®.

The Federal Databases table and the State / Tribal Databases table, both of which occur below, provide the standard environmental record resource, the description of the standard environmental record resource, the approximate minimum search distance information, and the number of facility listings occurring within the approximate minimum search distance. When identified within the approximate minimum search distance, specific facilities which may be listed on a database and deemed significant in relation to the Subject Property, are cited and further described in the paragraphs below the Listed Facilities Summary Table.

Sources related to the Federal Databases and the State / Tribal Databases are documented, including name, date request for information was filled, date information provided was last updated by source, date information was last updated by original source (if provided other than by original source) within Appendix D – The EDR Radius Map™ Report with GeoCheck®.

Federal Databases

Standard Environmental Record Resource	Description of Standard Environmental Record Resource	Minimum Search Distance (miles)	# of Facility Listings
Federal NPL (Superfund) sites	NPL: National Priority List. The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. ◊ Proposed NPL: Proposed National Priority List Sites site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing. ◊ NPL LIENS: Federal Superfund Liens Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.	1.0	0
Federal Delisted *NPL* sites	Delisted NPL: National Priority List Deletions. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.	0.5	0

Standard Environmental Record Resource	Description of Standard Environmental Record Resource	Minimum Search Distance (miles)	# of Facility Listings
Federal sites subject to CERCLA removals and CERCLA orders	FEDERAL FACILITY: Federal Facility Site Information listing. A listing of NPL and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities. ◊ SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the CERCLA. This dataset also contains sites which are either proposed to or on the NPL and the sites which are in the screening and assessment phase for possible inclusion on the NPL.	0.5	0
Federal CERCLA sites with NFRAP	SEMS-ARCHIVE: Superfund Enterprise Management System Archive. SEMS-ARCHIVE tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the NPL, unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.	0.5	0
Federal RCRA facilities undergoing Corrective Action	CORRACTS: Corrective Action Report. CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.	1	0

Standard Environmental Record Resource	Description of Standard Environmental Record Resource	Minimum Search Distance (miles)	# of Facility Listings
Federal RCRA TSD facilities	RCRA-TSDF: RCRA - Treatment, Storage and Disposal. RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.	0.5	0
Federal RCRA *generators*	RCRAInfo is EPA's comprehensive information system. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.	Subject Property and Adjoining Properties	0
Federal *institutional control/ engineering control registries*	Land Use Control Information System (LUCIS) contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties. ◊ US ENG CONTROLS: Engineering Controls Sites List is a listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health. ◊ US INST CONTROLS: Institutional Controls Sites List is a listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.	Subject Property Only	0
Federal *ERNS* list	Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.	Subject Property Only	0

State/Tribal Databases

Standard Environmental Record Resource	Description of Standard Environmental Record Resource	Minimum Search Distance (miles)	# of Facility Listings
State and tribal "Superfund" equivalent sites	State and tribal equivalent NPL.	1.0	NOT SEARCHED BY EDR
State and tribal hazardous waste facilities	SHWS: Site Transition List contains information on releases of oil and hazardous materials that have been reported to MADEP.	0.5	7
State and tribal *landfills* and *solid waste disposal facilities*	SWF/LF: Solid Waste Facility Database/Transfer Stations Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites. ◊ LF PROFILES: Landfill Profiles Listing is a spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MADEP permit or approval), or for which agency data is incomplete.	0.5	0
State and tribal leaking storage tanks	LUST: Leaking Underground Storage Tank Listing are sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source. ◊ LAST: Leaking Aboveground Storage Tank Sites are sites within the Releases Database that have an AST listed as its source. ◊ INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land is a listing of leaking underground storage tank locations on Indian Land in EPA Region 1 (Massachusetts).	0.5	0
State and tribal registered storage tanks	FEMA UST: Underground Storage Tank Listing is a listing of all FEMA owned underground storage tanks. ◊ UST: Summary Listing of all the Tanks Registered in the State of Massachusetts are Registered Underground Storage Tanks. USTs are regulated under Subtitle I of the RCRA and must be registered with the state department responsible for administering the UST program. Available information varies by state program. ◊ AST 2: Aboveground Storage Tanks; and Aboveground Storage Tank Database are Registered Aboveground Storage Tanks. ◊ INDIAN UST R1: Underground Storage Tanks on Indian Land is the Indian UST database which provides information about underground storage tanks on Indian land in EPA Region 1 (Massachusetts).	Subject Property and Adjoining Properties	0

Standard Environmental Record Resource	Description of Standard Environmental Record Resource	Minimum Search Distance (miles)	# of Facility Listings
State and tribal *institutional control/ engineering control registries*	INST CONTROL: Sites With Activity and Use Limitation Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.	Subject Property Only	0
State and tribal voluntary cleanup sites	INDIAN VCP R1: Voluntary Cleanup Priority Listing A listing of voluntary cleanup priority sites located on Indian Land located in Region 1 (Massachusetts).	0.5	0
State and tribal brownfield sites	Completed Brownfields Covenants Listing Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E; and BROWNFIELDS 2: Potential Brownfields Listing A listing of potential brownfields site locations in the state.	0.5	0

The most recent version of 310 CMR 40.000, the Massachusetts Contingency Plan (MCP) and published on March 1, 2024 (Mass Register # 1503) was reviewed in conjunction with the development of this environmental site assessment. Please note that based on 310 CMR 40.1055: Transition Provisions, as of June 20, 2014,

(1) all Class A-1, A-2 and B-1 Response Action Outcomes (RAO) submitted to the Department prior to June 20, 2014 shall be Permanent Solutions with No Conditions.

(2) all Class A-3, A-4, B-2 and B-3 RAO submitted to the Department prior to June 20, 2014 shall be Permanent Solutions with Conditions.

(3) all Class C-1 RAO submitted to the Department prior to June 20, 2014 shall be Temporary Solutions as described in 310 CMR 40.1050(1)(e)1.

(4) all Class C-2 RAO submitted to the Department prior to June 20, 2014 shall be Temporary Solution as described in 310 CMR 40.1050(1)(e)2.

Please also note that in considering RECs, specifically Historical RECs versus Controlled RECs, this Environmental Professional based the classification on 310 CMR 40.1041: Categories of Permanent Solutions, which indicates the following:

(1) Permanent Solution with No Conditions shall apply to:
   (a) disposal sites or portions of a disposal site where the requirements of 310 CMR 40.1040(1) have been achieved;
   (b) disposal sites or portions of a disposal site where oil and/or hazardous material concentrations do not exceed an applicable Method 3 Ceiling Limit in Soil or Groundwater listed at 310 CMR 40.0996(7), unless such levels are consistent with Natural Background;
   (c) disposal sites or portions of a disposal site where a level of No Significant Risk exists and will be maintained for all current and foreseeable future use of the site without relying upon:
      1. assumed limitations on current or future site activities, uses or conditions, that require an Activity and Use Limitation, as specified in 310 CMR 40.1012(2); or
      2. assumed limitations on current or future site activities, uses or conditions, that do not require an Activity and Use Limitations pursuant to 310 CMR 40.1013; and
   (d) sites where response actions have eliminated all threats of release and no release of oil and/or hazardous material to the environment has occurred.

(2) Permanent Solution with Conditions shall apply to disposal sites or portions of a disposal site where:
   (a) the requirements of 310 CMR 40.1040(1) have been achieved;
   (b) oil or hazardous material concentrations do not exceed an applicable Method 3 Ceiling Limit in soil or groundwater listed at 310 CMR 40.0996(7), unless such levels are consistent with Anthropogenic Background or oil and/or hazardous material in soil is located at a depth greater than 15 feet from the ground surface or beneath an Engineered Barrier and an evaluation conducted pursuant to 310 CMR 40.0860 indicates that it is not feasible to reduce the concentrations of oil and/or hazardous material in soil located at a depth greater than 15 feet from the ground surface or in the area beneath the Engineered Barrier to less than or equal to the applicable Method 3 Ceiling Limits in soil; and
   (c) a level of No Significant Risk exists and will be maintained for all current and foreseeable future use of the site, relying on one or more of the following:
      1. assumed limitations on future site activities or uses that require Activity and Use Limitations, as specified in 310 CMR 40.1012; or
      2. assumed limitations on current or future site activities, uses or conditions that do not require an Activity and Use Limitations pursuant to 310 CMR 40.1013.

In addition, the following link, active at the time of this environmental site assessment indicates the Massachusetts Department of Environmental Protection (MADEP) Waste Site / Reportable Releases Look Up Tool - Definitions of Fields Listed in Search Results:
https://www.mass.gov/doc/understanding-the-waste-siterelease-look-up-search-results/download

The Subject Property is listed 12 times in the EDR Regulatory Records Review report (MA ASBESTOS) for the following address: **320 Salem Street, Wilmington, Massachusetts**. The Subject Property is listed one time in the EDR Regulatory Records Review report (MA SPILLS) for the following address: **Salem Street, Wilmington, Massachusetts**.

The following Listed Facilities Summary Table summarizes the site-specific information provided by the specific database and/or gathered by the environmental professional for the identified facilities. Facilities are listed in order of their proximity to the Subject Property.

Listed Facilities Summary Table

Facility Number	Facility Name and Location	Estimated Direction/Distance/Gradient	Database Listings
	SUBJECT PROPERTY		
A1-A12	North Intermediate School Wilmington School Public School of Wilmington North School 320 Salem Street / Salem St. Wilmington, MA	Subject Property	MA ASBESTOS
13	No Intermediate School Salem St. Wilmington, MA	Subject Property	MA SPILLS
	ADJOINING PROPERTIES		
14	Heffron Materials Salem St. Wilmington, MA *(This facility has been Incorrectly mapped on EDR, and by the source database)*	South 0 feet Upgradient	UST
16	Avalon Oaks Apartment Complex 1 Avalon Drive Wilmington, MA	North 0 feet Downgradient	SHWS, RELEASE

Facility Number	Facility Name and Location	Estimated Direction/Distance/Gradient	Database Listings
		NEARBY PROPERTIES	
15	Schmidt Equipment Inc. 17 Ballardvale Street Wilmington, MA	Northeast 174 feet Downgradient	RCRA NonGen / NLR, FINDS, ECHO, MANIFEST

SUBJECT PROPERTY

A1-A12
North Intermediate School; Wilmington School; Public School of Wilmington; North School
320 Salem Street / Salem St.
Wilmington, MA
The Subject Property is listed within the following regulatory database: MA ASBESTOS. The MA ASBESTOS database is not part of the standard ASTM E1527-21 databases searched. In addition, the presence of asbestos is not part of the scope of work under this environmental site assessment, and are under the control of other regulatory programs within the Commonwealth of Massachusetts. Therefore, the listing of the Subject Property on these databases have not been further reviewed under ASTM E1527-21.

13
No Intermediate School
Salem St.
Wilmington, MA
The Subject Property is also listed on the MA SPILLS database. According to the database, on August 18, 1989, an unknown quantity of virgin #4 fuel oil impacted the soil during an underground storage tank removal.

The MA SPILLS database provides no additional information pertaining to this “unknown quantity of virgin #4 fuel oil impacted the soil during an underground storage tank removal”. Please refer to Section 5.6.1 within this report, below, where this condition on the Subject Property has been identified as a **REC**.

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ADJOINING PROPERTIES

14
Heffron Materials
Salem St.
Wilmington, MA

According to readily available information from web-based sources, Heffron Materials is actually located at 800 Salem Street, in Wilmington, MA; therefore, the database listing under MA UST for a facility address of "Salem St." appears to be erroneous. Therefore, this incorrectly mapped facility, which was not observed at "Salem St.", adjoining or nearby the Subject Property, is not being considered further under this Practice.

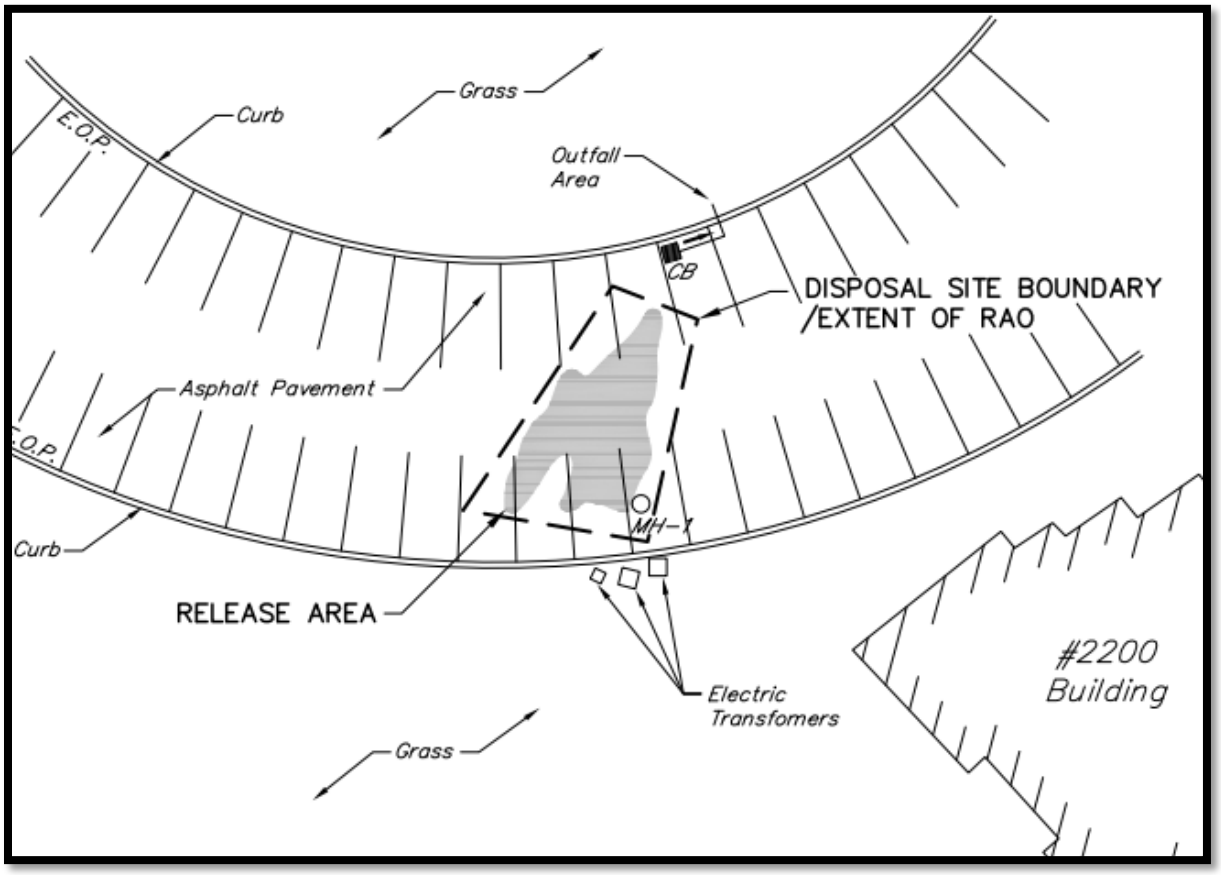
16
Avalon Oaks Apartment Complex
1 Avalon Drive
Wilmington, MA

This adjoining downgradient facility is listed on the MA SHWS and MA RELEASE databases.

This nearby facility is listed with a current status (8/30/2012) for a 2-hour RAO A1 (RTN 3-0030988) related to a chemical release with a notification date of July 18, 2007. The RAO A1 indicates that a permanent solution has been achieved, and contamination has been reduced to background or a threat of release has been eliminated. The database cites that a release of 30 gallons of gasoline occurred from a residential vehicle.

According to the RAO Statement, from Clean Harbors Environmental Services, Inc. (CHES) dated August 30, 2012, the release was a result of a vandal drilling a hole in the fuel tanks of two commercial vehicles parked at Avalon Oaks, which resulted in a release of gasoline to the asphalt pavement of approximately 30 feet by 42 feet.

Based on the location of the release area as per a sketch by CHES, which was northwest of Building 2200, and since according to CHES, the impacted pavement was cleaned with granular absorbents and detergents; and since a nearby manhole was not impacted and no soil or groundwater impacted by the release, CHES determined that no conditions that warranted further remedial measures were present.



Considering the distance of this adjoining facility to the Subject property, and considering that the regulatory agency concluded that a permanent solution has been achieved, and contamination had been reduced to background or a threat of release had been eliminated, this adjoining facility is not considered to be a REC to the Subject Property.

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NEARBY PROPERTIES

15
Schmidt Equipment Inc.
17 Ballardvale Street
Wilmington, MA

This nearby facility is listed on the RCRA NonGen / NLR, FINDS, ECHO, and RI MANIFEST. Since 17 Ballardvale Street, in Wilmington, MA does not appear to be a valid address, and since this facility is reported as a non-generator of hazardous waste, and since this facility has no violations found, this adjoining facility is not considered to be a REC to the Subject Property.

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ORPHAN SUMMARY
PEER has reviewed the site name and site address for the eight listed orphans. The site name and site address for the eight listed orphans do not appear to relate to the Subject Property, nor adjoining and nearby properties.

4.3.3 Federal and/or State/Tribal Records Review Summary

The Subject Property is listed 12 times in the EDR Regulatory Records Review report (MA ASBESTOS) for the following address: 320 Salem Street, Wilmington, Massachusetts. The Subject Property is listed one time in the EDR Regulatory Records Review report (MA SPILLS) for the following address: Salem Street, Wilmington, Massachusetts.

Considering the information provided in available MADEP file information for the MA SPILLS database listings, including the lack of information, the listing of the Subject Property on this database is not in and of itself considered to be a REC; however, the rationale for including this listing on this database as a **REC** has been further elaborated on in Section 5.6.1 of this Report.

Considering the EDR Regulatory Records Review report for adjoining properties, none of the listed facilities are considered to be a REC to the Subject Property.

Considering the EDR Regulatory Records Review report for nearby properties, none of the listed facilities are considered to be a REC to the Subject Property.

4.3.4 Additional Government Environmental Record Sources

No “additional government environmental record sources” were determined to be commonly known or reasonably ascertainable; therefore, no “additional government environmental record sources” reviewed as part of this environmental site assessment.

5.0 INTERVIEWS

The purpose of interviews is to obtain information indicating recognized environmental conditions in connection with the Subject Property. Interviews with past and present owners, operators, and occupants of the Subject Property consist of questions (in person, by telephone, by electronic communication, or in writing) which shall attempt to obtain information about current and past features, uses, activities, and conditions specified in Section 3.12 of this report above, as well as information such as the existence of the following:

- Environmental site assessment reports;
- Environmental site investigation reports;
- Environmental compliance audit reports;
- Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits, air permits);
- Registrations for underground storage tanks and aboveground storage tanks;
- Registrations for underground injection systems;
- Safety data sheets;
- Community right-to-know plans;
- Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; facility response plans, etc.;
- Reports regarding hydrogeologic conditions at the Subject Property or surrounding area;
- Reports regarding any self-directed or other cleanup activities conducted at the Subject Property;
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the Subject Property or relating to environmental liens encumbering the Subject Property;
- Hazardous waste generator notices or reports;
- Geotechnical studies;
- Risk assessments; and
- Recorded AULs.

The environmental professional asked the person or persons interviewed, as shown below, to be as specific as reasonably feasible in answering questions. The person or persons interviewed was / were also asked to answer in good faith and to the extent of their knowledge.

5.1 Key Site Manager

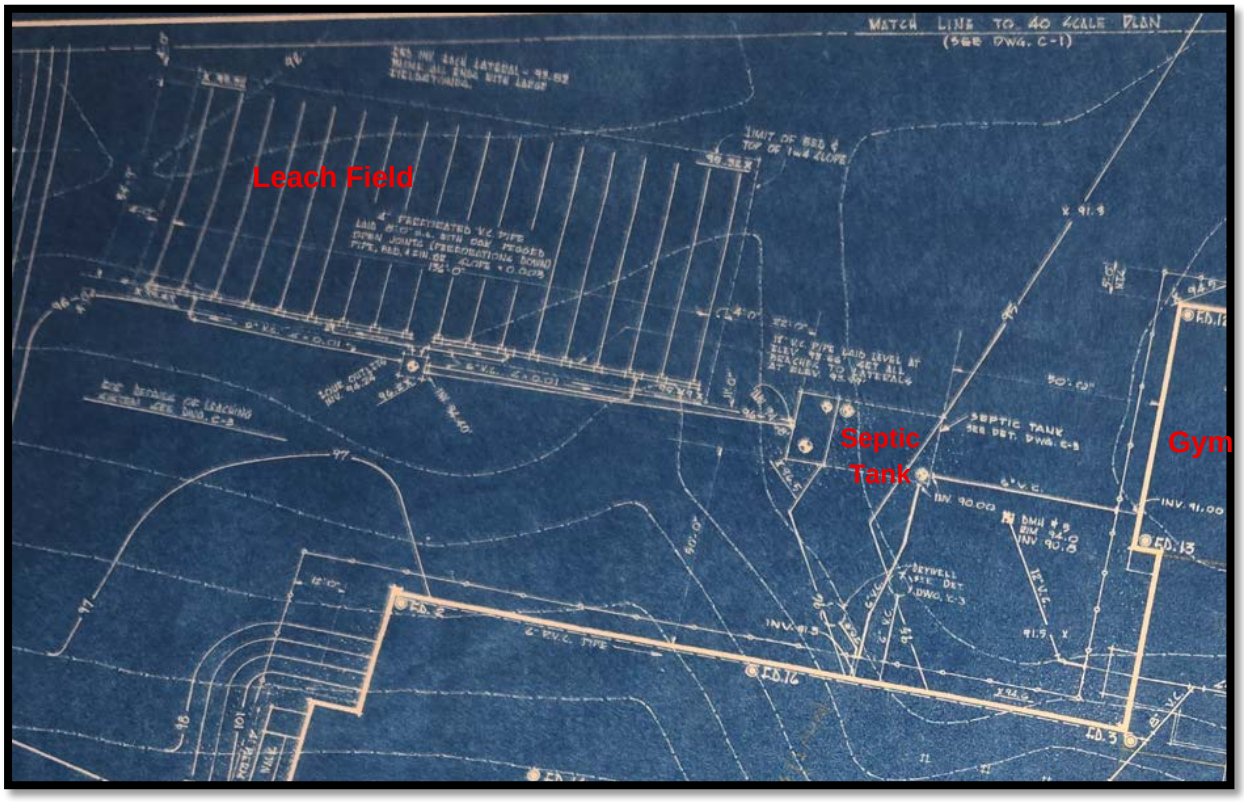
In advance of the site reconnaissance, the owner of the Subject Property was asked to identify a person with good knowledge of the uses and physical characteristics of the Subject Property (the Key Site Manager). Please note that if the user is the current subject property owner, the user has an obligation to identify a key site manager, even if it is the user himself or herself. The key site manager interviewed as part of this environmental site assessment is:

Key Site Manager Interview

Key Site Manager Name	Key Site Manager Title	Familiarity with Subject Property	PEER Interviewer Name	Date / Time of Interview
Dennis Kelley***	Superintendent of Public Buildings	12 years	Dave Gorden	October 29, 2025 1145 hours

*** Mr. Kelley was joined by Ms. Dianne Carreiro, Principal of North Intermediate School, during the Key Site Manager Interview.

Mr. Dennis Kelley, Superintendent of Public Buildings for the Town of Wilmington, was interviewed regarding the Subject Property. Mr. Kelley indicated that the Subject Property was used for education since at least 1958. Mr. Kelley indicated that an 1838 Deed indicated that the Subject Property was “vacant”. Mr. Kelley indicated that Subject Property is connected to Town sewer at Ballardvale Street and that the septic tank was removed in 2015. PEER has added an image below from available blueprints (no date shown on photographic copy provided to PEER) for the Building, showing the location of the septic tank (former) and leach field, west south-west of the gymnasium portion of the Building. Mr. Kelley indicated that the Subject Property is connected to natural gas and that any historic above ground or underground storage tanks on the Subject Property were removed (referring the Interviewer to Wilmington Fire Department files). Mr. Kelley indicated that the Subject Property did not generate hazardous wastes. Mr. Kelley showed the Interviewer the locations within the Building where the school stores hazardous substances and/or petroleum products in connection with identified uses.



Septic Tank (former) Location, as per "Blueprints"
(320 Salem Street, Wilmington, MA)

Mr. Kelley was asked "whether he was aware of (1) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, (2) and pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?" Mr. Kelley responded, "not to my knowledge."

5.2 Occupants

During the site reconnaissance, a reasonable attempt was made to identify and interview a reasonable number of occupants (those tenants, subtenants, or other persons or entities using a property or a portion of a property) of the Subject Property. The occupant, i.e., other person using a property) interviewed as part of this environmental site assessment included:

Occupants Interview

Occupants Name	Occupants Title	Familiarity with Subject Property	PEER Interviewer Name	Date / Time of Interview
Dianne Carreiro	Principal	4 years (since 2021)	Dave Gorden	October 29, 2025 1145 hours

Ms. Dianne Carreiro, Principal of the North Intermediate School, was interviewed concurrent with the interview with Mr. Kelley regarding the Subject Property. Ms. Carreiro indicated she was the Principal of the school for 4 years.

Ms. Carreiro was asked “whether she was aware of (1) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, (2) and pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?” Ms. Carreiro responded, “not to my knowledge.”

5.3 Major Occupants

PEER understands that if the Subject Property has five or fewer current occupants, the Practice indicates that a reasonable attempt shall be made to interview a representative of each one of the occupants. If there are more than five current occupants, the Practice indicates that a reasonable attempt shall be made to interview the major occupant(s) and those other occupants whose operations are likely to indicate recognized environmental conditions in connection with the Subject Property.

For the Subject Property, the current use is an intermediate school for the Town of Wilmington Public Schools, therefore, it is PEER’s understanding that there are no additional “major occupants” on the Subject Property.

5.4 Interviews with Past Owners, Operators, and Occupants

Interviews with past owners, operators, and occupants of the Subject Property (to the extent that they have been identified and that the information likely to be obtained is not duplicative of information already obtained from other sources) may provide material information regarding the potential for contamination at the Subject Property.

The Subject Property has been used for educational purposes (as a school) since at least 1958 (according to Mr. Kelley). Past owners, operators, and occupants of the Subject Property have not been identified, and therefore interviews with any known or unknown past owners, operators, and occupants of the Subject Property was not included as part of this environmental site assessment.

5.5 Interview Requirements for Abandoned Properties

In the case of inquiries conducted at abandoned properties where there is evidence of potential unauthorized uses of the abandoned property or evidence of uncontrolled access to the abandoned property, the Practice indicates that interviews with one or more owners or occupants of adjoining properties or nearby properties shall be conducted.

The Subject Property is NOT considered to be an abandoned property.

5.6 Interviews with State and/or Local Government Officials

The purpose of interviews (in person, by telephone, by electronic communication, or in writing) with state and/or local government officials is to obtain information indicating recognized environmental conditions in connection with the Subject Property. Interviews with state and/or local government consisted of questions directed towards identifying recognized environmental conditions in connection with the Subject Property.

PEER made a reasonable attempt to interview at least one staff member of any one or more of the following types of state and/or local government agencies: local fire department that serves the Subject Property; state and/or local health agency or local/regional office of state health agency serving the area in which the Subject Property is located; state and/or local agency or local/regional office of state agency having jurisdiction over hazardous waste disposal or other environmental matters in the area in which the Subject Property is located, or; local agencies responsible for the issuance of building permits or groundwater use permits that document the presence of AULs in the area in which the Subject Property is located.

5.6.1 Local Fire Department

PEER requested an interview with the local fire department. PEER received a response from William F. Cavanaugh, III, Chief of the Wilmington Fire Department.

Mr. Cavanaugh was asked whether he was aware of (1) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the property. Mr. Cavanaugh responded “no, to the best of my knowledge”, and then added “no litigation but there

is documents on the Town website for this site. Under "Fire Department" Menu on the left "21E Research" scroll to the site address and the documents are linked on the left." PEER reviewed the "documents on the Town website for this site".

In a March 14, 1986 Town of Wilmington Tank Registration for 320 Salem Street, the presence of Tank A, a 6,670-gallon steel #4 Fuel Oil Tank installed in 1961 as well as the presence of Tank B, a 6,670-gallon steel #4 Fuel Oil Tank installed in 1961, were reported.

During a Petrotite Tank System Tightness Test on April 23, 1987, the "front" tank was reported as "leaked at manhole cover". On August 18, 1989, the documents indicated receipt for the removal and disposal of one 6,500 gallon underground steel storage tank and one additional (gallons not stated) underground steel storage tank from North Intermediate School (Salem Street) to the John C Tombarello & Sons, Lawrence, MA tank yard.

In an undated letter, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on August 22, 2003, an inspection determined that the underground oil tank Veeder Root monitor device was out of service and needed to be repaired.

On August 19, 2004, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on August 12, 2004, an inspection determined that the Veeder Root leak detection monitor device for the underground oil tank was out of service and needed to be in service.

On August 12, 2005, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on August 5, 2005, an inspection determined that the underground tank monitoring system was out of service and needed to be repaired.

On August 24, 2006, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on August 10, 2006, an inspection determined that the underground tank monitoring system was in alarm and needed to be serviced.

On July 31, 2007, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on July 19, 2007, an inspection determined that the Veeder Root underground oil tank monitoring system was not working and needed to be serviced.

On October 7, 2009, the Town of Wilmington issued a permit to maintain an existing/new Underground Storage Tank Facility at 320 Salem Street, for one 10,000-gallon.

On June 2, 2010, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on May 6, 2010, an inspection determined that the Veeder Root underground oil tank monitoring system was not working.

On June 15, 2011, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on June 9, 2011, an inspection determined that the Veeder Root underground oil tank monitoring system was not working.

On May 9, 2012, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on May 2, 2012, an inspection determined that the Veeder Root underground oil tank monitoring system was not working.

On May 21, 2013, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on May 13, 2013, an inspection determined that the Veeder Root underground oil tank monitoring system was not working. This inspection also indicated that an oil tank is an “underground tank by front door” and that propane is “underground tank located in grass by rear parking lot, for kitchen”.

On April 28, 2014, the Town of Wilmington Fire Department issued a letter to North Intermediate School, indicating that on April 28, 2014, an inspection determined that a new Veeder Root underground oil tank monitoring system was installed.

On June 10, 2014, a Certificate of Registration for the keeping, storage, manufacture, or sale of flammables, combustibles, or explosives was issued for 320 Salem Street, for an “Inventory: 10,000 gallons”.

On July 30, 2014, Permit 2014-144 authorized a 10,000 gallon tank to be removed from 320 Salem Street by Petroleum Management Services, Inc. of Reading, MA, and be transported by Lighthouse Environmental Solutions, LLC to Allied Recycling in Walpole, MA.

Mr. Cavanaugh was also asked whether he was aware of (2) and pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?” Mr. Cavanaugh responded, “no, not to the best of my knowledge”, to both questions.

Based on the results of the April 23, 1987 Petrotite Tank System Tightness Test, which indicated that the “front” tank was reported as “leaked at manhole cover”, and which said steel tanks were reportedly removed and disposed of on August 18, 1989 with no additional observations noted in the documents; and based on the lack of Fire Department information between August 18, 1989 and August 22, 2003 for the Subject Property related to any underground storage tanks; and based on the documented service issues with the Veeder Root monitoring system between August 22, 2003 and May 21, 2013; and considering that Permit 2014-144 authorized a 10,000 gallon tank to be removed from 320 Salem Street by Petroleum Management Services, Inc. of Reading, MA, and be transported by Lighthouse Environmental Solutions, LLC to Allied Recycling

in Walpole, MA with no additional observations noted in the documents; and considering that MA SPILLS database reported a spill of virgin petroleum to the soil on August 18, 1989, the suspected presence of petroleum impacted soil from a reported spill of virgin petroleum to the soil on August 18, 1989, and presumed to be located to the west southwest of Door 1 (as per the image below) for the Building at the Subject Property is considered to be a **REC** to the Subject Property.



Each “Fuel Tank” Location, as per “Blueprints”
(320 Salem Street, Wilmington, MA)

5.6.2 State and/or Local Health Agency

PEER requested an interview with the local health department. PEER received a response from Shelly Newhouse, Director of Public Health. Ms. Newhouse was asked whether she was aware of (1) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, (2) and pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?" Ms. Newhouse responded, "no, to the best of my knowledge", to the questions.

5.6.3 State and/or Local Environmental Agency

On November 26, 2025, PEER conducted a review of the Waste Site & Reportable Releases results under the Energy & Environmental Affairs Data Portal. This database provides for the locations and details about oil and hazardous material sites in Massachusetts. Of the 262 listed sites in Wilmington, Massachusetts, as of November 26, 2025, none were reported with an address of 320 Salem Street, and none were reported with an address of Salem Street, and none were reported with a site name of North Intermediate School.

5.6.4 Local Building Permit Agency or Groundwater Use Permit Agency

PEER requested an interview with the local building inspector. PEER received a response from Al Spaulding, Building Inspector. Mr. Spaulding was asked whether he was aware of (1) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, (2) and pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property, and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?" Mr. Spaulding responded, "no, to the best of my knowledge", to the questions.

5.7 Interviews Summary

PEER requested information of the presence or absence of environmental records or other information which may indicate RECs for the Subject Property. Except where noted above, or where information was not provided to PEER within the timeframe of this report, when asked the following three part question of whether the Key Site Manager and Occupant were aware of (1) any pending, threatened or past litigation relevant to hazardous substances or petroleum products in, on, or from the property, (2) and pending, threatened or past administrative proceedings

relevant to hazardous substances or petroleum products in, on, or from the property, and (3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products, both the Key Site Manager and Occupant each responded “no, to the best of my knowledge”.

It is the opinion of the environmental professional that data gap did not occur except for lack of or inability to obtain the following information required by this Practice despite good faith efforts by the environmental professional to gather such information:

- Limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks.

The environmental professional reviewed this data gap for significance, specifically whether other information and/or professional experience raises reasonable concerns involving the effects of this data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks does not represent a significant data gap.

6.0 NON-SCOPE SERVICES

There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside the scope of this Practice (that is, non-scope considerations). As per this Practice, some environmental conditions may be present at a property that do not present potential CERCLA liability, and are beyond the scope of this Practice.

It is important to note that whether or not a user elects to inquire into non-scope considerations in connection with this Practice or any other environmental site assessment, no assessment of such non-scope considerations is required for all appropriate inquiry as defined by this Practice.

In addition, there may be standards or protocols for assessment of potential hazards and conditions associated with non-scope conditions developed by governmental entities, professional organizations, or other private entities.

Furthermore, Parties who wish to qualify for one of the LLPs will need to know whether they are in compliance with AULs, including land use restrictions that were relied upon in connection with a response action. A determination of compliance with AULs is beyond the scope of this Practice.

Finally, there may be certain non-scope considerations that persons, separate from this Practice, may want to assess in connection with commercial real estate. However, based on the scope of services in PEER's Proposal, this environmental site assessment was performed in accordance with PEER's proposal dated July 30, 2024, and was completed consistent with that proposal, which did not include non-scope considerations, such as:

> *Asbestos-containing building materials unrelated to releases into the environment; Biological agents; Cultural and historic resources; Ecological resources; Endangered species; Health and safety; Indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment; Industrial hygiene; Lead-based paint unrelated to releases into the environment; Lead in drinking water; Mold or microbial growth conditions; PCB-containing building materials (for example, interior fluorescent light ballasts, paint, and caulk); Naturally-occurring radon; Regulatory compliance; Substances not defined as hazardous substances (including some substances sometimes generally referred to as emerging contaminants) unless or until such substances are classified as a CERCLA hazardous substance; and Wetlands.*

No implication is intended as to the relative importance of inquiry into such non-scope considerations listed above, and the list of non-scope considerations above is not intended to be all-inclusive.

7.0 FINDINGS AND OPINIONS

The Findings section identifies those features, activities, uses, and conditions that, in the judgment of the environmental professional, may indicate the presence or likely presence of hazardous substances or petroleum products at the Subject Property. Some findings, but not necessarily all findings, may be indicative of the presence of recognized environmental conditions, controlled recognized environmental conditions, historical recognized environmental conditions, or de minimis conditions.

This section document the findings and opinions of the environmental site assessment and may include a discussion of significant data gaps and deletions.

This Phase I environmental site assessment was performed in accordance with PEER Consultant's (PEER) proposal dated July 30, 2024, and was conducted consistent with the procedures included in ASTM E1527-21, Standard Practice for environmental site assessments: Phase I Environmental Site Assessment Process. The environmental site assessment was conducted under the supervision or responsible charge of Mr. Dave Gorden, Environmental Professional with PEER. In addition, Mr. Gorden performed the Subject Property reconnaissance on October 29, 2025.

The Subject Property consists of one parcel, addressed as "320 Salem Street", Wilmington, Middlesex County, Massachusetts, and is identified on the Wilmington, MA Vision Government Solutions database by Parcel ID 97/ /61/ / (Salem Street), and consists of approximately 12.145 acres. The parcel is owned by the Town of Wilmington and is mainly classified for assessment purposes as Town Education C with a public school style, commercial 1.5-story building, built about 1955, and having a brick/masonry exterior, and flat, tar and gravel roof cover.

In general, from a topographic high along the southern edge, the Subject Property slopes down radially to the northeast, north, west, and southwest. Topographic elevations on the Subject Property range from approximately 108 feet above mean sea level (msl) along the southern edge of the Property (near 314 Salem Street) at Salem Street to approximately 92 feet above msl both along the extreme northwestern corner of the Property (near 9 Arlene Drive), and along the extreme southwestern corner of the Property (near 5 Arlene Drive).

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This section identifies the presence of recognized environmental conditions, controlled recognized environmental conditions, historical recognized environmental conditions, or de minimis conditions. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

Consistent with ASTM E1527-21 Section 3.2.73, and for the purposes of this assessment, recognized environmental condition means (1) the presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment. The following REC has been identified associated with the Subject Property.

- North Intermediate School, 320 Salem Street, Wilmington, MA
  - Based on the results of the April 23, 1987 Petrotite Tank System Tightness Test, which indicated that the "front" tank was reported as "leaked at manhole cover", and which said steel tanks were reportedly removed and disposed of on August 18, 1989 with no additional observations noted in the documents; and based on the lack of Fire Department information between August 18, 1989 and August 22, 2003 for the Subject Property related to any underground storage tanks; and based on the documented service issues with the Veeder Root monitoring system between August 22, 2003 and May 21, 2013; and considering that Permit 2014-144 authorized a 10,000 gallon tank to be removed from 320 Salem Street by Petroleum Management Services, Inc. of Reading, MA, and be transported by Lighthouse Environmental Solutions, LLC to Allied Recycling in Walpole, MA with no additional observations noted in the documents; and considering that MA SPILLS database reported a spill of virgin petroleum to the soil on August 18, 1989, the suspected presence of petroleum impacted soil from a reported spill of virgin petroleum to the soil on August 18, 1989, and presumed to be located to the west southwest of Door 1 for the Building at the Subject Property is considered to be a REC to the Subject Property.

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Consistent with ASTM E1527-21 Section 3.2.17, a controlled recognized environmental condition is a "recognized environmental condition affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).

This environmental site assessment did not identify Controlled RECs associated with the Subject Property.

↔

Consistent with ASTM E1527-21 Section 3.2.39, a historical recognized environmental condition is a "previous release of hazardous substances or petroleum products affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the Subject Property to any controls (for example, activity and use limitations or other property use limitations)". Please note that a historical recognized environmental condition is not a recognized environmental condition.

This environmental site assessment did not identify Historical RECs associated with the Subject Property.

↔

Consistent with ASTM E1527-21 Section 3.2.20, and for the purposes of this assessment, a de minimis condition is a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The following two de minimis conditions have been identified on or associated with the Subject Property.

- PEER observed stained bituminous pavement as follows: black stained bituminous pavement in the area of the employee parking lot along the eastern edge of the Subject Property; orange-red stained bituminous pavement in the area of the Casella metal trash container to the east of an exit door near the Kitchen for the Building at the Subject Property; and black stained bituminous pavement along the student drop off roadway to the south of the Main entrance to the Building at the Subject Property.

- PEER determined that based on analytical laboratory data that the arsenic concentration in soil from two samples collected above the groundwater table and two samples collected below the groundwater table as part of PEER's November 15, 2024 Limited Subsurface Soil Investigation Memorandum exceeded the reportable concentration (RC) in both S-1 and S-2 soils (310 CMR 40.00). In addition, PEER determined that based on analytical laboratory data that the arsenic concentration in soil from one sample collected above the groundwater table exceeded the criteria for acceptance at both a lined landfill and an unlined landfill. PEER understands that this portion of Wilmington is located within a naturally occurring arsenic (in bedrock) belt which causes "nearly all contamination of bedrock wells in the State by arsenic from a natural source". PEER further understands that the following releases and threats of release of oil and/or hazardous material are exempt from the notification requirements set forth in 310 CMR 40.0300: (22) arsenic,

beryllium or nickel in Boston Blue Clay or arsenic in an area documented by the U.S. Geological Survey or in other scientific literature as an area of elevated arsenic measured in soil or groundwater.

8.0 CONCLUSIONS

We have performed a Phase I environmental site assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of 320 Salem Street, Wilmington, Massachusetts, the Subject Property. Any exceptions to, or deletions from, this Practice are described in Section 1.5 of this report. This assessment has revealed the following recognized environmental conditions, and/or controlled recognized environmental conditions, and/or historical recognized environmental conditions, and/or de minimis conditions, and/or significant data gaps in connection with the Subject Property:

Subject Property

- 320 Salem Street, Wilmington, MA
  - One REC
  - No Historical RECs
  - No Controlled RECs
  - Two de minimis conditions

It is the opinion of the environmental professional that data gaps did not occur except for lack of or inability to obtain the following information required by this Practice despite good faith efforts by the environmental professional to gather such information:

- Limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks.

The environmental professional reviewed this data gap for significance, specifically whether other information and/or professional experience raises reasonable concerns involving the effects of this data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks does not represent a significant data gap.

Observation of surficial soils was limited due to the presence of buildings, asphalt, cement, and other covered surfaces on the Subject Property. This is considered to be a data gap; however, considering a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by

PEER, and based on any future scope activities such as the previously project-authorized recommendation of a proposed additional subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), it may be expected that any stand-alone geo-environmental surface and subsurface soil investigation event on the Subject Property may be able to provide additional details at specific soil borings, but will not eliminate uncertainty concerning observations of surficial and sub-surficial soils on the Subject Property.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property does not represent a significant data gap.

Please note that PEER observed a soil-based floor within a crawl space with an access door from the boiler room in the “basement” of the elongated northeast to southwest portion of the Building. Though PEER opened this access door to the crawl space with the assistance of the Key Site Manager, since the crawl space had limited illumination, was labeled with “asbestos” signs, and was located beneath (i.e., air quality unknown) the Building, PEER did not assess this crawl space / did not access the crawl space in its entirety. Please refer to the above discussion related to the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property, as it relates to this crawl space.

8.1 Non-Scope Services

There may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside the scope of this Practice (that is, non-scope considerations). As per this Practice, some environmental conditions may be present at a property that do not present potential CERCLA liability, and are beyond the scope of this Practice.

It is important to note that whether or not a user elects to inquire into non-scope considerations in connection with this Practice or any other environmental site assessment, no assessment of such non-scope considerations is required for all appropriate inquiry as defined by this Practice.

In addition, there may be standards or protocols for assessment of potential hazards and conditions associated with non-scope conditions developed by governmental entities, professional organizations, or other private entities.

Furthermore, Parties who wish to qualify for one of the LLPs will need to know whether they are in compliance with AULs, including land use restrictions that were relied upon in connection with a response action. A determination of compliance with AULs is beyond the scope of this Practice.

There may be certain non-scope considerations that persons, separate from this Practice, may want to assess in connection with commercial real estate. However, based on the scope of services in PEER's Proposal, this environmental site assessment was performed in accordance with PEER's proposal dated July 30, 2024, and was completed consistent with that proposal, which did not include non-scope considerations, such as the ones presented above in Section 6.0.

8.2 Additional Investigation

Please note that the environmental professional may choose to provide an opinion regarding an additional appropriate investigation, if any, to detect the presence of hazardous substances or petroleum products. An environmental site assessment which includes such an opinion (i.e., for an additional investigation) by the environmental professional does not render the environmental site assessment incomplete. This opinion is not intended to constitute a requirement that the environmental professional include any recommendations for Phase II or other assessment activities.

Recommendations are not required by this Practice. A user should consider whether recommendations for additional inquiries or other services are desired. Recommendations are an additional service that may be useful in the user's analysis of LLPs or business environmental risks. It is the opinion of this Environmental Professional that, at a minimum, the user may desire:

- to evaluate the presence or absence of oil and/or hazardous materials in soil beneath the footprint of any newly proposed school-style building(s) or associated groundwork excavations on the Subject Property.
- to evaluate the presence or absence of oil and hazardous materials in soil and/or groundwater beneath the existing school building and immediate surrounding land, if and when renovated or demolished, on the Subject Property.
- to conduct a ground penetrating radar (GPR) survey or a Geophysical Survey in an area on the Subject Property within the area consisting of the flag pole, Japanese maple, and raised concrete curbing, and located west-southwest of Door 1 at the Building, within an area previously reported to contain underground storage tanks, to evaluate the subsurface for any anomalies which may indicate a buried underground storage tank or any other buried object containing metal.
- to evaluate the presence or absence of oil and/or hazardous materials in soil beneath the area previously reported to contain underground storage tanks on the Subject Property.

- to conduct a GPR survey or a Geophysical Survey in an area on the Subject Property within the area consisting of the grass, and located west-southwest of the gymnasium at the Building, within an area previously reported to contain a septic tank and associated leach field, to evaluate the subsurface for any anomalies which may indicate a buried tank or any other buried object containing metal.
- to evaluate the presence or absence of oil and/or hazardous materials, and including biological material in soil beneath the area previously reported to contain a septic tank and associated leach field on the Subject Property.
- to evaluate the presence or absence of oil and/or hazardous materials, and including biological material in soil beneath the area previously reported to contain an abandoned leach field along the southwestern edge of the Subject Property.
- to evaluate the presence or absence of oil and/or hazardous materials in groundwater beneath the Subject Property,
    - should earth excavations be proposed during any site construction activities at or below the groundwater table, or
    - should proposed occupied functional spaces of any new building or buildings on the Subject Property occur within 15 feet of the groundwater table.

8.3 Limiting Conditions, Deletions, Deviations, Data Gaps

Should the user determine that the current location of the 320 Salem Street, Wilmington, Massachusetts Subject Property, or adjoining portions of land to the Subject Property will be the location for a building demolition and/or new building construction, or be utilized for any proposed redevelopment or new construction objectives, which may disturb the soil and/or groundwater at the Subject Property, or at adjoining properties, investigations, including additional investigation to evaluate the potential for buried anomalies and/or to detect the presence/absence and nature/extent of hazardous substances/petroleum products associated with the exposure and migration pathways, may be warranted.

Data failure reviewed the failure to achieve the historical research objective (such as compiling and analyzing historical property information and developing a history of the previous uses of the Subject Property, adjoining properties, and surrounding area). Data failure reviewed the failure to achieve the historical research objective (such as aerial photographs, fire insurance maps, local street directories, topographic maps, building department records, interviews, property tax files, zoning/land use records).

It is the opinion of the environmental professional that data failure did not occur except for with the review of the following historical research records:

- Limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks.

Furthermore, the historical research objective for the Subject Property was traced back to at least 1888 (historical topographic map). In summary, through historical research records, the Subject Property appears to have been utilized as an educational facility / school and associated purposes from at least 1943 through at least October 29, 2025, the date of the most recent site reconnaissance. Therefore, it is the opinion of the environmental professional that any perceived lack of the historical resources being able to identify historical uses at five-year intervals back to the first use or 1940 (whichever is earlier) should not represent a data failure within this environmental site assessment.

Data gap is the lack of or inability to obtain information required by this Practice despite good faith efforts by the environmental professional to gather such information.

It is the opinion of the environmental professional that data gap did not occur except for lack of or inability to obtain the following information required by this Practice despite good faith efforts by the environmental professional to gather such information:

- Limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks.

The environmental professional reviewed this data gap for significance, specifically whether other information and/or professional experience raises reasonable concerns involving the effects of this data gap on the ability of the environmental professional to render an opinion regarding whether conditions exist that are indicative of recognized environmental conditions or controlled recognized environmental conditions.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the limited and presumed incomplete documentation of information within available Fire Department records pertaining to the underground storage tanks does not represent a significant data gap.

Observation of surficial soils was limited due to the presence of buildings, asphalt, cement, and other covered surfaces on the Subject Property. This is considered to be a data gap; however, considering a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and based on any future scope activities such as the previously project-authorized recommendation of a proposed additional subsurface soil investigation at the Subject Property

(including an area proximate to the underground storage tanks), it may be expected that any stand-alone geo-environmental surface and subsurface soil investigation event on the Subject Property may be able to provide additional details at specific soil borings, but will not eliminate uncertainty concerning observations of surficial and sub-surficial soils on the Subject Property.

> The environmental professional concluded based on the knowledge obtained through a review of the State and Federal databases environmental record resources, and through a review of a November 15, 2024 Limited Subsurface Soil Investigation Report by PEER, and including the previously project-authorized recommendation of a proposed additional surface and subsurface soil investigation at the Subject Property (including an area proximate to the underground storage tanks), that the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property does not represent a significant data gap.

Please note that PEER observed a soil-based floor within a crawl space with an access door from the boiler room in the “basement” of the elongated northeast to southwest portion of the Building. Though PEER opened this access door to the crawl space with the assistance of the Key Site Manager, since the crawl space had limited illumination, was labeled with “asbestos” signs, and was located beneath (i.e., air quality unknown) the Building, PEER did not assess this crawl space / did not access the crawl space in its entirety. Please refer to the above discussion related to the inability to view surface soils in areas where the building, asphalt, cement, and other covered surfaces occur on the Subject Property, as it relates to this crawl space.

To the best of the Environmental Professional’s knowledge and belief, no other limitations, except as noted, imposed by physical obstructions such as adjacent buildings, bodies of water, or other limiting conditions (e.g., snow, rain, wind, etc.), associated with the Subject Property, were encountered during the environmental site assessment.

9.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in § 312.10 of 40 C.F.R. § 312" and 12.14.2. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed the "all appropriate inquiries" in conformance with the standards and Practices set forth in 40 C.F.R. Part 312.



Dave Gorden
Board Certified Environmental Scientist / Environmental Professional

10.0 REFERENCES

References, when not already provided in the above sections of this report, shall be properly referenced in this section in order to provide sufficient information to facilitate the reconstruction of information by another environmental professional. Resource references typically include information such as the (1) the name of the publisher, title of the publication, and year of publication for a city directory, business directory, or historical map; (2) the name of the entity that produced an aerial photograph or series of photographs, and date or year that the photograph was taken; (3) the name and title of the interviewee and date of the interview; or (4) the website address and resource description for pertinent supplemental internet information.

↔

Certified Sanborn® Map Report. Wildwood School @ North Intermediate School, 320 Salem Street, Wilmington, MA 01887. Inquiry Number: 8157807.3: October 30, 2025.

EDR Historical Topo Map Report with QuadMatch™. Wildwood School @ North Intermediate School, 320 Salem Street, Wilmington, MA 01887. Inquiry Number: 8157807.4: October 30, 2025.

The EDR Aerial Photo Decade Package. Wildwood School @ North Intermediate School, 320 Salem Street, Wilmington, MA 01887. Inquiry Number: 8157807.8: October 30, 2025.

The EDR-City Directory Image Report. Wildwood School @ North Intermediate School, 320 Salem Street, Wilmington, MA 01887. Inquiry Number: 8157807.5: November 4, 2025.

The EDR Radius Map™ Report with GeoCheck®. Wildwood School @ North Intermediate School, 320 Salem Street, Wilmington, MA 01887. Inquiry Number: 08157807.2r: October 30, 2025.

↔

End of References

APPENDICES

Please note that the appendices may contain supporting documentation and the qualifications of the environmental professional. Supporting documentation below may include subject property figures, historical documentation, regulatory database information, photographs, relevant prior reports/report excerpts, and relevant regulatory file information.

If identified during this environmental site assessment, and/or provided by the user, supporting documentation may also include documentation of Activity and Use Limitations and/or Institutional Controls/Engineering Controls (IC/EC), which may be in effect at the Subject Property.

APPENDIX A

SUBJECT PROPERTY FIGURES

FIGURE 1 – USGS TOPOGRAPHIC MAP

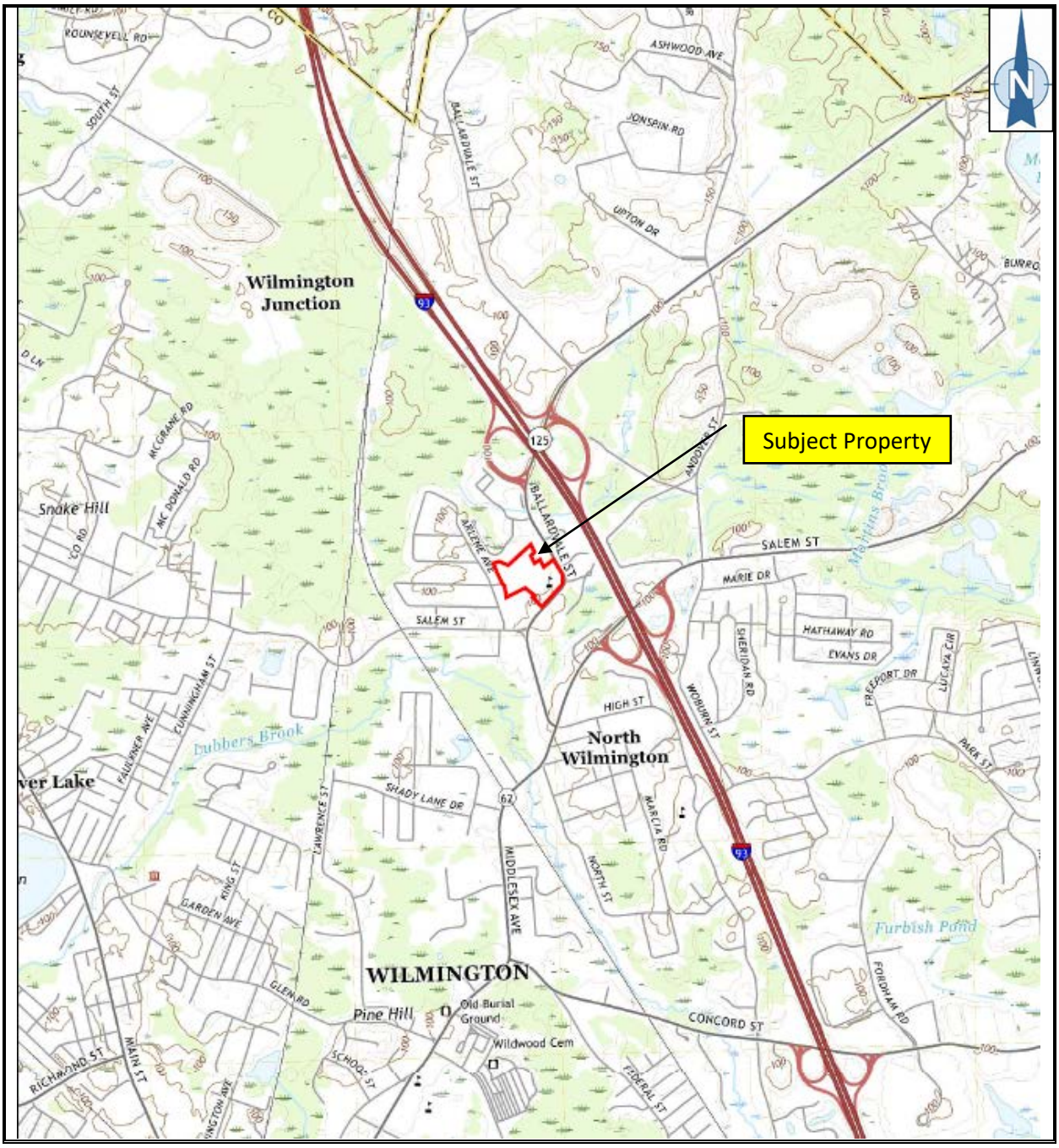


Figure 1: USGS Topographic Map		Phase I Environmental Site Assessment
Wilmington Quadrangle Massachusetts – Middlesex County 7.5-Minute Series Wilmington, MA: 2021 Scale 1:24,000	Wildwood School at North Intermediate School October 29, 2025	**PEER Consultants, P.C.** 25 Mall Road, Suite 206 Burlington, Massachusetts 01803 P: 781.238.8880

FIGURE 2 – AERIAL SKETCH: ADJOINING PROPERTIES

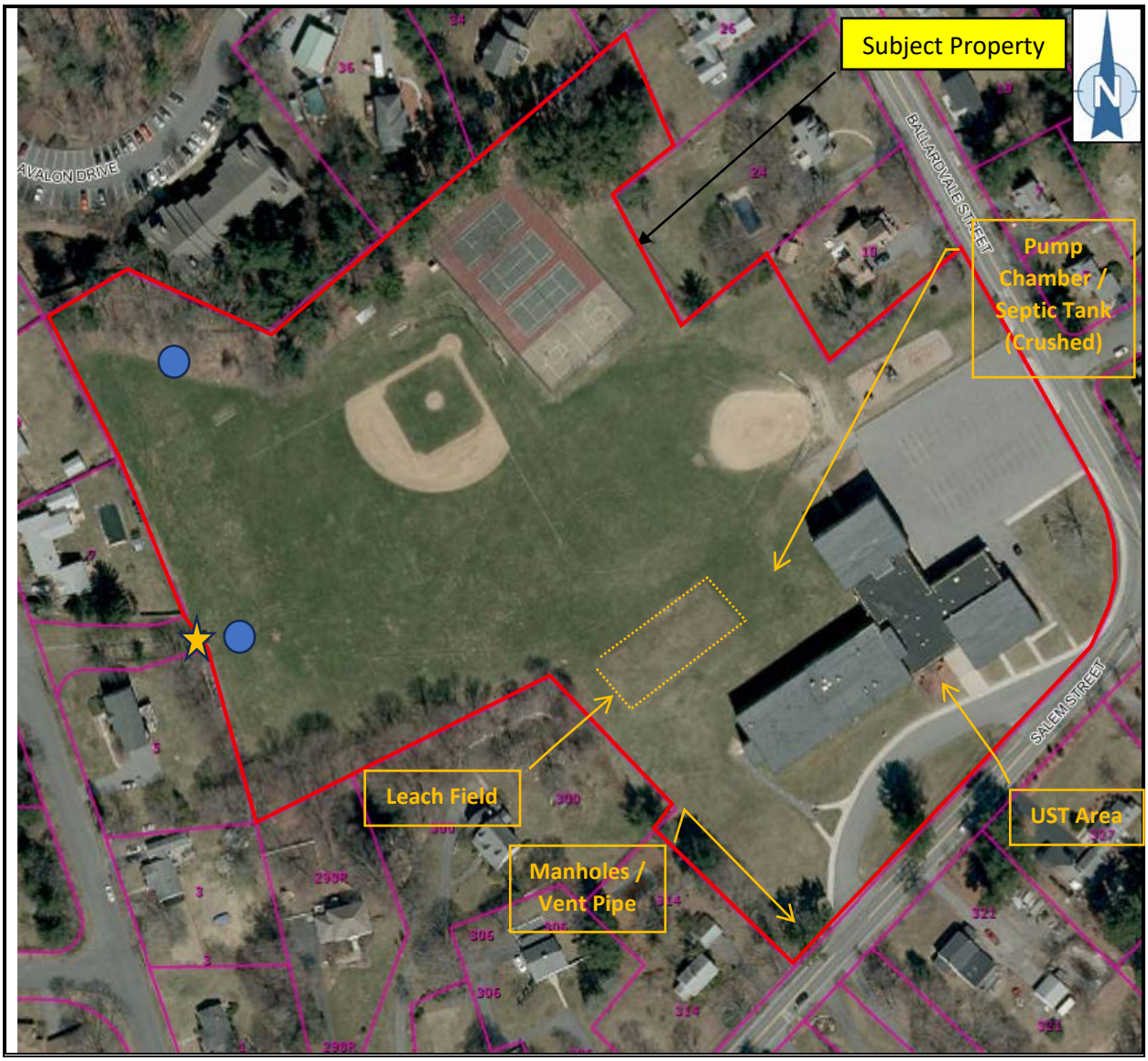


Figure 2: Aerial Sketch Subject Property		Phase I Environmental Site Assessment
MassGIS Bureau of Geographic Information MassMapper 320 Salem Street, Wilmington, MA Approximate Scale 1:2,257	Wildwood School at North Intermediate School October 29, 2025	**PEER Consultants, P.C.** 25 Mall Road, Suite 206 Burlington, Massachusetts 01803 P: 781.238.8880

= Subject Property

= Irrigation Well Points, as per Jamie Magaldi

= Pump House

FIGURE 3 – AERIAL SKETCH - SUBJECT PROPERTY

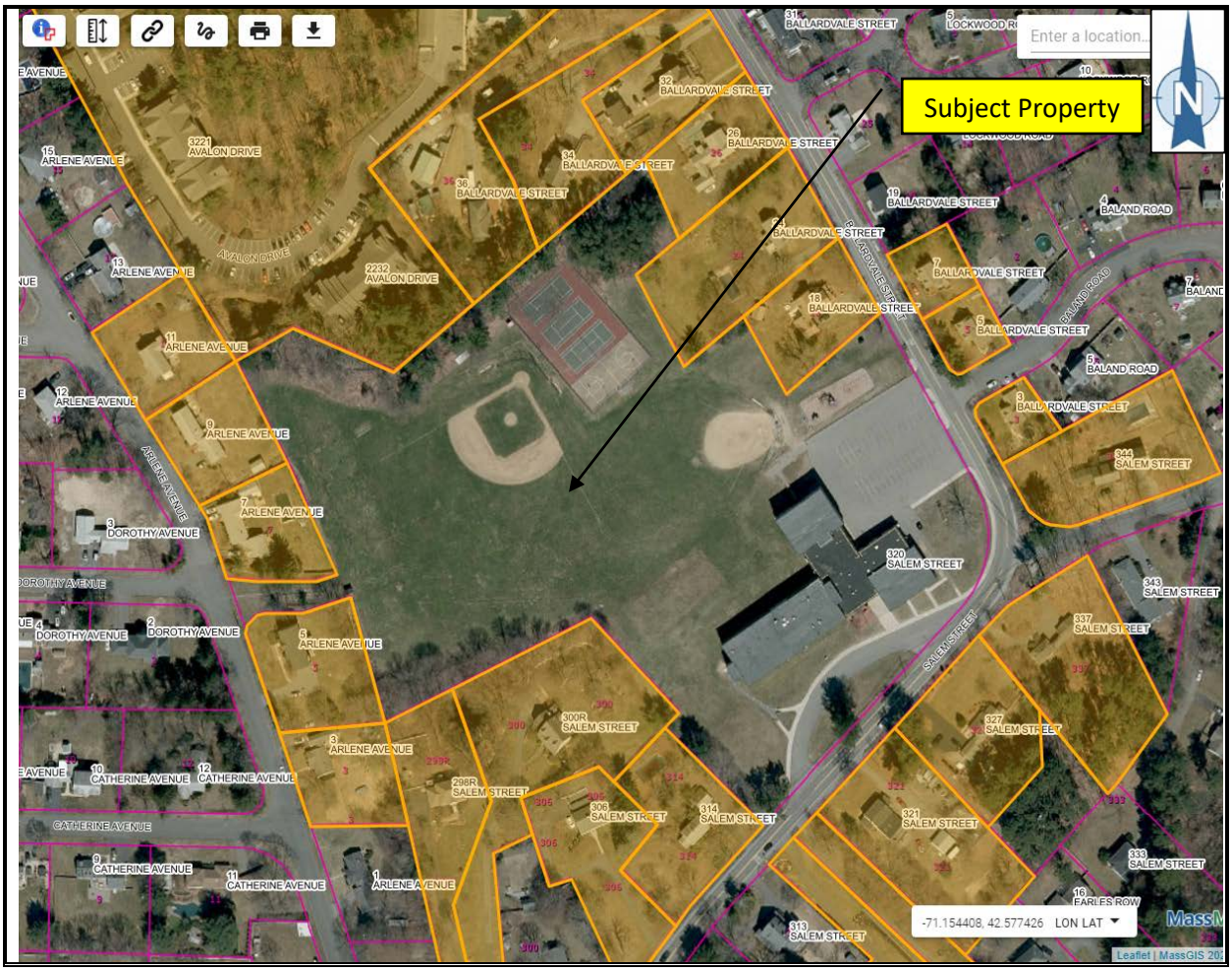


Figure 3: Aerial Sketch Adjoining Properties		Phase I Environmental Site Assessment
MassGIS Bureau of Geographic Information MassMapper 320 Salem Street, Wilmington, MA Approximate Scale 1:2,257	Wildwood School at North Intermediate School October 29, 2025	**PEER Consultants, P.C.** 25 Mall Road, Suite 206 Burlington, Massachusetts 01803 P: 781.238.8880

= Adjoining Residential Properties

APPENDIX B

DESCRIPTION OF ABBREVIATIONS, ACRONYMS, and TERMS

Abbreviations and Acronyms
3.3.1 AULs = Activity and Use Limitations
3.3.2 CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (as amended, 42 U.S.C. § 9601 et seq.)
3.3.3 C.F.R. = Code of Federal Regulations
3.3.4 CREC = Controlled Recognized Environmental Condition
3.3.5 EC = Engineering Control
3.3.6 EPA = United States Environmental Protection Agency
3.3.7 EPCRA = Emergency Planning and Community Right to Know Act (also known as SARA Title III), 42 U.S.C. §§ 11001-11050 et seq.
3.3.8 ERNS = emergency response notification system
3.3.9 environmental site assessment = environmental site assessment (different than an environmental compliance audit, 3.2.28)
3.3.10 FR = Federal Register
3.3.11 HREC = Historical Recognized Environmental Condition
3.3.12 IC = Institutional Control
3.3.13 LLP = Landowner Liability Protections under the Brownfields Amendments
3.3.14 LUST = Leaking underground storage tank
3.3.15 NCP = National Contingency Plan 3.3.16 NFRAP = Sites where no further remedial action is planned under CERCLA
3.3.17 NPDES = National Pollutant Discharge Elimination System
3.3.18 NPL = National Priorities List
3.3.19 PCBs = Polychlorinated biphenyls
3.3.20 RCRA = Resource Conservation and Recovery Act (as amended, 42 U.S.C. § 6901 et seq.)
3.3.21 REC = Recognized Environmental Condition
3.3.22 SARA = Superfund Amendments and Reauthorization Act of 1986 (amendment to CERCLA).

Abbreviations and Acronyms
3.3.23 TSDF = hazardous waste treatment, storage, or disposal facility
3.3.24 U.S.C. = United States Code
3.3.25 USGS = United States Geological Survey 3.3.26 UST = Underground Storage Tank
3.3.1 AULs = Activity and Use Limitations
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3.3.26 UST = Underground Storage Tank

Terms

3.2.1 abandoned property, n = property that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity thereon such that a reasonable person could believe that there was an intent on the part of the current owner to surrender rights to the property.

3.2.2 activity and use limitations (AULs), n = legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, soil vapor, groundwater, and/or surface water on a property.

3.2.2.1 Discussion = The term activity and use limitations (AULs) is taken from Guide E2091 to include both legal (that is, institutional) and physical (that is, engineering) controls within its scope. Other agencies, organizations, and jurisdictions may define or utilize these terms differently (for example, EPA and California do not include physical controls within their definitions of “institutional controls.” Department of Defense and International County/City Management Association use “Land Use Controls.” The term “land use restrictions” is used but not defined in the Brownfields Amendments).

3.2.3 actual knowledge, n = knowledge actually possessed by an individual who is a real person, rather than an entity. Actual knowledge is to be distinguished from constructive knowledge that is knowledge imputed to an individual or entity.

3.2.4 adjoining properties, n = any real property or properties the border of which is contiguous or partially contiguous with that of the subject property, or that would be contiguous or partially contiguous with that of the subject property but for a street, road, or other public thoroughfare separating them.

3.2.5 aerial photographs, n = photographs taken from an aerial platform with sufficient resolution to allow identification of development and activities.

3.2.6 all appropriate inquiries, n = that inquiry constituting all appropriate inquiries into the previous ownership and uses of the subject property consistent with good commercial and customary Practice as defined in CERCLA, 42 U.S.C. § 9601(35)(B) and 40 C.F.R. Part 312, that will qualify a party to a commercial real estate transaction for one of the threshold criteria for satisfying the LLPs to CERCLA liability (42 U.S.C. §§ 9601(35)(A) & (B), § 9607(b)(3), § 9607(q), and § 9607(r)), assuming compliance with other elements of the defense.

3.2.7 approximate minimum search distance, n = the area for which records must be obtained and reviewed pursuant to Section 8 subject to the limitations provided in that section. This may include areas outside the subject property and shall be measured from the nearest subject property boundary. This term is used in lieu of radius to include irregularly shaped properties.

Terms
3.2.8 bona fide prospective purchaser [42 U.S.C. § 9607(r)], n = a person may qualify as a bona fide prospective purchaser if, among other requirements, such person made “all appropriate inquiries into the previous ownership and uses of the facility in accordance with generally accepted good commercial and customary standards and Practices.” Knowledge of contamination resulting from all appropriate inquiries would not generally preclude this liability protection. A person must make all appropriate inquiries on or before the date of purchase. The facility must have been purchased after January 11, 2002.
3.2.9 Brownfields Amendments, n = amendments to CERCLA pursuant to the Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118 (2002), 42 U.S.C. § 9601 et seq.
3.2.10 building department records, n = those records of the local government in which the subject property is located indicating permission of the local government to construct, alter, or demolish improvements on a property.
3.2.11 business environmental risk (BER), n = a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to environmental issues required to be investigated in this Practice.
3.2.12 commercial real estate, n = any real property except a dwelling or property with no more than four dwelling units exclusively for residential use (except that a dwelling or property with no more than four dwelling units exclusively for residential use is included in this term when it has a commercial function, as in the construction of such dwellings for profit). This term includes but is not limited to undeveloped real property and real property used for industrial, retail, office, agricultural, other commercial, medical, or educational purposes; property used for residential purposes that has more than four residential dwelling units; and property with no more than four dwelling units for residential use when it has a commercial function, as in the building of such dwellings for profit.
3.2.13 commercial real estate transaction, n = a transfer of title to or possession of real property or receipt of a security interest in real property, except that it does not include transfer of title to or possession of real property or the receipt of a security interest in real property with respect to an individual dwelling or building containing fewer than five dwelling units, nor does it include the purchase of a lot or lots to construct a dwelling for occupancy by a purchaser, but a commercial real estate transaction does include real property purchased or leased by persons or entities in the business of constructing or developing dwelling units.
3.2.14 construction debris, n = concrete, brick, asphalt, and other such building materials discarded in the construction of a building or other improvement to property.
3.2.15 contaminated public wells, n = public wells used for drinking water that have been designated by a government entity as contaminated by hazardous substances (for example, chlorinated solvents) or petroleum products, or as having water unsafe to drink without treatment.

Terms

3.2.16 contiguous property owner [42 U.S.C. § 9607(q)], n = a person may qualify for the contiguous property owner liability protection if, among other requirements, such person owns real property that is contiguous to, and that is or may be contaminated by hazardous substances from other real property that is not owned by that person. Furthermore, such person conducted all appropriate inquiries at the time of acquisition of the subject property and did not know or have reason to know that the subject property was or could be contaminated by a release or threatened release from the contiguous property. The all appropriate inquiries must not result in knowledge of contamination. If it does, then such person did "know" or "had reason to know" of contamination and would not be eligible for the contiguous property owner liability protection.

3.2.17 controlled recognized environmental condition, n = recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations). For examples of controlled recognized environmental conditions.

3.2.17.1 Discussion = Identification of a controlled recognized environmental condition is a multi-step process that shall be reflected in the report's Findings and Opinions section(s), including the environmental professional's rationale for concluding that a finding is a controlled recognized environmental condition: (1) When determining whether a recognized environmental condition has been "addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place," the environmental professional shall review reasonably ascertainable documentation, such as no further action letters (or similar certifications or approvals) issued by the applicable regulatory authority or authorities, or, in the case of self-directed actions, documentation and relevant data that satisfy risk-based criteria established by the applicable regulatory authority or authorities. (2) In determining whether a recognized environmental condition is "subject to implementation of required controls (for example, activity and use limitations or other property use limitations)," the environmental professional shall identify the documentation providing the control(s) that addresses the recognized environmental condition in the report's Findings and Opinions section(s). (3) When the environmental professional determines that a recognized environmental condition is "subject to implementation of required controls," this determination does not imply that the environmental professional has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the control(s). (4) A past release that previously qualified as a controlled recognized environmental condition may no longer constitute a controlled recognized environmental condition at the time of the Phase I environmental site assessment if new conditions or information have been identified such as, among other things, a change in regulatory criteria, a change of use at the subject property, or a subsequently identified migration pathway that was not previously known or evaluated.

3.2.18 data failure, n = failure to achieve the historical research objective in Practice Section 8.3.1 even after reviewing the standard historical resources in Practice Section 8.3.4.1 through Practice Section 8.3.4.8 that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

3.2.19 data gap, n = a lack of or inability to obtain information required by this Practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this Practice, including, but not limited to, site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.).

Terms
3.2.20 de minimis condition, n = a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a de minimis condition is not a recognized environmental condition nor a controlled recognized environmental condition.
3.2.21 demolition debris, n = concrete, brick, asphalt, and other such building materials discarded in the demolition of a building or other improvement to a property.
3.2.22 drum, n = a container (typically, but not necessarily, holding 55 gal (208 L) of liquid) that may be used to store hazardous substances or petroleum products.
3.2.23 dry wells, n = underground areas where soil has been removed and replaced with pea gravel, coarse sand, or large rocks. Dry wells are used for drainage, to control storm runoff, for the collection of spilled liquids (intentional and nonintentional), and wastewater disposal (often illegal).
3.2.24 due diligence, n = the process of inquiring into the environmental characteristics of commercial real estate or other conditions, usually in connection with a commercial real estate transaction. The degree and kind of due diligence vary for different properties, and differing purposes.
3.2.25 dwelling, n = structure or portion thereof used for residential habitation.
3.2.26 engineering controls, n = physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or groundwater on a property. Engineering controls are a type of activity and use limitation (AUL).
3.2.27 environment, n = environment shall have the same meaning as the definition of environment in CERCLA 42 U.S.C. § 9601(8)).
3.2.28 environmental compliance audit, n = the investigative process to determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations. This term should not be used to describe this Practice, although an environmental compliance audit may include an environmental site assessment or, if prior audits are available, may be part of an environmental site assessment.
3.2.29 environmental lien, n = a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 U.S.C. §§ 9607(1) & 9607(r) and similar state or local laws.
3.2.30 environmental professional, n = a person meeting the education, training, and experience requirements as set forth in 40 C.F.R. § 312.10(b).
3.2.31 environmental site assessment , n = the process by which a person or entity seeks to determine if a subject property is subject to recognized environmental conditions. At the option of the user, an environmental site assessment may include more inquiry than that constituting all appropriate inquiries or, if the user is not concerned about qualifying for the LLPs, less inquiry than that constituting all appropriate inquiries. An environmental site assessment is both different from and often less rigorous than an environmental compliance audit.

Terms
3.2.32 ERNS list, n = EPA's emergency response notification system list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center. Notification requirements for such releases or spills are codified in 40 C.F.R. Parts 302 and 355.
3.2.33 fill dirt, n = dirt, soil, sand, or other earth, that is obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real property. It does not include material that is used in limited quantities for normal landscaping activities.
3.2.34 fire insurance maps, n = maps originally produced for fire insurance purposes that indicate uses of properties at specified dates.
3.2.35 good faith, n = absence of any intention to seek an unfair advantage or to defraud another party; an honest and sincere intention to fulfill one's obligations in the conduct or transaction concerned.
3.2.36 hazardous substance, n = a substance defined as a hazardous substance pursuant to CERCLA 42 U.S.C. § 9601(14), as interpreted by EPA regulations and the courts: "(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 U.S.C. § 6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. § 6901 et seq.) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. § 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)."
3.2.37 hazardous waste, n = any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of RCRA, as amended, (42 U.S.C. § 6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. §§ 6901-6992k) has been suspended by Act of Congress). RCRA is sometimes also identified as the Solid Waste Disposal Act. RCRA defines a hazardous waste, at 42 U.S.C. § 6903, as: "a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may: (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness, or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."
3.2.38 hazardous waste/contaminated sites, n = sites on which a release has occurred, or is suspected to have occurred, of any hazardous substance, hazardous waste, or petroleum products, and that release or suspected release has been reported to a government entity.
3.2.39 historical recognized environmental condition, n = a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition.

Terms

3.2.39.1 Discussion = Identification of a historical recognized environmental condition is a multi-step process that shall be reflected in the report's Findings and Opinions section(s), as described in Practice Section 12.5 and Practice Section 12.6, including the environmental professional's rationale for concluding that a finding is a historical recognized environmental condition: (1) When determining whether a recognized environmental condition has been "addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the regulatory authority or authorities," the environmental professional shall review reasonably ascertainable documentation and relevant data that demonstrate that unrestricted use criteria established by the applicable regulatory authority or authorities was met. (2) A past release that qualified as a historical recognized environmental condition may no longer qualify as a historical recognized environmental condition if new conditions or information have been identified such as, among other things, a change in regulatory criteria or a subsequently identified migration pathway that was not previously known or evaluated. As noted, the report's Findings and Opinions section(s) shall include the environmental professional's rationale for concluding that a condition at the subject property is or is not currently a recognized environmental condition or a historical recognized environmental condition.

3.2.40 IC/EC registries, n = databases of institutional controls or engineering controls that may be maintained by a federal, state, or local environmental agency for purposes of tracking sites that may contain residual contamination and AULs. The names for these may vary from program to program and state to state.

3.2.41 innocent landowner [42 U.S.C. §§ 9601(35) & 9607(b)(3)], n = a person may qualify as one of three types of innocent landowners: (1) a person who "did not know and had no reason to know" that contamination existed on the subject property at the time the purchaser acquired the subject property; (2) a government entity which acquired the subject property by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; or (3) a person who "acquired the facility by inheritance or bequest." To qualify for the innocent landowner defense, such person must have made all appropriate inquiries on or before the date of purchase. Furthermore, the all appropriate inquiries must not have resulted in knowledge of the contamination. If it does, then such person did "know" or "had reason to know" of contamination and would not be eligible for the innocent landowner defense.

3.2.42 institutional controls (IC), n = a legal or administrative mechanism (for example, "deed restrictions," restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to (1) reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. An institutional control is a type of activity and use limitation (AUL).

3.2.43 interviews, n = those portions of this Practice that are conducted to gather information from an individual or individuals in person, by telephone, in writing, or via other electronic media to meet the objectives of this Practice.

3.2.44 key site manager, n = the person identified by the owner or operator of a subject property as having good knowledge of the uses and physical characteristics of the subject property.

Terms
3.2.45 land title records, n = records that affect the title of real estate, which may include, among other things, deeds, mortgages, leases, land contracts, court orders, easements, liens, and AULs recorded within the recording systems or land registration systems created by state statute in every state and ordinarily administered in the local jurisdiction (usually the county) in which the subject property is located, and available by performing a title search. Such records are publicly accessible, though the process of performing a title search to find land title records often requires specialized expertise or knowledge of the local system (see Practice Section 5.4 – AULs and Environmental Liens in Land Title Records). Information about the title to the subject property that is filed or stored in any place other than where land title records are, by law or custom, recorded for the local jurisdiction in which the subject property is located, are not considered land title records.
3.2.46 landfill, n = a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term solid waste disposal site and is also known as a garbage dump, trash dump, or similar term.
3.2.47 landowner liability protections (LLPs), n = a defense to CERCLA available to bona fide prospective purchasers, contiguous property owners, and innocent landowners. See 42 U.S.C. §§ 9601(35)(A), 9601(40), 9607(q), and 9607(r).
3.2.48 local government agencies, n = those agencies of municipal or county government having jurisdiction over the subject property. Municipal and county government agencies include but are not limited to cities, parishes, townships, and similar entities.
3.2.49 local street directories, n = directories published by private or government entities that list the occupant(s) of a specific address at the time the occupant data were collected, typically within a year of the publication date of the directory.
3.2.50 major occupants, n = those tenants, subtenants, or other persons or entities each of which uses at least 40 % of the leasable area of the subject property or any anchor tenant when the subject property is a shopping center.
3.2.51 material safety data sheet (MSDS), n = see safety data sheet.
3.2.52 material threat, n = obvious threat which is likely to lead to a release and that, in the opinion of the environmental professional, would likely result in impact to public health or the environment. An example might include an aboveground storage tank system that contains a hazardous substance, and which shows evidence of damage. The damage would represent a material threat if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.
3.2.53 migrate/migration, v/n = for the purposes of this Practice, “migrate” and “migration” refers to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface.
3.2.53.1 Discussion = Vapor migration in the subsurface is described in Guide E2600; however, nothing in this Practice should be construed to require application of the Guide E2600 standard to achieve compliance with all appropriate inquiries.
3.2.54 National Priorities List (NPL), n = list compiled by EPA pursuant to CERCLA 42 U.S.C. § 9605(a)(8)(B) of sites with the highest priority for cleanup pursuant to EPA’s Hazard Ranking System. See 40 C.F.R. Part 300.
3.2.55 obvious, adj = that which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer.

Terms
3.2.56 occupants, n = those tenants, subtenants, or other persons or entities using a property or a portion of a property.
3.2.57 operator, n = person responsible for the overall operation of a facility.
3.2.58 other historical resources, n = any resource other than those designated in Practice Section 8.3.4.1 through Practice Section 8.3.4.8 that are credible to a reasonable person and that identify past uses of properties.
3.2.59 owner, n = generally the fee owner of record of a property.
3.2.60 petroleum exclusion, n = the exclusion from CERCLA liability provided in 42 U.S.C. § 9601(14), as interpreted by the courts and EPA: “The term (hazardous substance) does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).”
3.2.61 petroleum products, n = those substances included within the meaning of the petroleum exclusion to CERCLA, 42 U.S.C. § 9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 U.S.C. § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosine, diesel oil, jet fuels, and fuel oil, pursuant to Standard Definitions of Petroleum Statistics.8)
3.2.62 Phase I environmental site assessment, n = the process described in this Practice.
3.2.63 physical setting sources, n = resources that provide information about the geologic, hydrogeologic, hydrologic, or topographic characteristics of the area that includes the subject property.
3.2.64 pits, ponds, or lagoons, n = manmade or natural depressions in a ground surface that are likely to hold liquids or sludge containing hazardous substances or petroleum products. The likelihood of such liquids or sludge being present is determined by evidence of factors associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an obvious wastewater discharge.

Terms
3.2.65 practically reviewable, adj = information that is practically reviewable means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the subject property without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the user can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the subject property or a geographic area in which the subject property is located are not generally practically reviewable. Most databases of public records are practically reviewable if they can be obtained from the source agency by the county, city, zip code, or other geographic area of the facilities listed in the record system. Records that are sorted, filed, organized, or maintained by the source agency only chronologically are not generally practically reviewable. Listings in publicly available records which do not have adequate address information to be located geographically are not generally considered practically reviewable. For large databases with numerous records (such as RCRA hazardous waste generators and registered underground storage tanks), the records are not practically reviewable unless they can be obtained from the source agency in the smaller geographic area of zip codes. Even when information is provided by zip code for some large databases, it is common for an unmanageable number of sites to be identified within a given zip code. In these cases, it is not necessary to review the impact of all of the sites that are likely to be listed in any given zip code because that information would not be practically reviewable. In other words, when so much information is generated that it cannot be feasibly reviewed regarding its impact on the subject property, it is not practically reviewable.
3.2.66 property, n = real property, including buildings and other fixtures and improvements located on and affixed to the land.
3.2.67 property use limitation, n = limitation or restriction on current or future use of a property in connection with a response to a release, in accordance with the applicable regulatory authority or authorities that allows hazardous substances or petroleum products to remain in place at concentrations exceeding unrestricted use criteria.
3.2.68 property tax files, n = files kept for property tax purposes by the local jurisdiction which may include records of past ownership, appraisals, maps, sketches, photographs, or other information.
3.2.69 publicly available, adj = information that is publicly available means that the source of the information allows access to the information by anyone upon request.
3.2.70 RCRA generators, n = those persons or entities that generate hazardous wastes, as defined and regulated by RCRA.
3.2.71 RCRA TSD facilities, n = those facilities on which treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA.
3.2.72 reasonably ascertainable, adj = information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints, and (3) practically reviewable.
3.2.73 recognized environmental conditions, n = (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

Terms
3.2.73.1 Discussion = For the purposes of this definition, “likely” is that which is neither certain nor proved, but can be expected or believed by a reasonable observer based on the logic and/or experience of the environmental professional, and/or available evidence, as stated in the report to support the opinions given therein.
3.2.73.2 Discussion = A de minimis condition is not a recognized environmental condition.
3.2.74 records review, n = that part that is contained in Section 8 of this Practice that addresses which records shall or may be reviewed
3.2.75 release, n/v = a release of any hazardous substance or petroleum product shall have the same meaning as the definition of “release” in CERCLA 42 U.S.C. § 9601(22). There are a number of statutory exclusions from the definition of release that may impact the environmental professional’s opinions and conclusions, such as the normal application of fertilizer.
3.2.76 report, n = written report prepared by the environmental professional and constituting part of a “Phase I environmental site assessment,” as required by this Practice.
3.2.77 safety data sheets, n = written or printed material that is prepared by chemical manufacturers and importers for distributors’ and employers’ use that provides comprehensive information regarding a hazardous chemical pursuant to OSHA’s Hazard Communication Standard (HCS), 29 C.F.R. § 1910.1200.
3.2.78 significant data gap, n = a data gap that affects the ability of the environmental professional to identify a recognized environmental condition.
3.2.79 site reconnaissance, n = that part that is contained in Section 9 of this Practice and addresses what should be done in connection with the site visit. The site reconnaissance includes, but is not limited to, the site visit done in connection with such a Phase I environmental site assessment.
3.2.80 site visit, n = the visit to the subject property during which observations are made constituting the site reconnaissance section of this Practice.
3.2.81 solid waste disposal site, n = a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term landfill and is also known as a garbage dump, trash dump, or similar term.
3.2.82 solvent, n = a chemical compound that is capable of dissolving another substance and may itself be a hazardous substance, used in a number of manufacturing/industrial processes including but not limited to the manufacture of paints and coatings for industrial and household purposes, equipment clean-up, and surface degreasing in metal fabricating industries.
3.2.83 standard environmental record sources, n = those records specified in Practice Section 8.2.2.
3.2.84 standard historical resources, n = those resources of information about the history of uses of properties specified in Practice Section 8.3.4.
3.2.85 standard physical setting resources, n = recent USGS 7.5 Minute Topographic Map (or equivalent) showing contour lines and the area on which the subject property is located, and site-specific physical setting information obtained pursuant to agency file reviews.

Terms
3.2.86 standard Practice, n = the activities set forth in this Practice.
3.2.87 standard sources, n = sources of environmental, physical setting, or historical records specified in Practice Section 8.
3.2.88 subject property, n = the property that is the subject of the environmental site assessment described in this Practice.
3.2.89 sump, n = pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored.
3.2.90 topographic map, n = graphic representation delineating natural and man-made features of an area or region in a way that shows their relative positions and elevations.
3.2.91 TSD facility, n = treatment, storage, or disposal facility.
3.2.92 underground injection, n = the emplacement or discharge of fluids into the subsurface by means of a well, improved sinkhole, sewage drain hole, subsurface fluid distribution system or other system, or groundwater point source.
3.2.93 underground storage tank (UST), n = any tank, including underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10 % or more beneath the surface of the ground.
3.2.94 user, n = the party seeking to use Practice E1527 to complete an environmental site assessment of the subject property. 3.2.94.1 Discussion = A user may include, without limitation, a potential purchaser of subject property, a potential tenant of subject property, an owner of the subject property, a lender, or a property manager. A user seeking to qualify for an LLP to CERCLA liability, or a user that is an EPA Brownfield Assessment and Characterization grantee, has specific responsibilities for completing a successful application of this Practice as outlined in Section 6.
3.2.95 USGS 7.5 Minute Topographic Map, n = USGS Topographic Map, including the current US Topo 7.5-Minute Series or the historical 7.5-Minute Topographic Series, which is available from the United States Geologic Survey and showing the subject property.
3.2.96 visually and/or physically observed, v = during a site visit pursuant to this Practice, this term means observations made by visual, auditory, or olfactory means while performing the site reconnaissance.
3.2.97 wastewater, n = water that (1) is or has been used in an industrial or manufacturing process, (2) conveys or has conveyed sewage, or (3) is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water originating on or passing through or adjacent to a site, such as stormwater flows, that has not been used in industrial or manufacturing processes, has not been combined with sewage, or is not directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.
3.2.98 zoning/land use records, n = those records of the local government of areas encompassing the subject property indicating the uses permitted by the local government in particular zones within its jurisdiction. The records may consist of maps or written records.

APPENDIX C

HISTORICAL RECORDS REVIEW

X3. USER QUESTIONNAIRE

INTRODUCTION

To qualify for one of the Landowner Liability Protections (LLPs)[247] offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"),[248] the user must conduct the following inquiries required by 40 C.F.R. §§ 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The user should provide the following information to the environmental professional. Failure to conduct these inquiries could result in a determination that "all appropriate inquiries" is not complete.

[247] *Landowner Liability Protections*, or *LLPs*, is the term used to describe the three types of potential defenses to Superfund liability in EPA's *Interim Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability* ("*Common Elements*" Guide) issued on March 6, 2003.

[248] P.L. 107-118.

User should respond with a "Yes", or a "No", and provide and/or attach additional information explaining the User's response to the question, where appropriate.

(1.) Environmental liens that are filed or recorded against the *subject property* (40 C.F.R. § 312.25).
Did a search of *land title records* (or judicial records where appropriate, see **Note 1** below) identify any *environmental liens* filed or recorded against the *subject property* under federal, tribal, state, or local law?

> **Note 1** – In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that *environmental liens* and *AULs* be filed in judicial records rather than in *land title records*. In such cases judicial records shall be searched for *environmental liens* and *AULs*.

Response: No environmental liens were found to be filed or recorded against the subject property.

(2.) *Activity and use limitations* that are in place on the *subject property* or that have been filed or recorded against the *subject property* .

Did a search of *land title records* (or judicial records where appropriate, see **Note 1** above) identify any *AULs*, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the *subject property* and/or have been filed or recorded against the *subject property* under federal, tribal, state or local law?

Response: No *Activity and Use Limitations* (AUL) were identified.

(3.) Specialized knowledge or experience of the person seeking to qualify for the *LLP* (40 C.F.R. § 312.28).
Do you have any specialized knowledge or experience related to the *subject property* or nearby *properties*? For example, are you involved in the same line of business as the current or former *occupants* of the *subject property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Response: No; the subject property has been used exclusively as the site of a public school since 1868, is Zoned for R-20 Residential, and is surrounded by residential properties.

(4.) Relationship of the purchase price to the fair market value of the *subject property* if it were not contaminated (40 C.F.R. § 312.29).

Does the purchase price being paid for this *subject property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *subject property*?

Response: Not applicable; the subject property has been, and continues to be, owned by the Town of Wilmington.

(5.) Commonly known or *reasonably ascertainable* information about the *subject property* (40 C.F.R. § 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the *subject property* that would help the *environmental professional* to identify conditions indicative of *releases* or threatened *releases*?

Response: No.

For example,

(a.) Do you know the past uses of the *subject property*? Response: Yes, the subject property has been used continuously for public education since 1868.

(b.) Do you know of specific chemicals that are present or once were present at the *subject property*? Response: There are no records of specific chemicals that are present or were present at the subject property.

(c.) Do you know of spills or other chemical *releases* that have taken place at the *subject property*? Response: There are no records of spills or chemical releases at the subject property.

(d.) Do you know of any environmental cleanups that have taken place at the *subject property*? Response: There are no records of environmental cleanups at the subject property.

(6.) The degree of obviousness of the presence or likely presence of contamination at the *subject property*, and the ability to detect the contamination by appropriate investigation (40 C.F.R. § 312.31).

Based on your knowledge and experience related to the *subject property*, are there any *obvious* indicators that point to the presence or likely presence of *releases* at the *subject property*?

Response: There are no obvious indicators that point to the presence or likely presence of releases at the subject property.

[The EDR Aerial Photo Decade Package]

Wildwood School @ North Intermediate School

320 Salem Street

Wilmington, MA 01887

Inquiry Number: 8157807.8

October 30, 2025

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

10/30/25

Site Name:

Wildwood School @ North Inte
320 Salem Street
Wilmington, MA 01887
EDR Inquiry # 8157807.8

Client Name:

PEER Consultants
25 Mall Road
Burlington, MA 01803
Contact: Dave Gorden

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2023	1"=500'	Flight Year: 2023	USDA/NAIP
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1986	1"=500'	Flight Date: March 30, 1986	USDA
1980	1"=500'	Flight Date: September 19, 1980	USDA
1978	1"=500'	Flight Date: April 23, 1978	USGS
1965	1"=500'	Flight Date: April 06, 1965	USGS
1963	1"=500'	Flight Date: April 27, 1963	USGS
1938	1"=500'	Flight Date: November 10, 1938	USGS

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INQUIRY #: 8157807.8

YEAR: 2023

= 500'

N

EDR


INQUIRY #: 8157807.8
YEAR: 2018
= 500'
N
EDR


INQUIRY #: 8157807.8
YEAR: 2014
= 500'
N
EDR



INQUIRY #: 8157807.8

YEAR: 2010

= 500'

N

EDR



INQUIRY #: 8157807.8

YEAR: 1995

= 500'

N

EDR


INQUIRY #: 8157807.8
YEAR: 1986
= 500'
N
EDR



INQUIRY #: 8157807.8

YEAR: 1980

= 500'

N

EDR


INQUIRY #: 8157807.8
YEAR: 1978
= 500'
N
EDR



INQUIRY #: 8157807.8

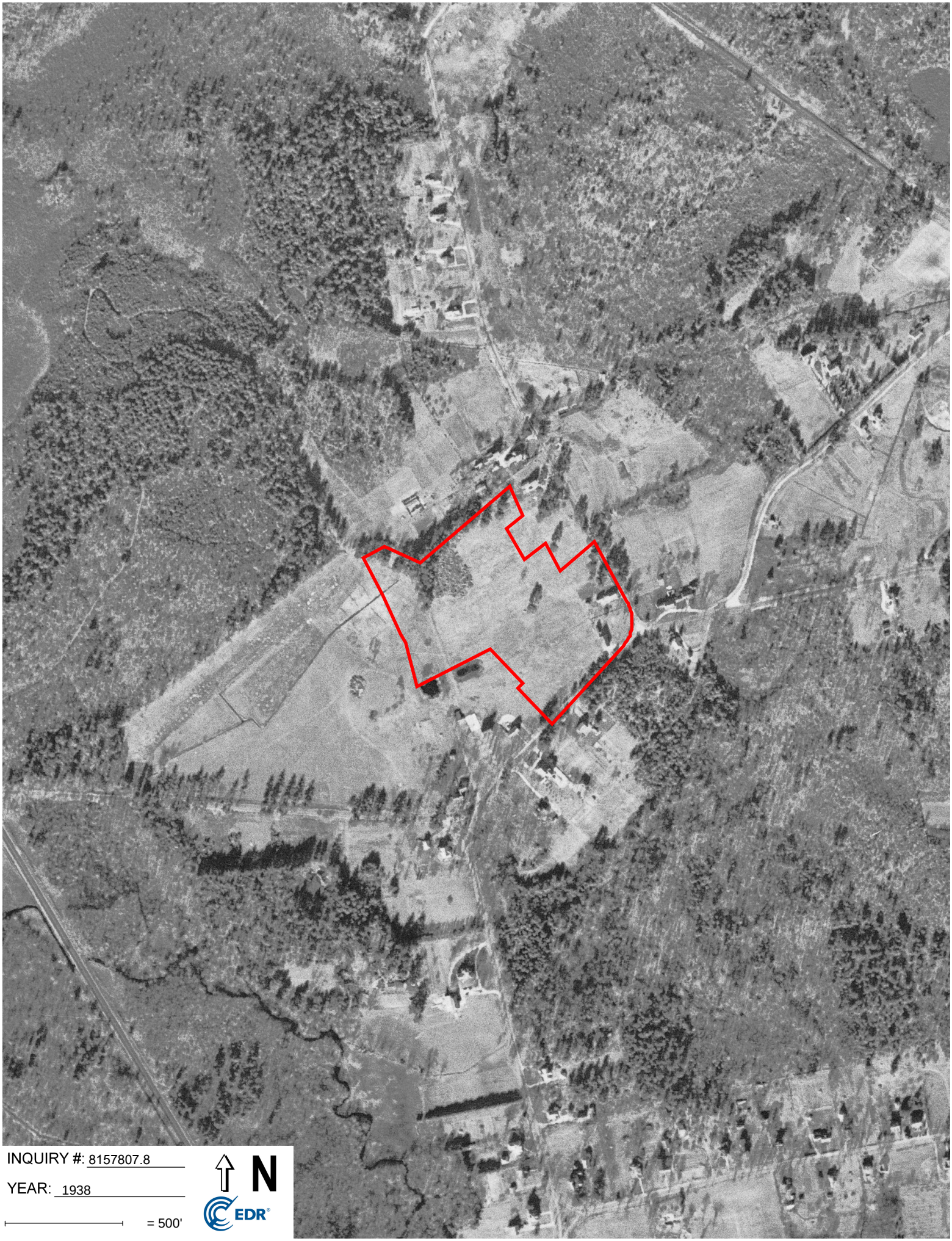
YEAR: 1965

= 500'

N

EDR


INQUIRY #: 8157807.8
YEAR: 1963
= 500'
N
EDR


INQUIRY #: 8157807.8
YEAR: 1938
= 500'
N
EDR

[Certified Sanborn® Map Report]

Wildwood School @ North Intermediate School

320 Salem Street

Wilmington, MA 01887

Inquiry Number: 8157807.3

October 30, 2025

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/30/25

Site Name:

Wildwood School @ North Inte
320 Salem Street
Wilmington, MA 01887
EDR Inquiry # 8157807.3

Client Name:

PEER Consultants
25 Mall Road
Burlington, MA 01803
Contact: Dave Gorden

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Certified Sanborn Results:

Certification # BBCE-4858-A3FD

PO # 8593-001

Project Wildwood @ North Intermediate

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: BBCE-4858-A3FD

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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[The EDR - City Directory Image Report]

Wildwood School @ North Intermediate School
320 Salem Street
Wilmington, MA 01887

Inquiry Number: 8157807.5
November 04, 2025

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2022	☑	☑	EDR Digital Archive
2014	☑	☑	Cole Information
2010	☑	☑	Cole Information
2005	☑	☑	Cole Information
2000	☑	☑	Cole Information
1995	☑	☑	Cole Information
1992	☑	☑	Cole Information
1989	☑	☑	Cole Criss-Cross Directory
1984	☑	☑	Cole Criss-Cross Directory

FINDINGS

TARGET PROPERTY STREET

320 Salem Street
Wilmington, MA 01887

Year	*CD Image*	*Source*
SALEM ST		
2022	pg A10	EDR Digital Archive
2014	pg A19	Cole Information
2010	pg A23	Cole Information
2005	pg A27	Cole Information
2000	pg A30	Cole Information
1995	pg A34	Cole Information
1992	pg A38	Cole Information
1989	pg A42	Cole Criss-Cross Directory
1984	pg A44	Cole Criss-Cross Directory

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
BALLARDVALE ST		
2022	pg. A2	EDR Digital Archive
2014	pg. A18	Cole Information
2010	pg. A22	Cole Information
2005	pg. A26	Cole Information
2000	pg. A29	Cole Information
1995	pg. A33	Cole Information
1992	pg. A37	Cole Information
1989	pg. A40	Cole Criss-Cross Directory
1989	pg. A41	Cole Criss-Cross Directory
1984	pg. A43	Cole Criss-Cross Directory

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BALLARDVALE ST 2022

3	CHARLES MCEWEN
	LINDA MCEWEN
5	JOHN SCARCELLI
7	JACQUELINE BARRERA
	LUIS BARRERA
	ROSALIE BARRERA
18	ANDY FARQUHARSON
	DOW INDUSTRIES
	JOHN DOHERTY
	MARY LABELLA
19	DANIEL HOPE
24	COREY KENNEY
	KAREN KENNEY
	RYAN KENNEY
	SEAN KENNEY
25	ABBVIE
	CARMEL CASTALINE
	CHARLES RIVER LABORATORIES INTERNATIONAL, INC
	EOIN MCCORMACK
	WILLIAM WALTRIP
26	JULIE STOCKBRIDGE
	MICHAEL STOCKBRIDGE
	NEIL STOCKBRIDGE
	WILLIAM STOCKBRIDGE
32	MICHAEL DOUCETTE
	ROBERT DOUCETTE
	TRACY DOUCETTE
33	GABRIEL SCHOLL
34	GILDAZIO FARIAS
	LAURIETE FARIAS
36	SEBASTIAO FILHO
	SEBASTIAO PINTO
56	KELSEY ASLETT
64	BRIDGET MURPHY
	DAVID FELLOWS
	JOSEPH BENGTSON
	LAURIE PYNE
	MITCHELL FISHER
	RICHARD BENGTSON
181	BRIAN MYERS
	BROAN-NU TONE LLC
	CATAPULT GROUP US INC
	CATAPULT SPORTS
	CLAIMIFY
	COMCAST CORPORATION
	GEOMAGIC INC
	GPI SOUTHEAST INC
	GREENMAN-PEDERSEN INC
	HANSCOM FEDEREAL CREDIT UNION
	INGERSOLL-RAND COMPANY

BALLARDVALE ST 2022 (Cont'd)

181 JIM WALTON
JOHN KNIPPEL
JOHN SWANSON
JOSEPH CONLEY
KATIE COPELAND
KATIE HANLEY
KIM FORTUNATO
KRISTIN DESROCHERS
MATTHEW BAIROS
MATTHEW DINEEN
MICHAEL JOYCE
MIKE FEENAN
MIT ALUMNI ASSOCIATION
NENA DABIC
ROBERT HULSART
SENSABLE TECHNOLOGIES INC
SETH BOSTOCK
STAN FRANZEEN
STEVE WIGHTMAN
TABETHA LITTLE
THE JUNCTION TMO, INC
THE TRANE COMPANY
TIMOTHY MCKNIGHT
TOM POWERS
TRANE
TRANE COMMERCIAL SALES OFFICE
TRANE US INC
VERITIV
XOS DIGITAL
XOS DIGITAL INC
XOS TECHNOLOGIES INC

187 @VENTURES
ADAM GOETZ
AMERISTAFF EMPLOYMENT
ANACOMP CORP
ANDREW WAUGH
ARCHITEXT INC
BROOKHAVEN NATIONAL LABORATORY BNL
CELLCEUTIX CORPORATION
CESAR LANZARINI
CHARLOTTE CANFIELD
CHRIS SAVINA
CHRISTOPHER STIRLING
CROTHALL SERVICES GROUP
CRYSTAL MAGANZINI
DAVE SPATARO
DAVID J NERROW
DENISE MCCABE
DINESH SHETTY
DON CAMPBELL

BALLARDVALE ST 2022 (Cont'd)

187
DREW VAN DUREN
EFI GLOBAL INC
ELAINE KATKOWSKI
FORESIGHT REGULATORY STRATEGIES INC
FORESIGHT REGULATORY STRATEGY
FRESH FOCUS MARKETING
GE HEALTH CARE
GERI ROSSETTI
GUIDO BERTOCCI
HANS FENSTERMACHER
IDEX AMERICA INC
IDEX BIOMETRICS
JACK STRAKOSCH
JEFF EMIG
JEFF SCHEINER
JEFF WALDROP
JEREMY HOLLAND
JESSE VICTORS
JOE BASIRICO
JOE MANUEL
JOSEPH GLENN
JUSTIN WORMELL
KATHERINE GONZALEZ
KATHLEEN NIGHTINGALE
KIMBERLY BOROYAN
KUBERRE SYSTEMS
LOADSPRING SOLUTIONS
LOADSPRING SOLUTIONS INC
LOADSPRING SOLUTIONS INC.
LOADSPRING SOLUTIONS, INC
LORI HORNSBY
MAINTECH DIVISION
MARC SAETTA
MATT HAGGARD
MICHAEL CONN
MODUSLINK GLOBAL SOLUTIONS INC
MSGI DIRECT
ONBOARD SECURITY INC
OUTERLINK CORP
OUTERLINK CORPORATION
OUTERLINK GLOBAL SOLUTIONS A METRO AVIATION COMPANY
OXIRA MEDICAL
PAMELA LEE
PATRICK HARVEY
PROFESSIONAL SUPPORT INC
PSP VOS
RIGHTER GROUP INC TNEMEC
ROBERT MCCONNELL
RODNEY DANIELSON
RUTTER NETWORKING

BALLARDVALE ST 2022 (Cont'd)

187	RUTTER NETWORKING TECH INC
	RUTTER NETWORKING TECHNOLOGIES
	RUTTER NETWORKING TECHNOLOGIES INC
	RYAN ROYALTY
	SAGE RIVER PARTNERS
	SECURITY INNOVATION
	SECURITY INNOVATION INC
	SECURITY INNOVATION, INC
	SECURITY INNOVATION, INC.
	SECURITY INNOVATIONS
	SECURITY SOURCE
	SI SALES
	STEVE BARRINGTON
	SYLVIA HOLDEN
	TIA CANIZALEZ
	TODD DAVENPORT
	TRANSLATIONS.COM INC
	TRANSPERFECT INC
	TRANSPERFECT TRANSLATIONS INTERNATIONAL INC
	WILLIAM J GLEASON
	WILLIAM WHYTE
193	HAROLD SULLIVAN
	SULLIVAN MECHANICAL SERVICES
195	CHARLES MAZZA
	JOHN WAY
	RITCHIE & SONS
	RITCHIE & SONS INC
197	COLONIAL ENGRAVING
	MACKAY CONSTRUCTION SERVICES INC
	NATASHA SHORT
	THOMAS MACKAY
200	3 STEP SPORTS LLC
	3 STEP SPORTS, LLC
	A GFA CORP
	ADP TAXWARE
	AGCO
	AGFA
	AGFA CORPORATION
	AGFA GRAPHICS
	AGFA HEALTHCARE
	AGFA HEALTHCARE CO LTD
	AGFA HEALTHCARE CORP
	AGFA HEALTHCARE GMBH
	AGFA MONOTYPE CORPORATION
	AGFA-GEVAERT N.V
	AGSA FINANCE CORPORATION
	AINSLEE LAMB
	ALEKSEY AVERIN
	ALLONE HEALTH
	AMETROS

BALLARDVALE ST 2022 (Cont'd)

200 ANTHONY LEHMAYER
ARMAND GENDREAU
ASHISH AGARWAL
BAYER CORPORATION
BILL MELONE
BILL WALLACE
BOB ZEBROWSKI
BONNIE SCHOMMER
CHRIS MASCIARELLI
CHRISTINA MENDES
CINDY HOBOKEN
COLTON SABLINSKY
CONVEY A SOVOS COMPLIANCE COMPANY
CONVEY, ACQUIRED BY SOVOS IN 2014
CVS HEALTH
DAVE SNYDER
DEBRA POWERS
DORA GAUDETTE
EAST COAST POWER BASKETBALL AND VOLLEYBALL LLC
ED BAKER
EDUARDO SOUSA
ELLEN LUCIA
ELLEN MILLER
GABRIELA RUIZ
GARRETT SAPARNIS
GEERT VERCRUYSSE
GENEVIEVE KALAHAR
GLOBAL SYSTEMS CO INC
GUY DESMET
ITT EDUCATIONAL SERVICES INC
ITT TECHNICAL INSTITUTE
IVAN PEETERS
JAVIER ALFARO
JEFF PICOTTE
JEREMY PYMENTO
JIANHUI HE
JIM RICHEY
JODI VALLANTE
JUAN NUNEZ
JUTTA BEDNARIK
KATE BAILEY ROESER
KATHERINE DRIGGERS
KEITH PIERCE
KENNETH MCKEE
KEVIN RODGERS
KIM ZEULI
KRIS MICHAUD
KRISTIN DEGROOF
KYLE ROOKE
LARRY CORMIER

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BALLARDVALE ST 2022 (Cont'd)

200
LEDVANCE
LEDVANCE PREVIOUSLY KNOWN AS OSRAM SYLVANIA INC
LEDVANCE SYLVANIA
LEDVANCE GMBH
LEDVANCE LLC
LEDVANCE LLC WILMINGTON
LEDVANCE LTD
LEDVANCE, LLC FORMERLY OSRAM SYLVANIA
MATTHEW DELMAN
MATTHEW WEINREB
MELISSA GUEZMIR
MICHAEL KOLAKOWSKI
MICHAEL MARTENS
MICHAEL STATS
MICHELE DELNINNO
MIKE COLOTTI
MONOTYPE IMAGING HOLDINGS INC
MONOTYPE IMAGING INC
NAVEEN TUMULA
NAVPREET SINGH
OSRAM
OSRAM GMBH
OSRAM SYLVANIA
OSRAM SYLVANIA INC
OSRAM SYLVANIA INC.
OSRAM SYLVANIA PRODUCTS INC OSRAM SYLVANIA INC
OSRAM SYLVANIA, INC
PAUL PAQUETTE
PAWEL SMOLARKIEWICZ
PFIZER
PFIZER WYETH BIOTECH
PFIZER CONSUMER HEALTHCARE
PFIZER PHARMACEUTICALS
PITMAN AGFA CORPORATION
RAUL GUAJARDO MARTINEZ
RHONDA TEMPLE
RICK TASSONI
ROB KASSLACK
ROBERT STROPE
ROBERT ZAWOJSKI
RYAN BRADY
SANA WAKIM
SCOTT ANSBAUGH
SEBASTIAN ALEGRIA
SHANE CHEASLEY
SHIPCOMPLIANT POWERED BY SOVOS
SOVOS
SOVOS COMPLIANCE
SOVOS COMPLIANCE LLC
SOVOS COMPLIANCE, LLC

BALLARDVALE ST 2022 (Cont'd)

200	STEPHEN REED
	STEVE KUHLMAN
	STEVEN JANOCHA
	SUE MCINTOSH
	SYLVANIA
	SYLVANIA LIGHTING SERVICES CORPORATION
	TARYN FLINT
	TAXIFY
	TAXIFY BY SOVOS
	TAXIFY EFFORTLESS SALES TAX
	TAXWARE
	TAXWARE A SOVOS COMPLIANCE COMPANY
	TAXWARE LLC
	TAXWARE LP
	TAXWARE, A SOVOS COMPLIANCE COMPANY
	THOMAS DEEB
	TRENT HOWELL
	ULTIMATE DESIGN APPAREL
	VERIZON WIRELESS
	VIPUL THAKKER
	VISTA EQUITY PARTNERS
	VLADIMIR DIMITROV
	WILMINGTON
201	A BUSINESS UNIT OF CURTISS-WRIGHT SURFACE TECHNOLOGIES
	ALISON STEPHENS
	BASF
	BASF CORP
	BRIAN CUSACK
	CINDY LITTON
	COGNIS CORPORATION
	CURTISS-WRIGHT CORPORATION
	CURTISS-WRIGHT CORPORATION - SURFACE TECHNOLOGIES DIVISION HQ
	CURTISS-WRIGHT SURFACE TECH
	CURTISS-WRIGHT SURFACE TECHNOLOGIES
	CYNTHIA LITTON
	DARLENE AUER
	DARLENE KNUTSON
	DARYL MESSER
	E M COATINGS SERVICES LTD
	JAMES LEE
	JAY WALDEN
	KEVIN HUNSICKER
	LASER PEENING 26-1
	METAL IMPROVEMENT CO
	METAL IMPROVEMENT CO. INC.
	METAL IMPROVEMENT COMPANY
	METAL IMPROVEMENT COMPANY INC
	MIC
	MICHELE POWELL
	PEDRO MENDEZ

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BALLARDVALE ST 2022 (Cont'd)

201 RANDALL BENJAMIN
STUART ANDERSON
TODD PARISH

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SALEM ST 2022

125	BRIAN UNGER
	LAUREN UNGER
126	KENNETH PALLADINO
	RYAN HANLON
129	RICHARD VAYO
130	STEPHEN PORTANOVA
131	JOHN FIELD
	KASEY FIELD
132	BRIAN GIROUARD
	HOLLY GIROUARD
133	JASON DEVEUVE
134	BARBARA KENNEDY
	JOHN KENNEDY
	JOSEPH KENNEDY
	MIA CURTATONE
	REBECCA TODD
136	D C EATON
	DONALD EATON
	MARIE EATON
	MAYNARD EATON
	WILMINGTON LANDSCAPING CO
137	JOHN DERVISHIAN
	MICHELLE DERVISHIAN
	PAT DERVISHIAN
139	RICHARD STARAM
141	KARL SAIED
	NABIL SAID
142	DANIELLE VERTIYEV
	DENNIS VERTIYEV
146	BERNICE HUDSON
	EMERY BOUDREAU
	JUDITH PALAZZO
	MICHAEL PALAZZO
150	JEFFREY TUCKER
	TANYA TUCKER
158	CAROL BOISVERT
	DENNIS BOISVERT
	ELISE BOISVERT
	HEATHER BOISVERT
159	JASON TASCHEREAU
	JENNIFER O'CONNOR
160	CHASE CRAFT
	REBECCA BIERSTEDT
	TIMOTHY CHASE
166	F LEKATSA
	PANAGIOTIS KAPASAKALIDIS
190	JOAN JONES
	MARK JONES
194	PAM RAY
	THOMAS RAY

SALEM ST 2022 (Cont'd)

195	ALAN GEORGE
	ALICE GEORGE
	ALICE ROBB
	ANDREA COMEAU
	ANDU LAM
	ANGELA HOLMAN
	ASHLEY LAM
	BARBARA GEORGE
	BARBARA HOWE
	BARBARA O'BRIEN
	BRETTANY DIMATTEO
	BRIAN CRAVEN
	CAROL FORESTER
	CATHERINE CONWAY
	CATHERINE MCCALLAN
	CHARLES DIMATTEO
	CHARLES J DIMATTEO JR CPA
	CHARLES OSGOOD
	DAVID MARTEL
	DERRICK CLARK
	DONALD SILVIA
	DONNA DIGGS
	DORTHY PERRY
	DOUGLAS CLARK
	EILEEN REDINGTON
	ELAINE COY
	EUNJOO SOHN
	FAYE ALEO
	GARAGE DOOR REPAIR WILMINGTON
	GERARD COMEAU
	GIACOMO TAMBURELLO
	HEATHER MARTEL
	HERBERT DORAZIO
	HONG LI
	JEAN LEAHY
	JEAN WILLIAMSON
	JEFFREY WILLIAMSON
	JOAN NAPOLI-WINANT
	JOANNE COLLINS
	JOHN REDINGTON
	JONATHAN JODOIN
	JOSEPH SHAFFER
	JOYCE DELANEY
	JUDITH PERRY
	JULIA DIBACCO
	JULIE CRAVEN
	KELLY O'BRIEN
	KENNETH STONE
	KENNETH WILLEY
	KEVIN BRENNAN

SALEM ST 2022 (Cont'd)

195	KIANA DIMATTEO
	LINDA GORGONE
	LORETTA COMEAU
	LOUISE MARTEL
	LUCILLE CLARK
	MANE HOJLO
	MARIE HOJLO
	MARJORIE KNOX
	MARY BRENNAN
	MARY OSGOOD
	MAURA TAMBURELLO
	MICHAEL DIBACCO
	MICHAEL GLUNZ
	MICHAEL WINN
	MILVA PHILLIPS
	NEILSON LAM
	PAMELA DIMATTEO
	PATRICIA WILLEY
	PAUL CAREY
	PAUL HOJLO
	PAULA CAREY
	PAULA GEORGE
	PETER GALLINARO
	RAVINDRAN SUNDAR
	RAYMOND MARTEL
	RICHARD HOLMAN
	RONALD CRAVEN
	SANDRA BAGLIO
	SANDRA FITZLER
	SHARON WINN
	SHAYLA DIMATTEO
	TERESA GALLINARO
	THERESA GLUNZ
	THREASA CRAVEN
	TIMOTHY LEAHY
	WILLIAM BRENNAN
	WILLIAM LEAHY
196	DONNA CARROLL
197	JAMES KIESINGER
	MARY KIESINGER
198	CARL ANDERSON
	NICOLE ANDERSON
200	AL AGNOLOTTI
	BENEVENETO BITUMINOUS CORPORATION LLC
201	ANDREW ESCOBAR
	ANNA ESCOBAR
	ENUDIO ESCOBAR
	MILAGROS ESCOBAR
	MILLIE ESCOBAR
204	JEFFERSON CONTI

SALEM ST 2022 (Cont'd)

204	KARINA CONTI
206	GAIL HOENIG
207	HEATHER THOMPSON
209	AGLAIA KARAPATAS
	AGLAIA KARRAPATSAS
	STEVEN KARAPATAS
210	JAMES HUNTER
	KAREN HUNTER
221	DAWN REIDY
	RICHARD REIDY
	SIOBHAN REIDY
	VERONICASIOBHAN REIDY
276	DAVID MCGILVRAY
	DEBORAH MCGILVRAY
	KORY MCGILVRAY
	KYLIE MCGILVRAY
	NATHAN MCGILVRAY
278	JAMES HUNTER
	KAREN HUNTER
280	ASHLEY HALE
	POOJA MALLYA
282	PATRICK SOUZA
	SARAH SOUZA
285	MAUREEN BRANCATO
286	MALCOLM CREETH
	MARIE CREETH
	SARAH CREETH
287	ROBERT MACIVER
288	JOHN KLEYNEN
	LOUIS KLEYNEN
290	KEVIN MAWN
	MELISSA MAWN
	PATRICIA MAWN
	PAUL MAWN
292	GAIL DONOVAN
	GARY DONOVAN
	JOSEPH DONOVAN
	KRISTEN DONOVAN
293	PAUL CURTIN
	SANDRA CURTIN
294	CHARLES ROBINSON
	R YESUDHASAN-ROBINSON
	RADHABAI ROBINSON
296	RUMANA JISA
	SHEIKH BAHAUDDIN
298	ERIN PIERRI
	MARY KILROY
	VINCENT PIERRI
300	ELIZABETH BERUBE
	ERIN BERUBE

SALEM ST 2022 (Cont'd)

300	JOSEPH BALLIRO
	K COLUNTINO
	SARAH BERUBE
	SEAN BERUBE
	STEVEN BERUBE
	TIMELINE BUILDER LLC
305	ANNEMARIE MCNEIL
	BRIANNA MCNEIL
	NANCY MCNEIL
	ROBERT MCNEIL
306	CHRISTINE BILYEU
313	CARMEL SARICH
	CAROLYN SARICH
	DAVID SARICH
	MARY SARICH
314	BERTHA DEPREZ
	STEVEN DEPREZ
317	ELIZABETH CARLI
	MICHAEL CARLI
319	JENNA MORSE
320	CHRISTINE MCMENIMEN
	DIANA FAY
	FRANK FERRIERO
	HOLLY BANUSIEWICZ
	JESSICA BARRY
	NORTH INTERMEDIATE SCHOOL
	PATTY BOGGIA
	SHAWSHEEN ELEMENTARY SCHOOL
	STEPHEN BJORK
	WEST INTERMEDIATE SCHOOL
	WILDWOOD EARLY CHILDHOOD CENTER
	WILMINGTON MIDDLE SCHOOL
	WILMINGTON PUBLIC SCHOOLS
	WILMINGTON PUBLIC SCHOOLS WILMINGTON HIGH SCHOOL WILMINGTON MI
	WOBURN ST ELEMENTARY SCHOOL
321	ERIK TIMMONS
	KATHLEEN TIMMONS
327	GWENDILYN LAWSON
	WILLIAM LAWSON
333	GAUTHAM KRISHNAMURTHY
	RADHA KRISHNAMURTHY
	SRIKANTH KRISHNAMURTHY
337	ELIZABETH ANDERSON
	NANCY CARSON
343	JAMES DONOVAN
	KATHRYN DONOVAN
344	MAXWELL LEE
	PETE JENSEN
347	ALYSE SCANLON
	DEBORAH SCANLON

SALEM ST 2022 (Cont'd)

347	KIMBERLY SCANLON
	MICHAEL SCANLON
	THOMAS SCANLON
390	DIANE CARBONE
	RICHARD CARBONE
391	DAVID REGAN
	ELIZABETH REGAN
393	CAMILLE LANE
	MARIE BUTLER
394	DONALD O'BRIEN
	SANDRA DOGHERTY
	SANDRA DOHERTY
395	GEORGE DOHERTY
396	DONNA BROWN
397	CAROL RUSSO
405	MELISSA MCNAMARA
	RICHARD MCNAMARA
	THERESA MCNAMARA
407	AMY LINDQUIST
	ARRAYA ACUPUNCTURE AND WELLNESS
	ERIK LINDQUIST
	ROLEN CHOM
409	ANGELO CIANO
	JAIME CIANO
411	MICHAEL ARNOS
430	THERESA MCDERMOTT
	WILMINGTON TOWN MUSEUM
437	JANINE DUSABLON
	WILLIAM DUSABLON
439	MICHELLE AICHER
	WILLIAM AICHER
443	SUSAN FRANK
455	CORNELIUS SHEEHAN
459	BETTY DOERFLER
	CARL DOERFLER
	JOHN DOERFLER
	PAUL DOERFLER
	RELIETA DOERFLER
461	JILL GRAHAM
	RYAN GRAHAM
463	CATHERINE GLENN
465	ARLENE ORSO
	PAUL ORSO
467	DENNIS DESFORGE
	JOHN DESFORGE
	MADELYN DESFORGE
	RICHARD DESFORGE
469	ANDREA COURTNEY
	ROBERT COURTNEY
471	DOUGLAS IULIANO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SALEM ST 2022 (Cont'd)

471	SHERRY IULIANO
500	ANDREW SARAH
	ANTHONY BAILEY
	ATLANTIC AUDIOLOGY
	BURLINGTON EYE ASSOCIATES
	BURLINGTON PODIATRY
	CAROLINE SEDER
	CAROLINE SEDER MD
	CARSON DANIEL
	CLARISSA RONZIO
	COSMETIC LASER SOLUTIONS MEDSPA BOSTON & RI
	DANIEL CARSON
	DANIEL M CARSON
	DIANE BUJALSKI
	DR MARK MACKLIS OBGYN
	EDGAR MULLIN
	ELLA RAPOSO-SACKS
	FAMILY MEDICAL CENTER
	HEKMATPOUR SHAHROOZ
	JACLYN SUGRUE
	JESSICA DELANEY-SLOPER
	JHA NEETI MD
	JOHN MADDOX
	JONATHAN ADLER
	KEN WILSON
	LAURA ARMSTRONG
	LILLIAN S MOY-YEE
	LILLIAN S MOY-YEE MD
	MACKLIS MARK A
	MADDOX JOHN MD
	MARK A MACKLIS
	MELISSA M ZORN MD
	MELISSA ZORN
	MICHAEL BRITT
	MICHAEL BRITT MD
	NEETI JHA
	NICOLE ECCLESTON
	NORMAND TANGUAY
	PETER ROTOLO
	PHILIP GENDELMAN
	PHILL HYWOOD
	SANDY STEPHENS
	SARAH ANDREW
	SHAHROOZ HEKMATPOUR MD
	STEPHENS SANDY
	TANGUAY NORMAND
	WILMINGTON INTERNISTS INC
	WILMINGTON PEDIATRICS
	WILMINGTON PEDIATRICS INC
	WILMINGTON PEDIATRICS, INC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

SALEM ST 2022 (Cont'd)

500	WINCHESTER GASTROENTEROLOGY ASSOC
	WINCHESTER HEALTHCARE MANAGEMENT, INC
	WINCHESTER HOSPITAL
	WINCHESTER OPEN MRI LLC
	WOBURN MEDICAL ASSOCIATES

Target Street	Cross Street	Source
-	✓	Cole Information

BALLARDVALE ST 2014

3	OCCUPANT UNKNOWN,
5	SCARCELLI, JOHN J
7	BARRERA, LUIS F
18	DOHERTY, JOHN F
19	NEVINS, MARSHALL
24	OCCUPANT UNKNOWN,
25	CASTALINE, CARMEL M
26	STOCKBRIDGE, NEIL W
31	FITZPATRICK, WARREN P
32	DOUCETTE, MICHAEL P
34	OCCUPANT UNKNOWN,
36	PINTO, MEIRE M
40	AVALON OAKS
56	AGGERTY, NEIL
	SAWYER, LEONARD
57	AVALON OAKS
64	FISHER, MITCHELL
	MCMURRAY, HEATHER
181	HOUGHTON MIFFLIN
	WAKEFIELD CUSHAM
	XOS TECHNOLOGIES INC
187	ANACOMP CORP
	CUSHMAN & WAKEFIELD
	DATAPAQ INC
	DIMENSIONAL PHOTONICS
	DPI SYBRON
	KUBERRE SYSTEMS
	LP NETWORK INC
	MICROCOMPLETE CLEANING
	MSGI DIRECT
	MSGI DIRECT BOSTON
	RUTTER NETWORKING
	WPG AMERICAS
193	SULLIVAN MECHANICAL SERVICES
195	INC RITCHIE & SONS
197	COLONIAL ENGRAVING
	MACKAY CONSTRUCTION
	STANLEY ENGINEERING CO INC
199	SAWYER, MALCOLM
200	AGFA CORPORATION
	AGFA DIVISION OF BAYER INC
	AGFA FINANCE
	BAYER FINANCIAL SERVICE
	CUSHMAN & WAKEFIELD
	ITT TECHNICAL INSTITUTE
	KAPA BIOSYSTEMS
201	CURTISS WRIGHT

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2014

125	ARNOLD, PRESCOTT
	OCCUPANT UNKNOWN,
	PRESCOTT, ARNOLD
	RAMSDELL, KENNETH A
129	THURSTON, JOSEPH P
131	FERGUSON, ROBERT S
133	CIPRIANO, NICHOLAS J
134	KENNEDY, JOSEPH M
136	EATON, DONALD C
137	DERVISHIAN, JOHN P
139	OCCUPANT UNKNOWN,
141	SAID, NABIL K
142	PICANSO, GERALD L
146	PALAZZO, MICHAEL A
150	TUCKER, JEFFREY A
158	BOISVERT, DENNIS H
159	DILLON, TIMOTHY L
160	CHASE, TIMOTHY J
166	TELIS, PETER C
190	JONES, MARK S
194	OCCUPANT UNKNOWN,
	RAY, THOMAS W
195	CAREY, PAUL W
	DEFURIA, ANTOINETTE J
	DELEO, CRISTINA M
	DONNA, DIGGS
	EINARSON, PATRICIA A
	FLOOD, STEPHEN
	FREGEAU, MARK R
	GALLINARO, PETER P
	HOLMAN, RICHARD L
	KNOX, MARJORIE
	LANGONE, ANTHONY J
	LUDWIG, CATHERINE P
	MANUEL, JANET E
	MCHUGH, DENISE M
	OBRIEN, BARBARA O
	PAGLUICA, ALFRED J
	PHILLIPS, JOHN F
	YUND, MAUREEN
	ZANI, MARY E
196	CARROLL, DONNA M
197	KIESINGER, MARY F
198	KALAVANTIS, CHRISTOS P
199	FRANKELTON, FRANCIS J
201	ESCOBAR, ENUDIO O
202	RIDEOUT, KENNETH R
203	PECK, THOMAS M
204	MELKONIAN, MARK
205	FRANCES, G

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2014 (Cont'd)

206 TOCE, MELISSA J
207 FLANDERS, TRACY R
209 KARAPATSAS, ANTHONY P
221 REIDY, RICHARD J
276 MCGILVRAY, DAVID C
278 HUNTER, JAMES I
280 SOUCY, JEFFREY R
282 HAYES, JOHN H
285 DIAZ, JOSE B
286 CREETH, JOHN J
287 ANDERSON, ROBERT D
288 KLEYNEN, KEVIN W
289 GAGLIONE, MICHAEL P
STAVROPOULOS, CYNTHIA R
290 SPINNEY, JAMES G
291 MANINOS, MATTHEW C
292 DONOVAN, GARY J
293 OCCUPANT UNKNOWN,
294 CHARLES, RAVI
296 TOWNSEND, CARL F
298 BREVILIA, JESSICA
GARDNER, WAYNE G
STAVROPOULOS, JAMES
299 GOUVEIA, ADAM T
300 BALLIRO, LINDA
JOSEPH, JR
OCCUPANT UNKNOWN,
305 BRUCE, CHESTER A
306 LABUZ, JEFFREY A
307 SULLIVAN, KENNETH A
313 SARICH, DAVID A
314 OCCUPANT UNKNOWN,
317 CARLI, MICHAEL D
319 GILLIS, TIMOTHY
321 WHITNEY, EDWARD C
327 LAWSON, WILLIAM F
333 KRISHNAMURTHY, GAUTHAM
334 DELUCA, ANTHONY
343 DONOVAN, JAMES J
344 ELIA, JOHN J
390 CARBONE, RICHARD J
391 REGAN, DAVID M
392 OCCUPANT UNKNOWN,
393 BUTLER, CARL M
CASSIDY, JAMES
J & L PAINTING
OCCUPANT UNKNOWN,
394 DOGHERTY, SANDRA A
395 CARROLL, GEORGE J
396 BROWN, CHARLES E

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2014 (Cont'd)

397	OCCUPANT UNKNOWN,
404	OCCUPANT UNKNOWN,
405	MCNAMARA, RICHARD
406	MORRIS, SUSAN N
407	LAM, NIDA
409	WRYE, TAYLOR P
411	IULIANO, DOUGLAS R
437	DUSABLON, WILLIAM S
439	DICHIARA, PAUL D
443	PATTERSON, TONY J
455	SHEEHAN, MARY L
457	TROXELL, PAUL E
459	DOERFLER, PAUL L
463	GRIFFITH, JONATHAN A
465	ORSO, PAUL D
467	DESFORGE, RICHARD J
469	MURPHY, PHILIP T
471	LEIGHTON, MIKE H
500	ANDREW SARAH MD
	ATLANTIC AUDIOLOGY
	BURLINGTON EYE ASSOCIATES
	CARSON DANIEL MD
	MACKLIS MARK A MD
	SEDER CAROLINE MD
	STEPHENS SANDY MD
	TANGUAY NORMAND MD
	WILMINGTON PEDIATRICS
	WINCHESTER FAMILY MEDICAL CENTER
	WINCHESTER HOSPITAL FAMILY MEDICAL C
	WINCHESTER HOSPITAL ORTHOPEDICS PLUS
506	DURKEE, JAMES J
530	PARSI, MAITE A

Target Street	Cross Street	Source
-	✓	Cole Information

BALLARDVALE ST 2010

3	MCEWEN, CHARLES E
7	BARRERA, LUIS F
19	NEVINS, MARSHALL
24	BURNS, JOANNE F
25	AMIRAULT, MARK E
26	STOCKBRIDGE, NEIL W
31	DOWNS, THOMAS E
32	LEADEN, JOHN C
34	BURGESS, MELINDA
36	PINTO, MEIRE M
56	SAWYER, LEONARD
64	CARVALHO, JOSE V
181	CUSHMAN & WAKEFIELD INC
	DIMENSIONAL PHOTONICS
	HOUGHTON MIFFLIN EMPLOYEE FCU
	SAXON PUBLISHERS
	SUPPLEMENTAL PUBLISHERS DIV
187	ANACOMP INC
	AURA COMMUNICATIONS
	DATAPAQ INC
	JACO ELECTRONICS INC
	MAINTECH
	MICROCOMPLETE CLEANING
	PROFESSIONAL SUPPORT INC
	RUTTER NETWORKING
	SECURITY INNOVATIONS
	US DEFENSE SECURITY SVC
	W 3 HEALTH
193	SULLIVAN MECHANICAL SVC
195	RITCHIE & SONS INC
197	COLONIAL ENGRAVING
	R & D MACHINING INC
	SHORTMC DONALD ASSOC INC
	STANLEY ENGINEERING CO
199	SAWYER, MALCOLM
200	AGFA GRAPHICS
	AGSA FINANCE CORP
	CUSHMAN & WAKEFIELD INC
	HANSCOM FEDERAL CREDIT UNION
	INTERNATIONAL TYPEFACE CORP
	WYET

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2010

125	RAMSDELL, KENNETH A
129	THURSTON, JOSEPH P
130	MAFFEO, JERRY L
131	FERGUSON, ROBERT S
132	CALDERWOOD, PAUL E
133	JENNINGS, RANDOLPH R
134	KENNEDY, JOSEPH M
136	EATON, DONALD C
	WILMINGTON LANDSCAPING CO
137	DERVISHIAN, JOHN P
141	LEKA, HATIXHE
142	PICANSO, GERALD L
150	ARSENAULT, DENNIS L
158	BOISVERT, DENNIS H
159	DILLON, TIMOTHY L
160	CHASE, TIMOTHY J
166	TELIS, PETER C
190	JONES, MARK S
194	RAY, THOMAS W
195	CAREY, PAUL W
	CENTRELLA, JOHN A
	COURCY, LUCIEN E
	DEFURIA, ANTHONY S
	DIGGS, ADAM E
	DIGGS, DONNA
	DONNA, DIGGS
	DUDLEY, MARY F
	FREGEAU, JEAN L
	GUGGER, EDWARD M
	HOLMAN, RICHARD L
	HOWE, ROBERT A
	KNOX, MARJORIE
	LANGONE, ANTHONY J
	MCCALLAN, CATHERINE
	MCGRATH, EDWARD F
	MCHUGH, DENISE M
	MORGAN, RICHARD S
	PHILLIPS, JOHN F
	VENTOLA, PETER E
	ZANI, MARY E
196	CARROLL, DONNA M
197	KIESINGER, RICHARD P
198	THIBODEAU, DICK
199	FRANKELTON, FRANCIS J
201	ESCOBAR, ENUDIO O
202	RIDEOUT, KENNETH R
203	PECK, THOMAS F
204	MELKONIAN, MARK
205	FRANCES, G
206	TOCE, MELISSA J

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2010 (Cont'd)

207	FLANDERS, TRACY R
209	KARAPATSAS, ANTHONY P
221	REIDY, RICHARD J
276	MCGILVRAY, DAVID C
278	HUNTER, JAMES I
280	HARRINGTON, ROBERT C
282	HAYES, JOHN H
285	DIAZ, JOSE B
286	CREETH, JOHN J
287	ANDERSON, ELLEN F
288	KLEYNEN, PATRICIA A
289	GAGLIONE, MICHAEL P
292	DONOVAN, GARY J
294	CHARLES, R
296	TOWNSEND, CARL F
298	STAVROPOULOS, JAMES
302	BROOKS, DOROTHY A
305	BRUCE, CHESTER A
306	LABUZ, JEFFREY A
307	SULLIVAN, KENNETH A
313	SARICH, DAVID A
320	NORTH INTERMEDIATE SCHOOL
321	WHITNEY, EDWARD C
327	LAWSON, WILLIAM F
333	PUNUKOLLU, SHANTA A
334	DELUCA, ANTHONY
343	ONEILL, STEPHEN D
344	ELIA, MARGE R
347	CUSTOM INTERIORS BY DONNA
390	CARBONE, ROBERT P
391	REGAN, DAVID M
392	SOUSA, EDWARD L
393	BUTLER, CARL M
	CASSIDY, JAMES
	J & L PAINTING
	LAST, JOHN A
394	OBRIEN, DAN E
395	CARROLL, GEORGE
396	BROWN, CHARLES E
397	PRATT, GEORGE H
405	MCNAMARA, RICHARD
407	DIAS, ANTONIO H
409	WARGO, FRANK J
411	IULIANO, DOUGLAS R
430	WILMINGTON TOWN MUSEUM
437	DUSABLON, WILLIAM S
439	DICHIARA, PAUL D
443	FRANK, SUSAN R
455	SHEEHAN, MARY L
457	TROXELL, PAUL E

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2010 (Cont'd)

459	DOERFLER, PAUL L
461	ELMORE, CYNTHIA L
463	GRIFFITH, JONATHAN A
465	ORSO, PAUL D
469	MURPHY, PHILIP T
471	BOURASSA, ROBERT A
500	ATLANTIC AUDIOLOGY
	BRITT MICHAEL MD
	BURLINGTON EYE ASSOC
	BURLINGTON PODIATRY
	DELANEYSLOPER JESSICA
	WILMINGTON PEDIATRICS
	WINCHESTER HOSPITAL FAMILY MED
	WOBURN MEDICAL ASSOC
506	DURKEE, JAMES J
530	FISHER, MARGARET

Target Street	Cross Street	Source
-	✓	Cole Information

BALLARDVALE ST 2005

3	MCEWEN, CHARLES E
5	BINKOSKI, THOM J
18	LABELLA, TERI T
19	WHITEHOUSE-NEVINS, PAT
20	VINSON, ROBERT A
25	AMIRAULT, MARK E
26	STOCKBRIDGE, NEIL W
31	DOWNS, THOMAS E
32	MARTIN, SARAH J
34	EDGERLY, EDWARD J
56	DAVIS, ELLEN G
64	CARVALHO, JOSE
181	GENETICS INSTITUTE
187	CUSHING & DOLAN
	DATAPAQ INC
	M K T G SERVICE INC
193	SULLIVAN MECHANICAL SERVICES
195	RITCHIE AND SONS INC
197	COLONIAL ENGRAVING
	STANLEY ENGINEERING CO INC
200	AGFA EMPLOYEES FEDERAL CREDIT UNION
	INTERNATIONAL TYPEFACE
	NEW PROIMAGE AMERICA INC
201	ENGELHARD SURFACE TECHNOLOGIES

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2005

125	RAMSDELL, KENNETH A
129	GUEVARA, JORGE
130	MAFFEO, JERRY L
131	FERGUSON, ROBERT S
132	CALDERWOOD, PAUL E
133	JENNINGS, RANDOLPH R
134	KENNEDY, JOSEPH M
136	EATON, DONALD C
137	DERVISHIAN, JOHN L
141	ANDRADE, MANUEL T
142	PICANSO, GERALD L
146	PALAZZO, MICHAEL A
150	ARSENAULT, DENNIS L
158	BOISVERT, DENNIS H
159	BUTTERS, CARL W
160	CHASE, TIMOTHY J
190	JONES, MARK S
194	RAY, THOMAS W
196	CARROLL, DONNA M
197	KIESINGER, RICHARD P
198	THIBODEAU, JOSEPH E
199	FRANKELTON, FRANCIS J
201	ESCOBAR, ENUDIO O
202	RIDEOUT, KENNETH R
203	PECK, THOMAS F
204	MELKONIAN, MARK
205	DINGLE, LAWRENCE F
206	TOCE, MELISSA
207	LEONARD, MARJORIE A
209	KARAPATSAS, ANTONIOS P
219	PERSONAL FINANCIAL MGMT PLUS
221	BUZZELL, ANNE R
276	MCGILVRAY, DAVID C
278	HUNTER, JAMES I
280	HARRINGTON, ROBERT
282	HAYES, JOHN H
285	DURFEE, WILLIAM D
286	CREETH, JOHN J
287	ANDERSON, ELLEN F
288	KLEYNEN, PATRICIA A
289	STAVROPOULOS, JAMES
290	SPINNEY, JAMES G
292	DONOVAN, GARY J
293	CURTIN, PAUL J
294	FRITZ, MICHAEL J
296	TOWNSEND, CARL F
298	CURLEW, KEVIN F
300	BERUBE, STEVEN
302	BROOKS, DOROTHY A
305	BRUCE, CHIP A

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2005 (Cont'd)

306	LABUZ, JEFFREY A
307	SULLIVAN, KENNETH A
	UNIQUE SEATS
313	SARICH, DAVID A
314	DEPREZ, STEVEN A
317	SILVESTRI, DOMINICK J
321	WHITNEY, EDWARD C
333	KRISHNAMURTHY, GAUTHAM
334	DELUCA, ANTHONY
343	ONEILL, STEPHEN D
344	ELIA, MARGUERITE R
377	PULEO, M
390	CARBONE, ROBERT P
391	REGAN, DAVID M
392	SOUSA, EDWARD L
393	BUTLER, CARL M
	J & L PAINTING
	LAST, JOHN A
394	OBRIEN, DONALD E
395	DOHERTY, GEORGE L
396	HALLETT, ROSS D
397	THOMAS-MOORE, GAR N
405	MCNAMARA, RICHARD
407	RITAROSSI, JAMES P
409	WARGO, FRANK J
411	IULIANO, DOUGLAS R
437	TORRI, ANNE M
439	DICHIARA, PAUL D
443	FRANK, SUSAN R
455	SHEEHAN, MARY L
457	TROXELL, PAUL E
459	DOERFLER, PAUL E
461	ELMORE, CYNTHIA L
463	GRIFFITH, JONATHAN
467	DESFORGE, RICHARD J
469	MURPHY, PHILIP T
471	BOURASSA, ROBERT O
500	ATLANTIC AUDIOLOGY INC
	EYE ASSOCIATES PC
	HEARING EARS AUDIOLOGY RESOURCES
	WILMINGTON PEDIATRICS INC
	WOBURN MEDICAL ASSOCIATES IN WILMING
	WOBURN MEDICAL ASSOCIATION
506	ROTHWELL, VERA H
530	HIRSCH, JUDI I

Target Street	Cross Street	Source
-	✓	Cole Information

BALLARDVALE ST 2000

5	BINKOSKI, THOM
18	LABELLA, TERI
19	NEVINS, P W
20	VINSON, ROBERT
25	AMIRAULT, MARK E
31	DOWNS, THOMAS
	FITZPATRICK, WARREN
32	BRODERICK, GARY T
34	EDGERLY, EDWARD J
56	DAVIS, ELLEN
64	DOYLE, LAURIE A
	PYNE, THOMAS
187	ASCENT PEDIATRICS
	DATAPAQ INCORPORATED
	NETCORE SYSTEMS INCORPORATED
195	RITCHIE & SONS INCORPORATED
197	STANLEY ENGINEERING COMPANY INCORPORATED
200	AGFA DIVISION OF BAYER INCORPORATED
	SULLIVAN MECHANICAL SERVICES
201	ENGELHARD SURFACE TECHNOLOGIES
	JET COM INCORPORATED
	JEY COM INCORPORATED

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2000

125	DROHAN, V
	RAMSDELL, KENNETH
129	GUEVARA, ANNE
	GUEVARA, JORGE
	THURSTON, JOSEPH
130	MAFFEO, JERRY L
131	FERGUSON, ROBERT S
132	CALDERWOOD, PAUL
134	KENNEDY, JOSEPH M
136	EATON, DONALD C
137	DERVISHIAN, JOHN
	REID, P
142	PICANSO, ELEANOR
146	BOUDREAU, EMERY
	PALAZZO, MICHAEL A
150	ARSENAULT, ANITA
	BRABANT, RONALD
158	BOISVERT, DENNIS
160	CHASE, TIMOTHY J
190	KOMENCHUK, STEVEN W
194	FARNSWORTH, P G
	RAY, THOMAS
196	CARROLL, FRANCIS X
197	KIESINGER, RICHARD P
198	THIBODEAU, DICK
199	FOLEY, JOHN P
200	KOMENCHUK, STEVEN W
201	MCDONALD, R
202	JOYCE, MICHAEL A
	RIDEOUT, KENNETH
203	PECK, THOMAS F
204	MELKONIAN, MARK
206	HOENIG, GAIL
	TOCE, MELISSA
207	LEONARD, C E
209	KARAPATAS, A
210	HUNTER, JAMES
221	BUZZELL, ANNE R
278	HUNTER, JAMES I
280	DONEGAN, K
282	HAYES, JOHN H
285	DURFEE, WILLIAM
286	CREETH, JOHN
287	ANDERSON, ELLEN F
289	STAVROPOULOS, JAMES
290	SPINNEY, GEORGE F
291	MANINOS, ELAINE B
292	DONOVAN, KATIE
293	CURTIN, PAUL J
294	DURANTE, ARTHUR

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2000 (Cont'd)

296	TOWNSEND, CARL F
298	CURLEW, SUSAN A
	KILROY, MARY E
	STAVROPOLOUS, CYNTHIA
300	BALLIRO, JOSEPH
	BERUBE, STEVEN P
302	BROOKS, DOROTHY A
305	BRUCE, CHIP
306	BROOKS, D A
313	SARICH, DAVID A
314	DEPREZ, BERTHA G
317	KREMENEZKY, SUSAN
	SILVESTRI, D
321	WHITNEY, EDWARD C
327	SILVERS, JOHN P
333	GHATE, D H
337	ANDERSON, E
343	MONTEFORTE, GREG
	SCHWARTZ, ANN
	WHITNEY, ANN
344	ELIA, M R
390	CARBONE, ROBERT P
391	REGAN, E
392	SOUSA, EDWARD L
393	BUTLER, CARL
	J & L PAINTING
	LAST, JOHN A
395	DOHERTY, GEORGE
396	BROWN, CHARLES
	HALLETT, R
397	THOMAS-MOORE, GAR N
405	CABRAL, MICHAEL S
409	GAGNON, MICHAEL
437	TORRI, ROBERT
439	DICHIARA, PAUL A
443	FRANK, SUSAN R
455	SHEEHAN, MARY L
457	TROXELL, PAUL E
459	DOERFLER, PAUL E
461	KING, HOWARD
463	GRIFFITH, JERI A
465	BROWN, LESLIE
469	MURPHY, PHILIP T
471	BOURASSA, ROBERT O
500	BAUMWOLL ROBERT MD
	BRITT MICHAEL MD
	CARSON DANIEL MD
	ELKERM ASHRAF F MD
	HOLY FAMILY HOSPITAL AND MEDICAL CENTER
	SEDER CAROLINE MD

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 2000 (Cont'd)

500	SULLIVAN JOHN MD
	WILMINGTON HEALTH CENTER
	WILMINGTON PEDIATRICS INCORPORATED
	WINCHESTER HOSPITAL FAMILY MEDICAL CENTER
	WOBURN MEDICAL ASSOCIATES IN WILMINGTON
502	HIRSCH, J
506	DURKEE, JAMES J
	ROTHWELL, H V

Target Street	Cross Street	Source
-	✓	Cole Information

BALLARDVALE ST 1995

5	BINKOSKI, SUSAN
	BINKOSKI, THOM
7	KENNEDY, JAS J
17	SCHMIDT EQUIPMENT INC
18	LABELLA, TERI
19	NEVINS, P WHITEHOUSE
20	VINSON, ROBT
25	AMIRAULT, MARK E
31	DOWNS, THOS & DONNA
	FITZPATRICK, WARREN & LYNDA
32	DOUCETTE, MICHAEL
56	DAVIS, E
	GLENDENNING, JOHN M
64	DOYLE, L A
	PYNE, THOS
187	AT VENTURES
	CMG INFORMATION SERVICES
	DATAPAQ INC
	G A BLANCO & SONS INC
	LISTLAB
	LISTLINE
	LITTER D H CO INC
	LUSSIER FINANCIAL GROUP
	MASS COMM YOUTH SERVICE DEPT REGIONAL OFCC
	MASS COMM YOUTH SERVICES DEPT COMMISSIONER & ASST COMMISSION
	PROFESSIONAL SUPPORT INC
	SPAULDING & SLYE
	TRI-LOGIC INC
	WESTON, ROY F INC
193	SULLIVAN MECHANICAL SERVICES INC
195	RITCHIE & SONS INC
197	STANLEY ENGINEERING CO INC
	STANLEY ENGINEERING COMPANY INC
200	4 MILES FINANCIAL SERVICES
	AGFA COMPUGRAPHIC
	AGFA CORPORATION
	AGFA FINANCIAL SERVICES
	AGFA MATRIX
	AGFA PHOTO
	COMPUGRAPHIC CORPORATION
201	JET-COM INC
	JETCOM INC

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 1995

125	RAMSDELL, KENNETH
129	GUEVARA, ANNE
	GUEVARA, JORGE, JR
	THURSTON, JOS & KATHLEEN
130	MAFFEO, JERRY L
132	CALDERWOOD, PAUL
133	JENNINGS, L RANDOLPH
134	KENNEDY, BARBARA E & JOS M
	KENNEDY, JOHN TJ
136	EATON, DONALD C
137	DERVISHIAN, JOHN & PAT
	REID, P
139	FREEMAN, S W
141	CAIZZI, ATTILIO E
	CAIZZI, LAWRENCE J
142	PICANSO, ELEANOR
146	PETERSON, DOUGLAS
	PETERSON, RALPH D
150	ARSENAULT, A
	ARSENAULT, DAVID A
158	BOISVERT, DENNIS
160	BIERSTEDT, R
	CHASE, TIMOTHY J
166	TRUSLOW, ROBERT
194	FARNSWORTH, P G
	RAY, THOMAS & PAM
196	CARROLL, FRANCIS X
197	KIESINGER, RICHARD P
198	THIBODEAU, DICK & DORIS
199	FOLEY, J P
200	KOMENCHUK, S W
201	MCDONALD, JOS
202	PHELPS, COREY & JEAN
204	MELKONIAN, MARK
206	TOCE, G
	TOCE, JENNIFER
207	LEONARD, CLARENCE E
221	BUZZELL, PHILIP
276	DIRUPO, LOUIS & ROBERTA
278	HUNTER, JAS I & KAREN A
282	HAYES, JOHN H
285	DURFEE, WM & PATRICIA
286	CREETH, JOHN
287	ANDERSON, ROBT D
288	KLEYNEN, LOUIS L, JR
290	SPINNEY, GEO F
291	MANINOS, E B
292	DONOVAN, KATIE
293	CURTIN, PAUL J & SANDRA
294	COSMAN, D A

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 1995 (Cont'd)

294	DURANTE, ART & SUE
	DURANTE, ARTHUR
296	TOWNSEND, CARL F
298	CURLEW, SUSAN ANN
	KILROY, MARY E
300	BROOKS, JOHN
305	BRUCE, CHIP
306	BROOKS, JOS
313	SARICH, DAVID A
314	DEPREZ, ALBERT J
317	BRUCE, APRIL
	BRUCE, CHESTER A & JOAN M
321	WHITNEY, EDW C JR & MARY
327	SILVERS, J P
333	FLANAGAN, JOHN & B
337	ANDERSON, BRUCE C
343	MONTEFORTE, GREGORY C & LISA J
	SCHWARTZ, EARLE & ANN
	WHITNEY, ANN
344	ELIA, JOHN J, JR
390	CARBONE, ROBT P, SR
391	REGAN, ELIZABETH
392	SOUSA, EDW L
393	BUTLER, CARL
	J & L PAINTING
	LAST, JOHN A JR & LYNDA
395	DOHERTY, MARY & GEORGE
396	GRIFFIN, J KENNETH
397	THOMAS-MOORE, G N & M M
409	GAGNON, MICHAEL & CORINNA
437	SALOMAN, PETER L
439	DICHIARA, PAUL A
457	ROLLINS COMPANY THE
459	DOERFLER, PAUL E & BETTY J
461	WILLIS, DEBRA
463	ROUILLARD, DAVID
	ROUILLARD, PAUL
465	BROWN, LESLIE
467	DESFORGE, JOHN
469	MURPHY, PHILIP T
471	BOURASSA, E
500	ANDREW, SARAH, MD
	BOTCHAN, PETER M, MD
	BRITT, MICHAEL R, MD
	BRITT, MICHAEL, MD
	CARRIGAN, JOHN L, MD
	CARRIGAN, JOHN, MD
	CARSON, DANIEL, MD
	MIRZAI, RAY
	RUBRAKE, SHARON, MD

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 1995 (Cont'd)

500	RUBREAK, SHARON, MD
	SEDER, CAROLINE, MD
	STEPHENS, SANDY, MD
	VISIT NURSE AND HEALTH CARE
	WILMINGTON HEALTH CENTER
	WILMINGTON INTERNISTS
	WILMINGTON INTERNISTS INC
	WILMINGTON PEDIATRICS INC
502	HIRSCH, J
506	DURKEE, JAS J
	DURKEE, JUDITH

Target Street	Cross Street	Source
-	✓	Cole Information

BALLARDVALE ST 1992

3	MCEWEN, SHEILA
5	BINKOSKI, SUSAN
	BINKOSKI, THOM
7	KENNEDY, JAS J
18	LABELLA, TERI
19	NEVINS, P WHITEHOUSE
20	DEVINE, P
	VINSON, ROBT
31	DOWNS, THOS & DONNA
	FITZPATRICK, WARREN & LYNDA
32	DOUCETTE, MICHAEL
56	DAVIS, E
	MCVICKER, CLIVA C, III
64	PARSONS, ALLEN
187	AKZO FIBERS INC
	BALLARDVALE PARK II
	CMG INFORMATION SERVICES
	DATAPAQ INC
	GALVIN, VINCENT, LWYR
	HYPHEN INCORPORATED
	INTELOGIC TRACE MARION GROUP
	K & C SYSTEMS
	LISTLAB
	LISTLINE
	LITTERD H CO INC
	MASS COMM YOUTH SERVICE DEPT REGIONAL OFC
	MASS COMM YOUTH SERVICES DEPT COMMISSIONER & ASST COMMISSION
	NUS CORPORATION WASTE MANAGEMENT SERVICES GROUP
	OLYMPUS CORP
	PROFESSIONAL SUPPORT INC
	SCRIPT RESOURCES
	SIEMENS-SIEMENS ENERGY & AUTOMATION IN
	STANDARD BUSINESS FORMS DIVISION OF K & C SYSTEMS
	SYMPATEX
	TRI-LOGIC INC
193	EAGLE FLOORS INC
195	RITCHIE & SONS INC
197	BIOTECH ENGINEERING INC
	STANLEY ENGINEERING
	STANLEY ENGINEERING CO INC
200	AGFA COMPUGRAPHIC
	AGFA CORPORATION
	AGFA FINANCIAL SERVICES
	AGFA MATRIX
	AGFA PHOTO
	COMPUGRAPHIC CORPORATION
201	JET-COM INC
	JETCOM INC
	RATIONAL SOLUTIONS

Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 1992

125	RAMSDELL, KENNETH
129	THURSTON, JOS & KATHLEEN
130	MAFFEO, JERRY L
133	JENNINGS, L RANDOLPH
134	KENNEDY, BARBARA E & JOS M
136	EATON, DONALD C
137	DERVISHIAN, JOHN & PAT
	REID, P
139	FREEMAN, S W
141	CAIZZI, LAWRENCE J
142	PICANSO, ELEANOR
146	PETERSON, DOUGLAS B
150	ARSENAULT, A
	ARSENAULT, DAVID A
	CARROLL, ROBT
158	BOISVERT, DENNIS
160	GOODRICH, PETER
166	TRUSLOW, ROBERT
194	FARNSWORTH, P G
	RISSER, M B
196	CARROLL, FRANCIS X
197	KIESINGER, RICHARD P
199	FOLEY, J P
200	KOMENCHUK, S W
201	MCDONALD, JOS
202	PHELPS, COREY & JEAN
204	MELKONIAN, MARK
205	CANTWELL, LAURA & BRIAN
	CANTWELL, SUSAN
206	TOCE, G
	TOCE, JENNIFER
207	LEONARD, CLARENCE E
221	BUZZELL, PHILIP
276	DIRUPO, LOUIS & ROBERTA
278	HUNTER, JAS I & KAREN A
282	HAYES, JOHN H
285	DURFEE, WM & PATRICIA
286	ALTOBELLI, DAVID DR & ROSEMARY
287	ANDERSON, ROBT D
288	KLEYNEN, LOUIS L, JR
290	SPINNEY, GEO F
291	MANINOS, E B
293	CURTIN, PAUL J & SANDRA
294	COSMAN, D A
	DURANTE, ART & SUE
	DURANTE, ARTHUR
296	TOWNSEND, CARL F
298	KILROY, MARY E
300	BROOKS, JOHN
305	HANDRAHAN, JOS J

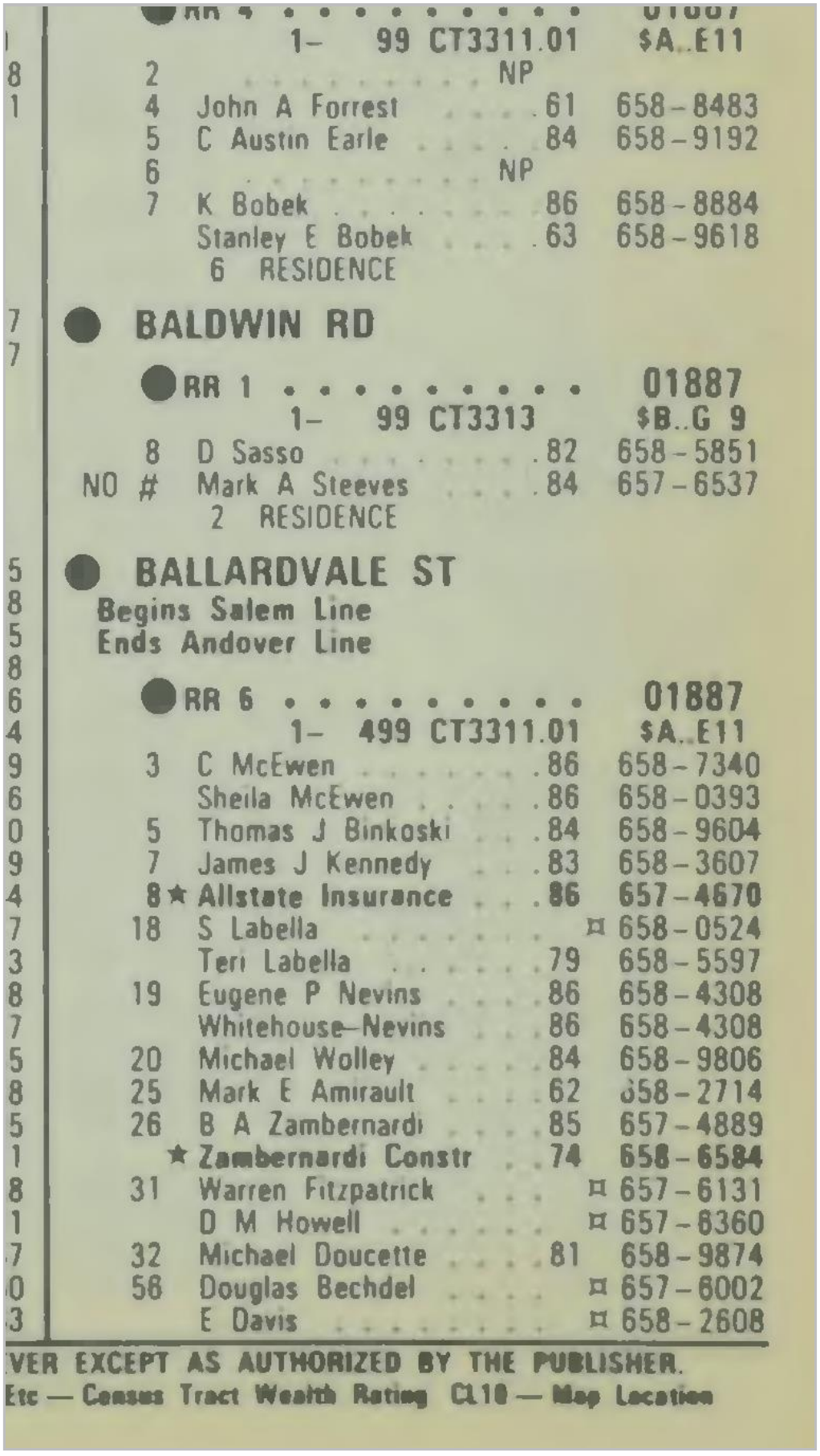
Target Street	Cross Street	Source
✓	-	Cole Information

SALEM ST 1992 (Cont'd)

306	BROOKS, JOS
313	SARICH, DAVID A
314	DEPREZ, ALBERT J
317	BRUCE, CHESTER A & JOAN M
321	WHITNEY, EDW C JR & MARY
327	SILVERS, J P
337	ANDERSON, BRUCE C
343	WHITNEY, ANN
344	ELIA, JOHN J, JR
390	CARBONE, ROBT P, SR
391	REGAN, ELIZABETH
392	LASER'S EDGE
	SOUSA, EDW L
393	BUTLER, CARL
	J & L PAINTING
	LAST, JOHN A JR & LYNDA
395	DOHERTY, M V
397	THOMAS-MOORE, G N & M M
405	LEAVITT, KENNETH M
437	SALOMAN, PETER L
439	DICHIARA, PAUL A
457	ROLLINS CO THE
	ROLLINS, DAVID L
461	MULRYAN, MICHAEL J
463	GAULDER, KERRY
	ROUILLARD, DAVID
465	CORRENTE, MICHAEL JR & VALERIE
467	DESFORGE, JOHN
469	MURPHY, PHILIP T
471	BOURASSA, E
500	BAUMWOLL, ROBT, MD
	KRESS, ARTHUR, MD
	MYERS JOHN, MD
	SALOMON DAVID, MD
502	HIRSCH, J
506	DURKEE, JAS J
536	DURKEE, LESLIE A

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

BALLARDVALE ST 1989



RR 4 01887
1- 99 CT3311.01 $A..E11

2 NP
4 John A Forrest 61 658-8483
5 C Austin Earle 84 658-9192
6 NP
7 K Bobek 86 658-8884
Stanley E Bobek 63 658-9618
6 RESIDENCE

BALDWIN RD

RR 1 01887
1- 99 CT3313 $B..G 9

8 D Sasso 82 658-5851
NO # Mark A Steeves 84 657-6537
2 RESIDENCE

BALLARDVALE ST

Begins Salem Line
Ends Andover Line

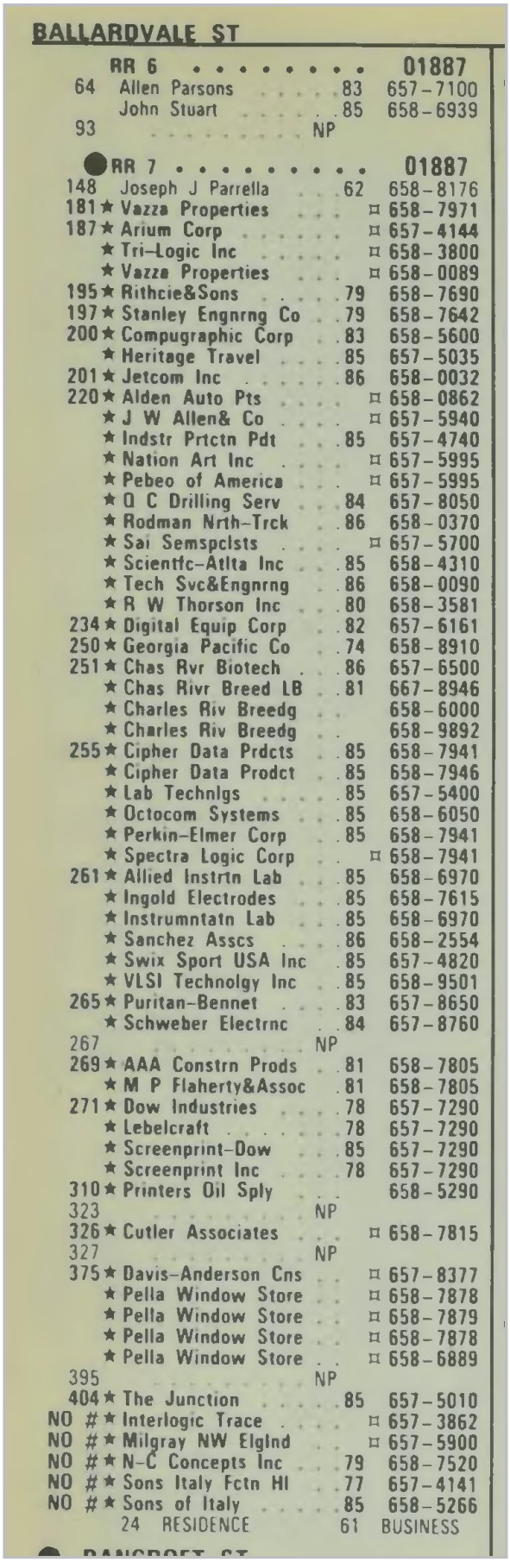
RR 6 01887
1- 499 CT3311.01 $A..E11

3 C McEwen 86 658-7340
Sheila McEwen 86 658-0393
5 Thomas J Binkoski . . . 84 658-9604
7 James J Kennedy . . . 83 658-3607
8★ Allstate Insurance . . . 86 657-4670
18 S Labella . . . . . ¤ 658-0524
Teri Labella 79 658-5597
19 Eugene P Nevins 86 658-4308
Whitehouse-Nevins . . . 86 658-4308
20 Michael Wolley 84 658-9806
25 Mark E Amirault 62 658-2714
26 B A Zambernardi 85 657-4889
★ Zambernardi Constr . . 74 658-6584
31 Warren Fitzpatrick . . . ¤ 657-6131
D M Howell . . . . . ¤ 657-6360
32 Michael Doucette 81 658-9874
58 Douglas Bechdel . . . . ¤ 657-6002
E Davis . . . . . ¤ 658-2608

VER EXCEPT AS AUTHORIZED BY THE PUBLISHER.
Etc — Census Tract Wealth Rating Ct10 — Map Location

Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

BALLARDVALE ST 1989



BALLARDVALE ST

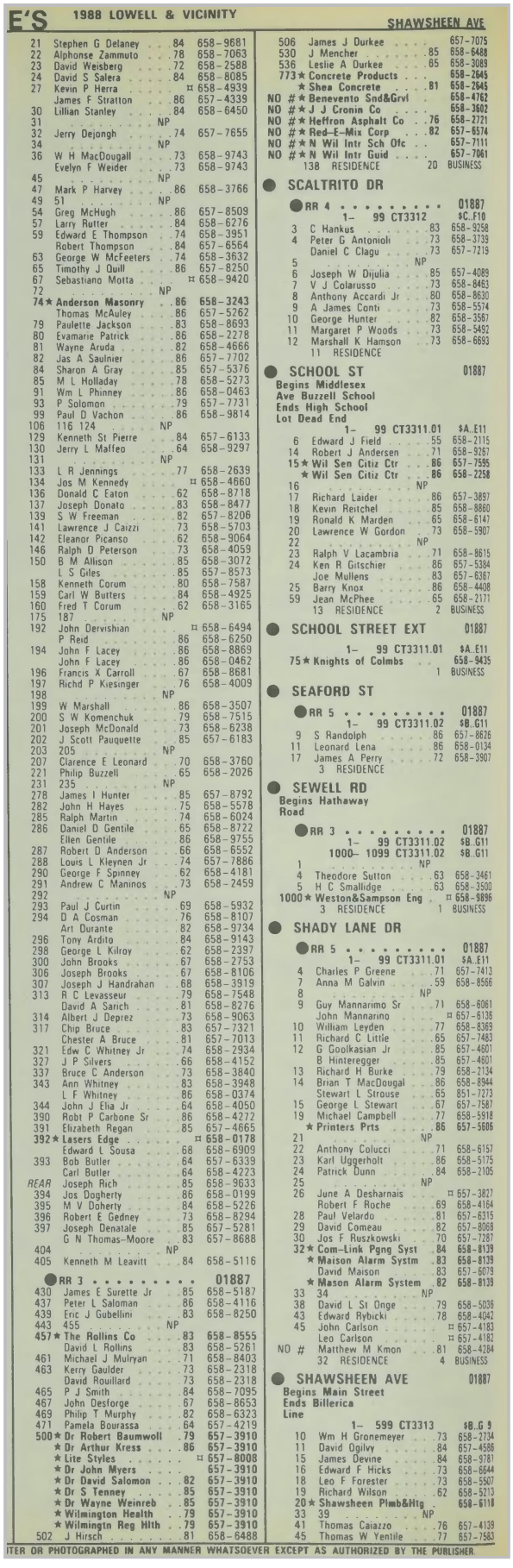
RR 6 01887
64 Allen Parsons 83 657-7100
John Stuart 85 658-6939
93 . . . . . NP

RR 7 01887
148 Joseph J Parrella . . .62 658-8176
181★ Vazza Properties . . . ¤ 658-7971
187★ Arium Corp . . . . . ¤ 657-4144
★ Tri-Logic Inc . . . . . ¤ 658-3800
★ Vazza Properties . . . ¤ 658-0089
195★ Rithcie&Sons 79 658-7690
197★ Stanley Engnrng Co . .79 658-7642
200★ Compugraphic Corp . .83 658-5600
★ Heritage Travel 85 657-5035
201★ Jetcom Inc 86 658-0032
220★ Alden Auto Pts . . . . ¤ 658-0862
★ J W Allen& Co . . . . ¤ 657-5940
★ Indstr Prtctn Pdt . . .85 657-4740
★ Nation Art Inc . . . . ¤ 657-5995
★ Pebeo of America . . . ¤ 657-5995
★ O C Drilling Serv . . .84 657-8050
★ Rodman Nrth-Trck . . .86 658-0370
★ Sai Semspclsts . . . . ¤ 657-5700
★ Scientfc-Atlta Inc . . .85 658-4310
★ Tech Svc&Engnrng . . .86 658-0090
★ R W Thorson Inc . . .80 658-3581
234★ Digital Equip Corp . .82 657-6161
250★ Georgia Pacific Co . .74 658-8910
251★ Chas Rvr Biotech . . .86 657-6500
★ Chas Rivr Breed LB . .81 667-8946
★ Charles Riv Breedg . . 658-6000
★ Charles Riv Breedg . . 658-9892
255★ Cipher Data Prdcts . .85 658-7941
★ Cipher Data Prodct . .85 658-7946
★ Lab Technlgs 85 657-5400
★ Octocom Systems . . .85 658-6050
★ Perkin-Elmer Corp . .85 658-7941
★ Spectra Logic Corp . . ¤ 658-7941
261★ Allied Instrtn Lab . . .85 658-6970
★ Ingold Electrodes . . .85 658-7615
★ Instrumntatn Lab . . .85 658-6970
★ Sanchez Asscs 86 658-2554
★ Swix Sport USA Inc . .85 657-4820
★ VLSI Technolgy Inc . .85 658-9501
265★ Puritan-Bennet 83 657-8650
★ Schweber Electrnc . .84 657-8760
267 . . . . . NP
269★ AAA Constrn Prods . .81 658-7805
★ M P Flaherty&Assoc .81 658-7805
271★ Dow Industries 78 657-7290
★ Lebelcraft 78 657-7290
★ Screenprint-Dow . . .85 657-7290
★ Screenprint Inc 78 657-7290
310★ Printers Oil Sply . . . 658-5290
323 . . . . . NP
326★ Cutler Associates . . . ¤ 658-7815
327 . . . . . NP
375★ Davis-Anderson Cns . . ¤ 657-8377
★ Pella Window Store . . ¤ 658-7878
★ Pella Window Store . . ¤ 658-7879
★ Pella Window Store . . ¤ 658-7878
★ Pella Window Store . . ¤ 658-6889
395 . . . . . NP
404★ The Junction 85 657-5010
NO #★ Interlogic Trace . . . . ¤ 657-3862
NO #★ Milgray NW Elgind . . ¤ 657-5900
NO #★ N-C Concepts Inc . . .79 658-7520
NO #★ Sons Italy Fctn Hl . .77 657-4141
NO #★ Sons of Italy 85 658-5266
24 RESIDENCE 61 BUSINESS

BANCROFT ST

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

SALEM ST 1989



E'S 1988 LOWELL & VICINITY

21 Stephen G Delaney .84 658-9681
22 Alphonse Zammuto .78 658-7063
23 David Weisberg .72 658-2588
24 David S Salera .84 658-8085
27 Kevin P Herra ¤ 658-4939
James F Stratton .86 657-4339
30 Lillian Stanley .84 658-6450
31 NP
32 Jerry Dejongh .74 657-7655
34 NP
36 W H MacDougall .73 658-9743
Evelyn F Weider .73 658-9743
45 NP
47 Mark P Harvey .86 658-3766
49 51 NP
54 Greg McHugh .86 657-8509
57 Larry Rutter .84 658-6276
59 Edward E Thompson .74 658-3951
Robert Thompson .84 657-6564
63 George W McFeeters .74 658-3632
65 Timothy J Quill .86 657-8250
67 Sebastiano Motta ¤ 658-9420
72 NP
74★ **Anderson Masonry .86 658-3243**
Thomas McAuley .86 657-5262
79 Paulette Jackson .83 658-8693
80 Evamarie Patrick .86 658-2278
81 Wayne Aruda .82 658-4666
82 Jas A Saulnier .86 657-7702
84 Sharon A Gray .85 657-5376
85 M L Holladay .78 658-5273
91 Wm L Phinney .86 658-0463
93 P Solomon .79 657-7731
99 Paul D Vachon .86 658-9814
106 116 124 NP
129 Kenneth St Pierre .84 657-6133
130 Jerry L Maffeo .64 658-9297
131 NP
133 L R Jennings .77 658-2639
134 Jos M Kennedy ¤ 658-4660
136 Donald C Eaton .62 658-8718
137 Joseph Donato .83 658-8477
139 S W Freeman .82 657-8206
141 Lawrence J Caizzi .73 658-5703
142 Eleanor Picanso .62 658-9064
146 Ralph D Peterson .73 658-4059
150 B M Allison .85 658-3072
L S Giles .85 657-8573
158 Kenneth Corum .80 658-7587
159 Carl W Butters .84 658-4925
160 Fred T Corum .62 658-3165
175 187 NP
192 John Dervishian ¤ 658-6494
P Reid .86 658-6250
194 John F Lacey .86 658-8869
John F Lacey .86 658-0462
196 Francis X Carroll .67 658-8681
197 Richd P Kiesinger .76 658-4009
198 NP
199 W Marshall .86 658-3507
200 S W Komenchuk .79 658-7515
201 Joseph McDonald .73 658-6238
202 J Scott Pauquette .85 657-6183
203 205 NP
207 Clarence E Leonard .70 658-3760
221 Philip Buzzell .65 658-2026
231 235 NP
278 James I Hunter .85 657-8792
282 John H Hayes .75 658-5578
285 Ralph Martin .74 658-6024
286 Daniel D Gentile .65 658-8722
Ellen Gentile .86 658-9755
287 Robert D Anderson .66 658-6552
288 Louis L Kleynen Jr .74 657-7886
290 George F Spinney .62 658-4181
291 Andrew C Maninos .73 658-2459
292 NP
293 Paul J Curtin .69 658-5932
294 D A Cosman .76 658-8107
Art Durante .82 658-9734
296 Tony Ardito .84 658-9143
298 George L Kilroy .62 658-2397
300 John Brooks .67 658-2753
306 Joseph Brooks .67 658-8106
307 Joseph J Handrahan .68 658-3919
313 R C Levasseur .79 658-7548
David A Sarich .81 658-8276
314 Albert J Deprez .73 658-9063
317 Chip Bruce .83 657-7321
Chester A Bruce .81 657-7013
321 Edw C Whitney Jr .74 658-2934
327 J P Silvers .66 658-4152
337 Bruce C Anderson .73 658-3840
343 Ann Whitney .83 658-3948
L F Whitney .86 658-0374
344 John J Elia Jr .64 658-4050
390 Robt P Carbone Sr .86 658-4272
391 Elizabeth Regan .85 657-4665
392★ **Lasers Edge** ¤ **658-0178**
Edward L Sousa .68 658-6909
393 Bob Butler .64 657-6339
Carl Butler .64 658-4223
REAR Joseph Rich .85 658-9633
394 Jos Dogherty .86 658-0199
395 M V Doherty .84 658-5226
396 Robert E Gedney .73 658-8294
397 Joseph Denatale .85 657-5281
G N Thomas-Moore .83 657-8688
404 NP
405 Kenneth M Leavitt .84 658-5116

RR 3 01887

430 James E Surette Jr .85 658-5187
437 Peter L Saloman .86 658-4116
439 Eric J Gubellini .83 658-8250
443 455 NP
457★ **The Rollins Co .83 658-8555**
David L Rollins .83 658-5261
461 Michael J Mulryan .71 658-8403
463 Kerry Gaulder .73 658-2318
David Rouillard .73 658-2318
465 P J Smith .84 658-7095
467 John Desforge .67 658-8653
469 Philip T Murphy .82 658-6323
471 Pamela Bourassa .64 657-4219
500★ **Dr Robert Baumwoll .79 657-3910**
★ **Dr Arthur Kress .86 657-3910**
★ **Lite Styles** ¤ **657-8008**
★ **Dr John Myers 657-3910**
★ **Dr David Salomon .82 657-3910**
★ **Dr S Tenney .85 657-3910**
★ **Dr Wayne Weinreb .85 657-3910**
★ **Wilmington Health .79 657-3910**
★ **Wilmingtn Reg Hlth .79 657-3910**
502 J Hirsch .81 658-6488

SHAWSHEEN AVE

506 James J Durkee 657-7075
530 J Mencher .85 658-6488
536 Leslie A Durkee .65 658-3089
773★ **Concrete Products 658-2645**
★ **Shea Concrete .81 658-2645**
NO #★ **Benevento Snd&Grvl 658-4762**
NO #★ **J J Cronin Co 658-3602**
NO #★ **Heffron Asphalt Co .76 658-2721**
NO #★ **Red-E-Mix Corp .82 657-6574**
NO #★ **N Wil Intr Sch Ofc 657-7111**
NO #★ **N Wil Intr Guid 657-7061**
138 RESIDENCE 20 BUSINESS

SCALTRITO DR

RR 4 01887
1- 99 CT3312 $C..F10

3 C Hankus .83 658-9258
4 Peter G Antonioli .73 658-3739
Daniel C Clagu .73 657-7219
5 NP
6 Joseph W Dijulia .85 657-4089
7 V J Colarusso .73 658-8463
8 Anthony Accardi Jr .80 658-8630
9 A James Conti .73 658-5574
10 George Hunter .82 658-3567
11 Margaret P Woods .73 658-5492
12 Marshall K Hamson .73 658-6693
11 RESIDENCE

SCHOOL ST 01887

Begins Middlesex Ave Buzzell School
Ends High School
Lot Dead End
1- 99 CT3311.01 $A..E11

6 Edward J Field .55 658-2115
14 Robert J Andersen .71 658-9267
15★ **Wil Sen Citiz Ctr .86 657-7595**
★ **Wil Sen Citiz Ctr .86 658-2258**
16 NP
17 Richard Laider .86 657-3897
18 Kevin Reitchel .85 658-8880
19 Ronald K Marden .65 658-6147
20 Lawrence W Gordon .73 658-5907
22 NP
23 Ralph V Lacambria .71 658-8615
24 Ken R Gitschier .86 657-5384
Joe Mullens .83 657-6367
25 Barry Knox .86 658-4408
59 Jean McPhee .65 658-2171
13 RESIDENCE 2 BUSINESS

SCHOOL STREET EXT 01887

1- 99 CT3311.01 $A..E11
75★ Knights of Colmbs 658-9435
1 BUSINESS

SEAFORD ST

RR 5 01887
1- 99 CT3311.02 $B..G11

9 S Randolph .86 657-8626
11 Leonard Lena .86 658-0134
17 James A Perry .72 658-3907
3 RESIDENCE

SEWELL RD

Begins Hathaway Road

RR 3 01887
1- 99 CT3311.02 $B..G11
1000- 1099 CT3311.02 $B..G11

1 NP
4 Theodore Sutton .63 658-3461
5 H C Smallidge .63 658-3500
1000★ **Weston&Sampson Eng** ¤ **658-9896**
3 RESIDENCE 1 BUSINESS

SHADY LANE DR

RR 5 01887
1- 99 CT3311.01 $A..E11

4 Charles P Greene .71 657-7413
7 Anna M Galvin .59 658-8566
8 NP
9 Guy Mannarimo Sr .71 658-6061
John Mannarino ¤ 657-6138
10 William Leyden .77 658-8369
11 Richard C Little .65 657-7483
12 G Goolkasian Jr .85 657-4601
B Hinteregger .85 657-4601
13 Richard H Burke .79 658-2134
14 Brian T MacDougal .86 658-8944
Stewart L Strouse .65 851-7273
15 George L Stewart .67 657-7587
19 Michael Campbell .77 658-5918
★ **Printers Prts .86 657-5806**
21 NP
22 Anthony Colucci .71 658-6157
23 Karl Uggerholt .86 658-5175
24 Patrick Dunn .84 658-2105
25 NP
26 June A Desharnais ¤ 657-3827
Robert F Roche .69 658-4164
28 Paul Velardo .81 657-6315
29 David Comeau .82 657-8068
30 Jos F Ruszkowski .70 657-7287
32★ **Com-Link Pgng Syst .84 658-8139**
★ **Maison Alarm Systm .83 658-8139**
David Maison .83 657-6079
★ **Mason Alarm System .82 658-8139**
33 34 NP
38 David L St Onge .79 658-5036
43 Edward Rybicki .78 658-4042
45 John Carlson ¤ 657-4183
Leo Carlson ¤ 657-4182
NO # Matthew M Kmon .81 658-4284
32 RESIDENCE 4 BUSINESS

SHAWSHEEN AVE 01887

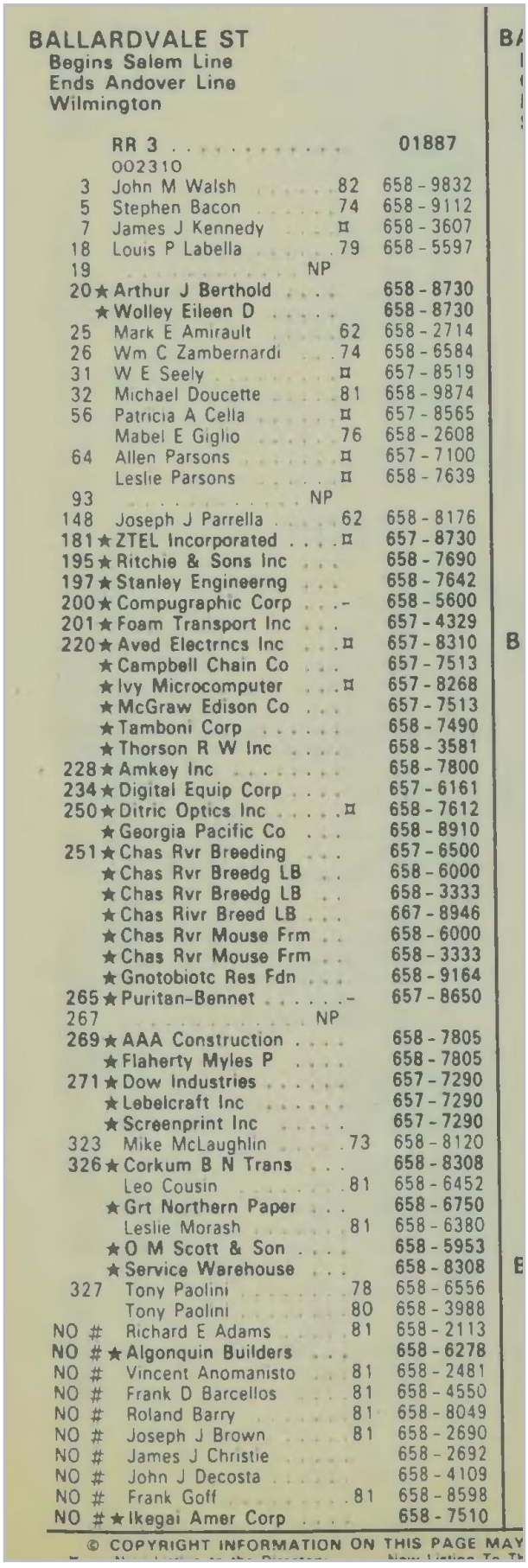
Begins Main Street
Ends Billerica Line
1- 599 CT3313 $B..G 9

10 Wm H Gronemeyer .73 658-2734
11 David Ogilvy .84 657-4586
15 James Devine .84 658-9781
16 Edward F Hicks .73 658-6644
18 Leo F Forester .73 658-5507
19 Richard Wilson .62 658-5213
20★ **Shawsheen Plmb&Htg 658-6110**
33 39 NP
41 Thomas Caiazzo .76 657-4139
45 Thomas W Yentile .77 657-7583

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Target Street	Cross Street	Source
-	✓	Cole Criss-Cross Directory

BALLARDVALE ST 1984



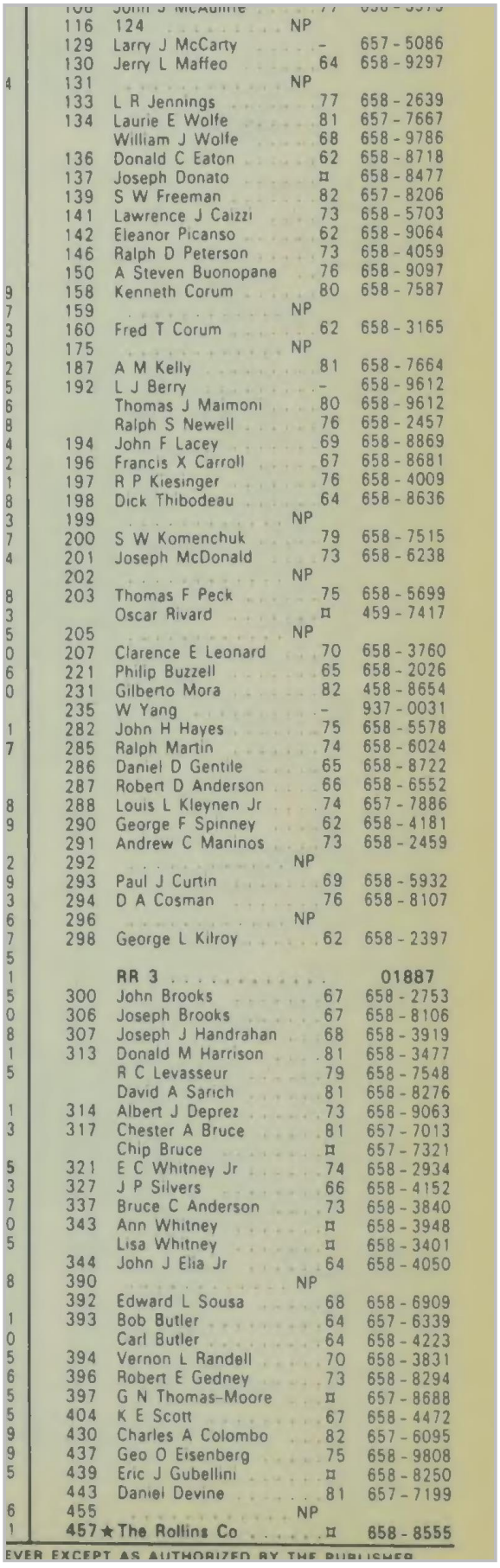
BALLARDVALE ST
Begins Salem Line
Ends Andover Line
Wilmington

RR 3 01887
002310
3 John M Walsh 82 658-9832
5 Stephen Bacon 74 658-9112
7 James J Kennedy . . . ¤ 658-3607
18 Louis P Labella 79 658-5597
19 . . . . . NP
20 ★ Arthur J Berthold 658-8730
★ Wolley Eileen D 658-8730
25 Mark E Amirault 62 658-2714
26 Wm C Zambernardi . . . 74 658-6584
31 W E Seely . . . . . ¤ 657-8519
32 Michael Doucette 81 658-9874
56 Patricia A Cella . . . . . ¤ 657-8565
Mabel E Giglio 76 658-2608
64 Allen Parsons . . . . . ¤ 657-7100
Leslie Parsons . . . . . ¤ 658-7639
93 . . . . . NP
148 Joseph J Parrella 62 658-8176
181 ★ ZTEL Incorporated . . . . ¤ 657-8730
195 ★ Ritchie & Sons Inc . . . 658-7690
197 ★ Stanley Engineerng . . . 658-7642
200 ★ Compugraphic Corp . . . - 658-5600
201 ★ Foam Transport Inc . . . 657-4329
220 ★ Aved Electrncs Inc . . . ¤ 657-8310
★ Campbell Chain Co . . . 657-7513
★ Ivy Microcomputer . . . ¤ 657-8268
★ McGraw Edison Co . . . 657-7513
★ Tamboni Corp 658-7490
★ Thorson R W Inc 658-3581
228 ★ Amkey Inc 658-7800
234 ★ Digital Equip Corp 657-6161
250 ★ Ditric Optics Inc . . . . . ¤ 658-7612
★ Georgia Pacific Co . . . 658-8910
251 ★ Chas Rvr Breeding . . . 657-6500
★ Chas Rvr Breedg LB . . 658-6000
★ Chas Rvr Breedg LB . . 658-3333
★ Chas Rivr Breed LB . . . 667-8946
★ Chas Rvr Mouse Frm . . 658-6000
★ Chas Rvr Mouse Frm . . 658-3333
★ Gnotobiotc Res Fdn . . . 658-9164
265 ★ Puritan-Bennet . . . . . - 657-8650
267 . . . . . NP
269 ★ AAA Construction 658-7805
★ Flaherty Myles P 658-7805
271 ★ Dow Industries 657-7290
★ Lebelcraft Inc 657-7290
★ Screenprint Inc 657-7290
323 Mike McLaughlin 73 658-8120
326 ★ Corkum B N Trans . . . 658-8308
Leo Cousin 81 658-6452
★ Grt Northern Paper . . . 658-6750
Leslie Morash 81 658-6380
★ O M Scott & Son 658-5953
★ Service Warehouse . . . 658-8308
327 Tony Paolini 78 658-6556
Tony Paolini 80 658-3988
NO # Richard E Adams 81 658-2113
NO # ★ Algonquin Builders . . . 658-6278
NO # Vincent Anomanisto . . . 81 658-2481
NO # Frank D Barcellos . . . 81 658-4550
NO # Roland Barry 81 658-8049
NO # Joseph J Brown 81 658-2690
NO # James J Christie 658-2692
NO # John J Decosta 658-4109
NO # Frank Goff 81 658-8598
NO # ★ Ikegai Amer Corp . . . 658-7510

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Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

SALEM ST 1984



	116	124	NP		
	129	Larry J McCarty		-	657 - 5086
	130	Jerry L Maffeo		64	658 - 9297
4	131		NP		
	133	L R Jennings		77	658 - 2639
	134	Laurie E Wolfe		81	657 - 7667
		William J Wolfe		68	658 - 9786
	136	Donald C Eaton		62	658 - 8718
	137	Joseph Donato		¤	658 - 8477
	139	S W Freeman		82	657 - 8206
	141	Lawrence J Caizzi		73	658 - 5703
	142	Eleanor Picanso		62	658 - 9064
	146	Ralph D Peterson		73	658 - 4059
	150	A Steven Buonopane		76	658 - 9097
9	158	Kenneth Corum		80	658 - 7587
7	159		NP		
3	160	Fred T Corum		62	658 - 3165
0	175		NP		
2	187	A M Kelly		81	658 - 7664
5	192	L J Berry		-	658 - 9612
6		Thomas J Maimoni		80	658 - 9612
8		Ralph S Newell		76	658 - 2457
4	194	John F Lacey		69	658 - 8869
2	196	Francis X Carroll		67	658 - 8681
1	197	R P Kiesinger		76	658 - 4009
8	198	Dick Thibodeau		64	658 - 8636
3	199		NP		
7	200	S W Komenchuk		79	658 - 7515
4	201	Joseph McDonald		73	658 - 6238
	202		NP		
8	203	Thomas F Peck		75	658 - 5699
3		Oscar Rivard		¤	459 - 7417
5	205		NP		
0	207	Clarence E Leonard		70	658 - 3760
6	221	Philip Buzzell		65	658 - 2026
0	231	Gilberto Mora		82	458 - 8654
	235	W Yang		-	937 - 0031
1	282	John H Hayes		75	658 - 5578
7	285	Ralph Martin		74	658 - 6024
	286	Daniel D Gentile		65	658 - 8722
	287	Robert D Anderson		66	658 - 6552
8	288	Louis L Kleynen Jr		74	657 - 7886
9	290	George F Spinney		62	658 - 4181
	291	Andrew C Maninos		73	658 - 2459
2	292		NP		
9	293	Paul J Curtin		69	658 - 5932
3	294	D A Cosman		76	658 - 8107
6	296		NP		
7	298	George L Kilroy		62	658 - 2397
5					
1		**RR 3**			**01887**
5	300	John Brooks		67	658 - 2753
0	306	Joseph Brooks		67	658 - 8106
8	307	Joseph J Handrahan		68	658 - 3919
1	313	Donald M Harrison		81	658 - 3477
5		R C Levasseur		79	658 - 7548
		David A Sarich		81	658 - 8276
1	314	Albert J Deprez		73	658 - 9063
3	317	Chester A Bruce		81	657 - 7013
		Chip Bruce		¤	657 - 7321
5	321	E C Whitney Jr		74	658 - 2934
3	327	J P Silvers		66	658 - 4152
7	337	Bruce C Anderson		73	658 - 3840
0	343	Ann Whitney		¤	658 - 3948
5		Lisa Whitney		¤	658 - 3401
	344	John J Elia Jr		64	658 - 4050
8	390		NP		
	392	Edward L Sousa		68	658 - 6909
1	393	Bob Butler		64	657 - 6339
0		Carl Butler		64	658 - 4223
5	394	Vernon L Randell		70	658 - 3831
6	396	Robert E Gedney		73	658 - 8294
5	397	G N Thomas-Moore		¤	657 - 8688
5	404	K E Scott		67	658 - 4472
9	430	Charles A Colombo		82	657 - 6095
9	437	Geo O Eisenberg		75	658 - 9808
5	439	Eric J Gubellini		¤	658 - 8250
	443	Daniel Devine		81	657 - 7199
6	455		NP		
1	457	★ **The Rollins Co**		¤	**658 - 8555**

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[EDR Historical Topo Map Report with QuadMatch™]

Wildwood School @ North Intermediate School

320 Salem Street

Wilmington, MA 01887

Inquiry Number: 8157807.4

October 30, 2025

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

10/30/25

Site Name:

Wildwood School @ North Inte
320 Salem Street
Wilmington, MA 01887
EDR Inquiry # 8157807.4

Client Name:

PEER Consultants
25 Mall Road
Burlington, MA 01803
Contact: Dave Gorden

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by PEER Consultants were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 8593-001

Project: Wildwood @ North Intermediat

Coordinates:

Latitude:	42.578683 42° 34' 43" North
Longitude:	-71.158084 -71° 9' 29" West
UTM Zone:	Zone 19 North
UTM X Meters:	322897.47
UTM Y Meters:	4716287.25
Elevation:	92.97' above sea level

Maps Provided:

2021	1950
2018	1947
2015	1944
2012	1943
1987	1918
1979	1915
1977	1893
1965	1888

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Topo Sheet Key

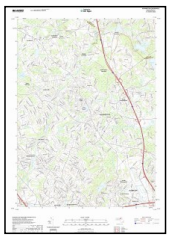
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets



Wilmington
2021
7.5-minute, 24000

2018 Source Sheets



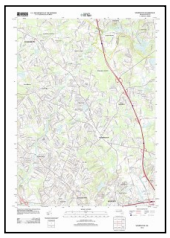
Wilmington
2018
7.5-minute, 24000

2015 Source Sheets



Wilmington
2015
7.5-minute, 24000

2012 Source Sheets



Wilmington
2012
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1987 Source Sheets



Reading
1987
7.5-minute, 25000
Aerial Photo Revised 1978

1979 Source Sheets



Wilmington
1979
7.5-minute, 25000
Aerial Photo Revised 1977

1977 Source Sheets



Wilmington
1977
7.5-minute, 25000
Aerial Photo Revised 1977

1965 Source Sheets



Wilmington
1965
7.5-minute, 24000
Aerial Photo Revised 1939

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1950 Source Sheets



Wilmington
1950
7.5-minute, 24000

1947 Source Sheets



WILMINGTON
1947
7.5-minute, 25000

1944 Source Sheets



Wilmington
1944
7.5-minute, 31680

1943 Source Sheets



Lowell
1943
30-minute, 125000

Topo Sheet Key

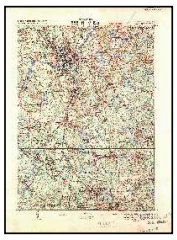
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1918 Source Sheets



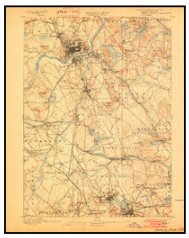
Lawrence
1918
15-minute, 62500

1915 Source Sheets



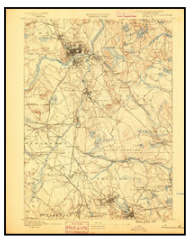
LAWRENCE
1915
15-minute, 62500

1893 Source Sheets



Lawrence
1893
15-minute, 62500

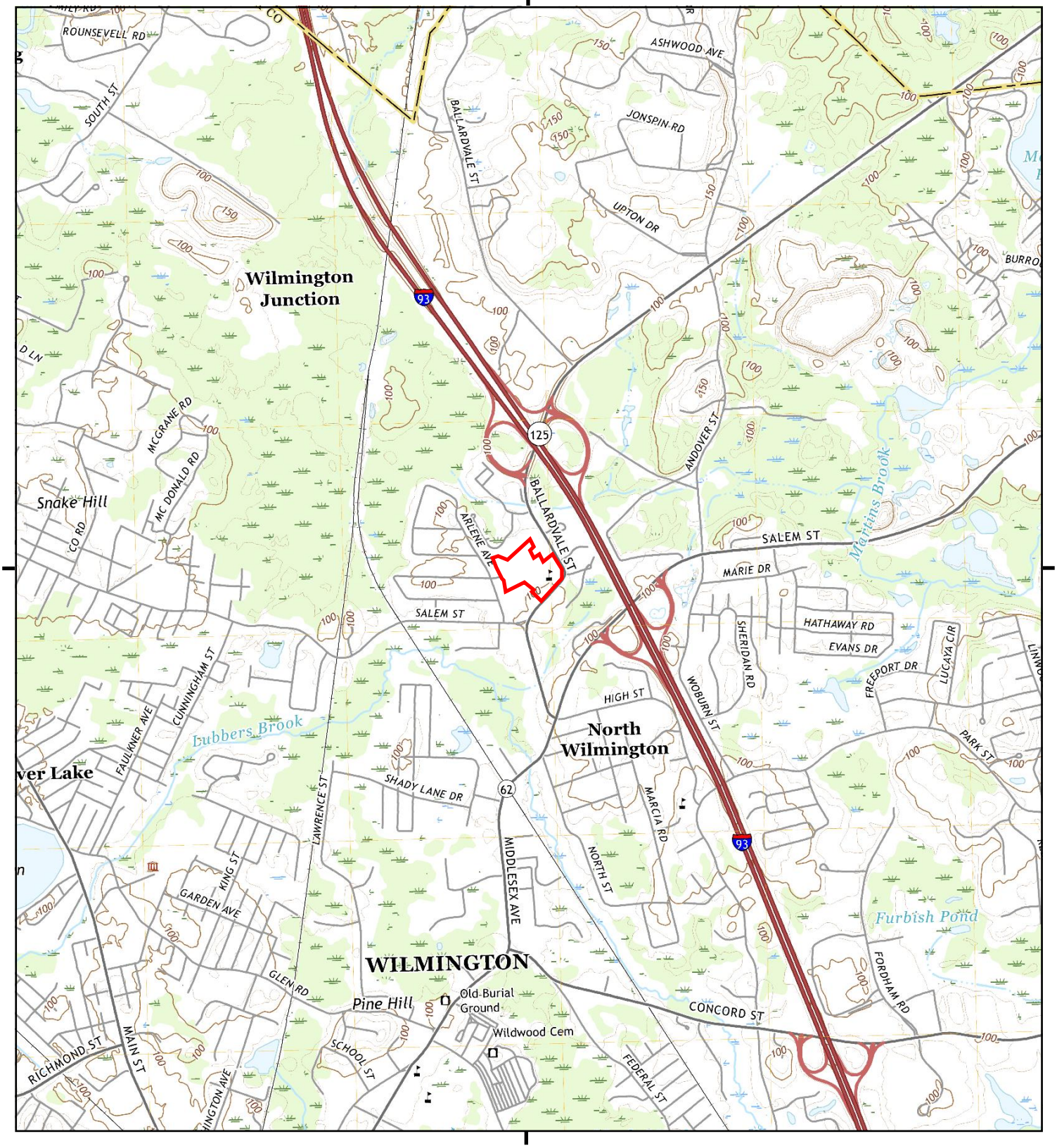
1888 Source Sheets



Lawrence
1888
15-minute, 62500

Historical Topo Map

2021



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NW N NE
W E
SW S SE

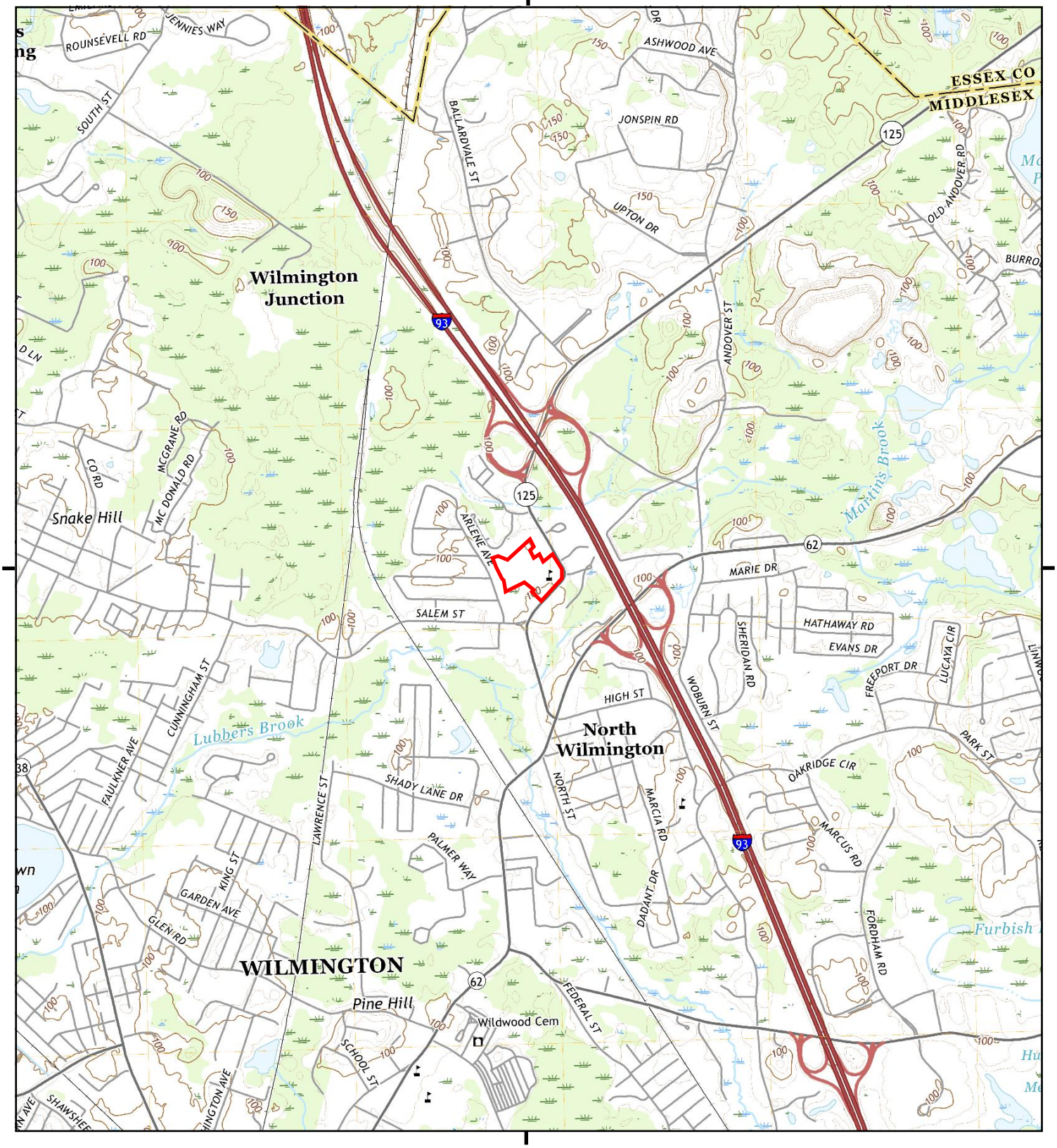
TP, Wilmington, 2021, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N

Historical Topo Map

2018



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W E
SW S SE

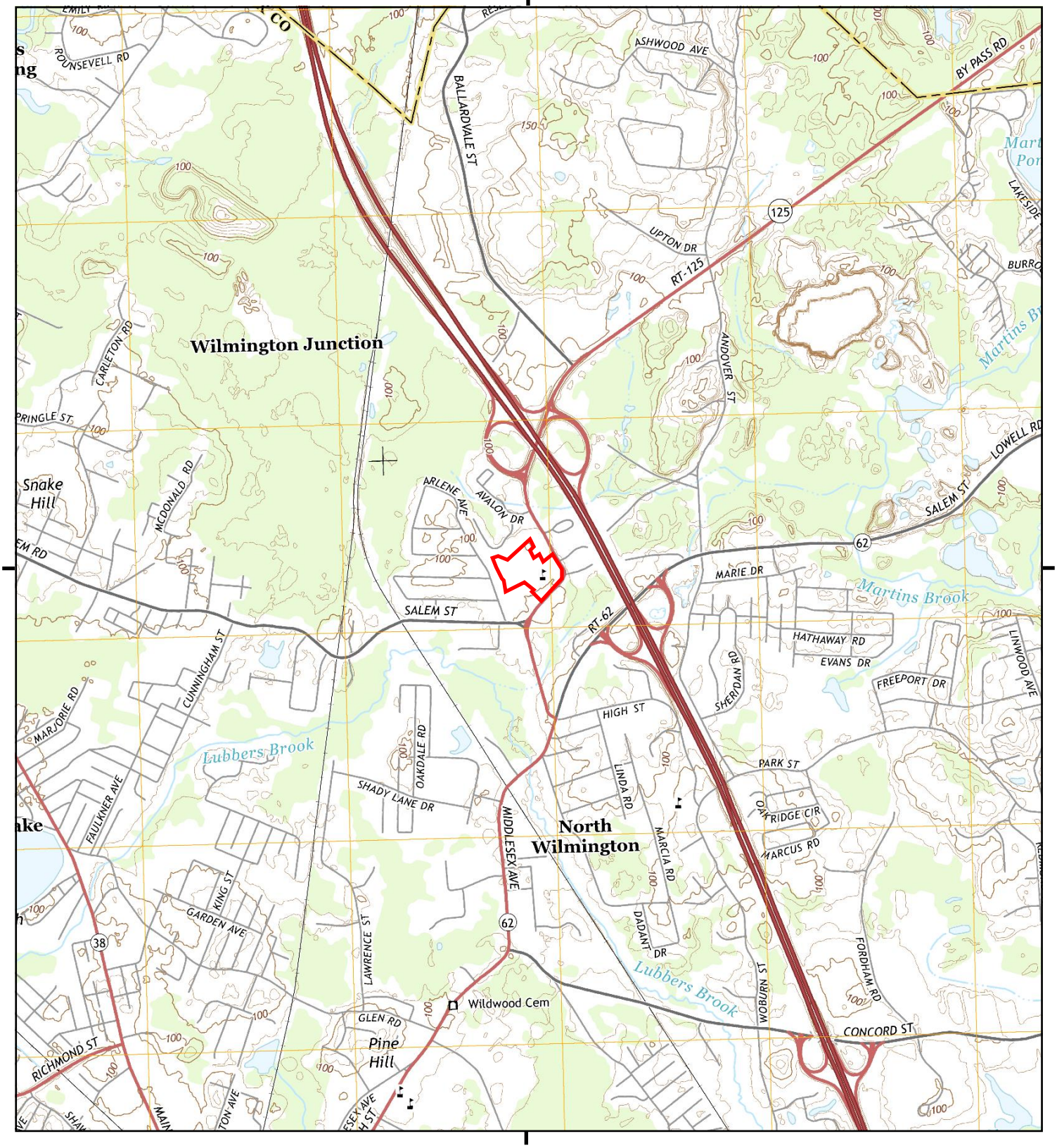
TP, Wilmington, 2018, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N

Historical Topo Map

2015



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W E
SW S SE

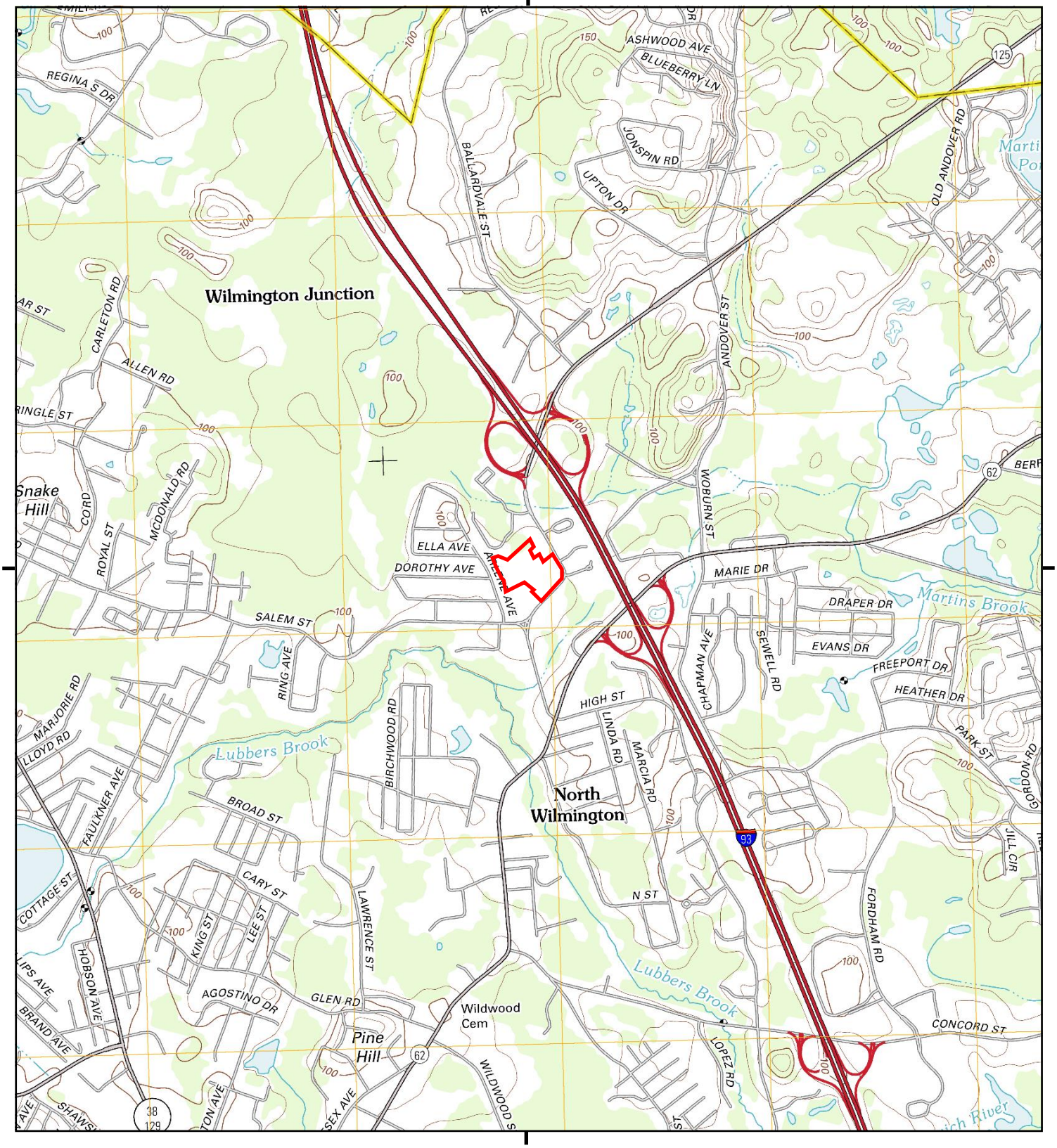
TP, Wilmington, 2015, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N

Historical Topo Map

2012



This report includes information from the following map sheet(s).

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W E
SW S SE

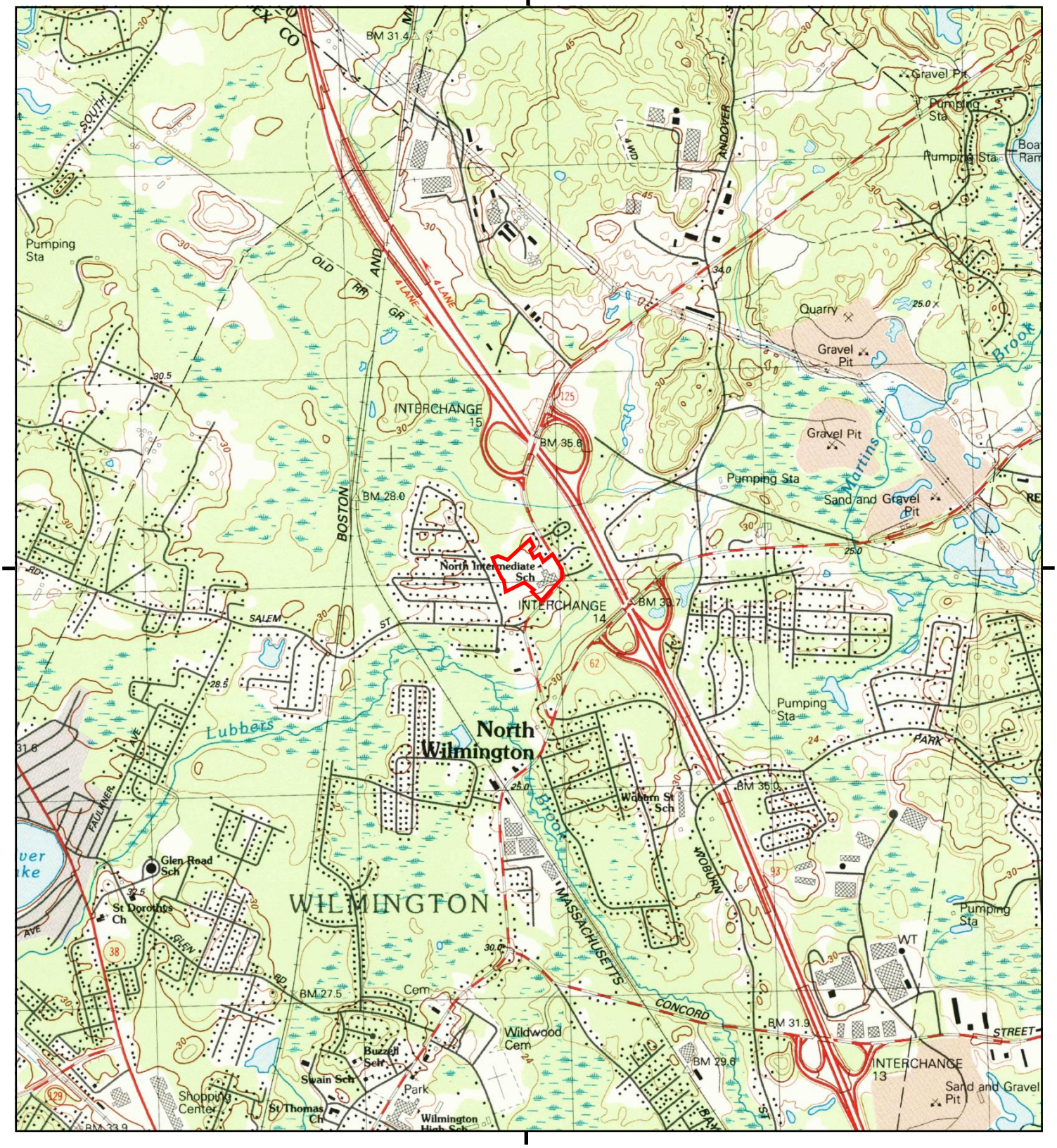
TP, Wilmington, 2012, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

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Historical Topo Map

1987



This report includes information from the following map sheet(s).

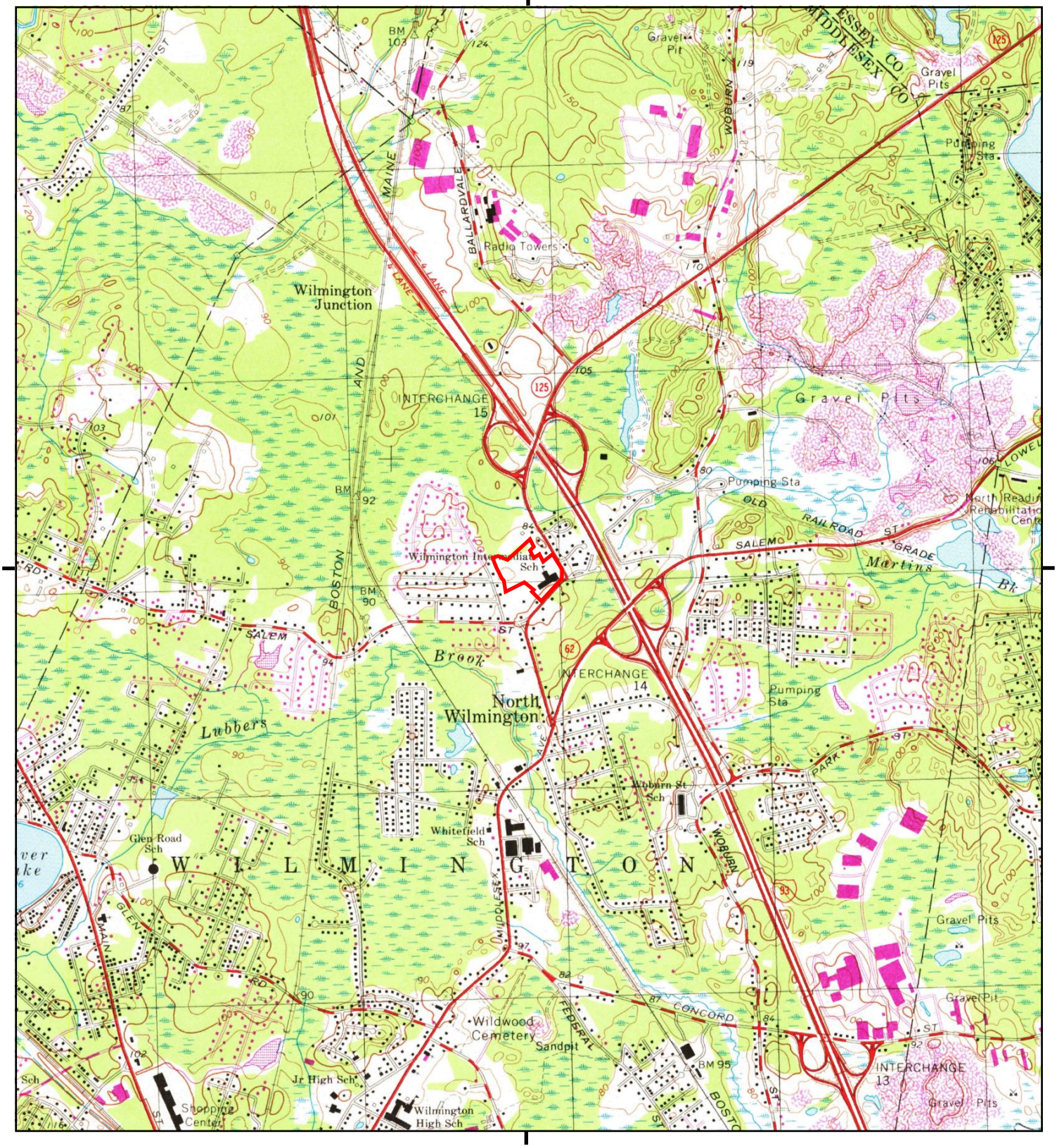
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Reading, 1987, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

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This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Wilmington, 1979, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

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Historical Topo Map

1977



This report includes information from the following map sheet(s).

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W E
SW S SE

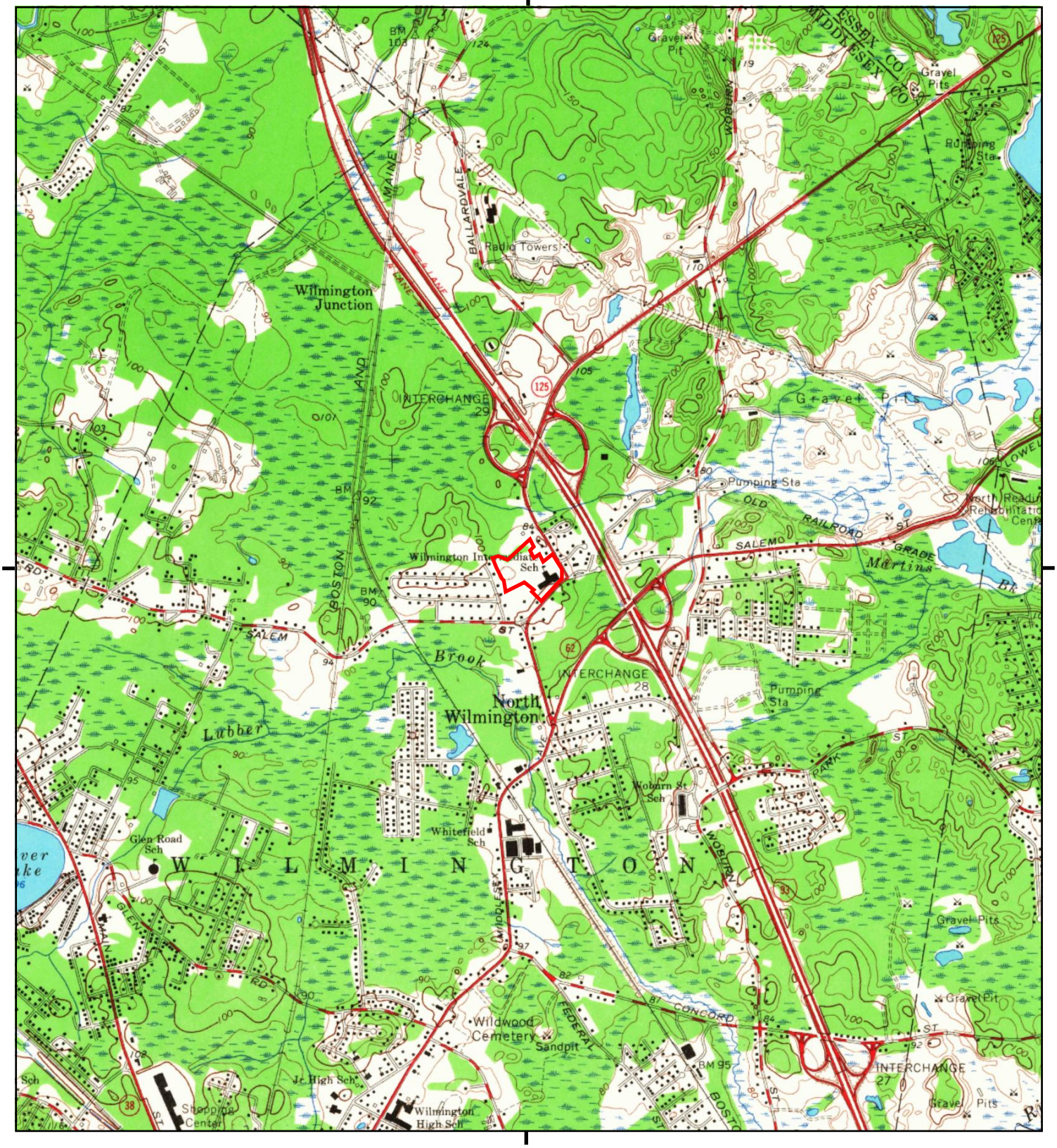
TP, Wilmington, 1977, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N

Historical Topo Map

1965



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Wilmington, 1965, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

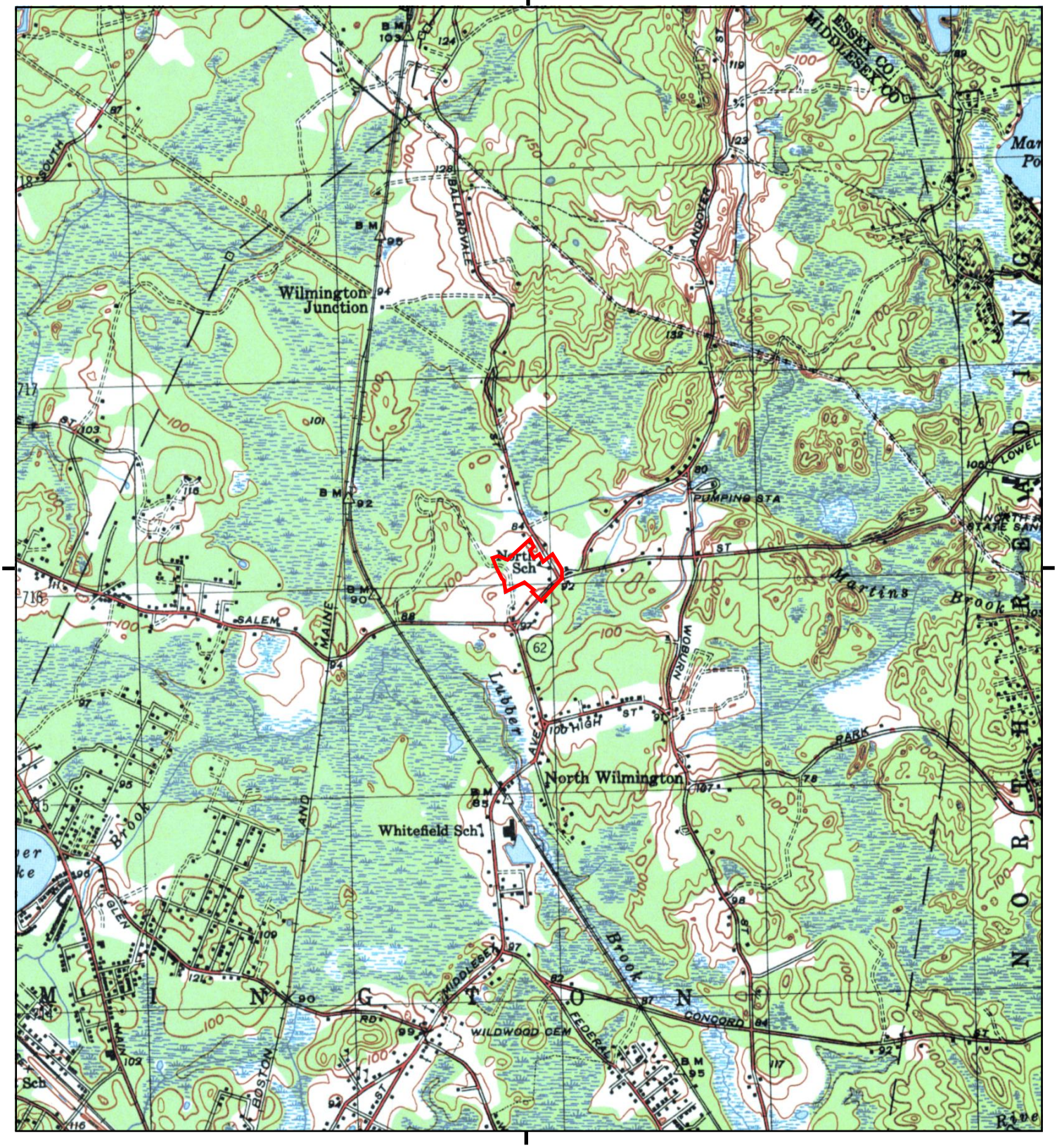
TP, Wilmington, 1950, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N

Historical Topo Map

1947



This report includes information from the following map sheet(s).

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W E
SW S SE

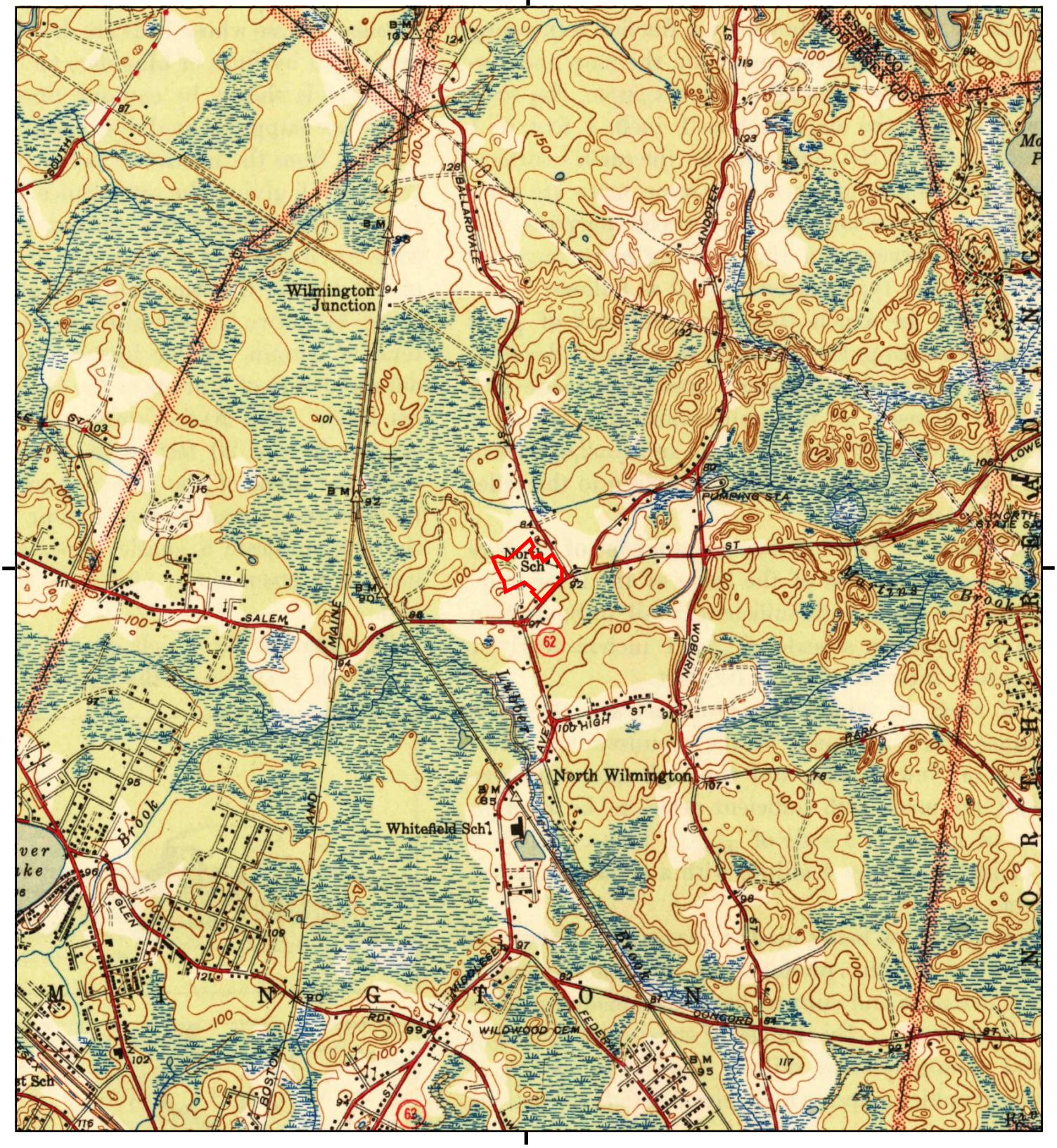
TP, WILMINGTON, 1947, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N

Historical Topo Map

1944



This report includes information from the following map sheet(s).

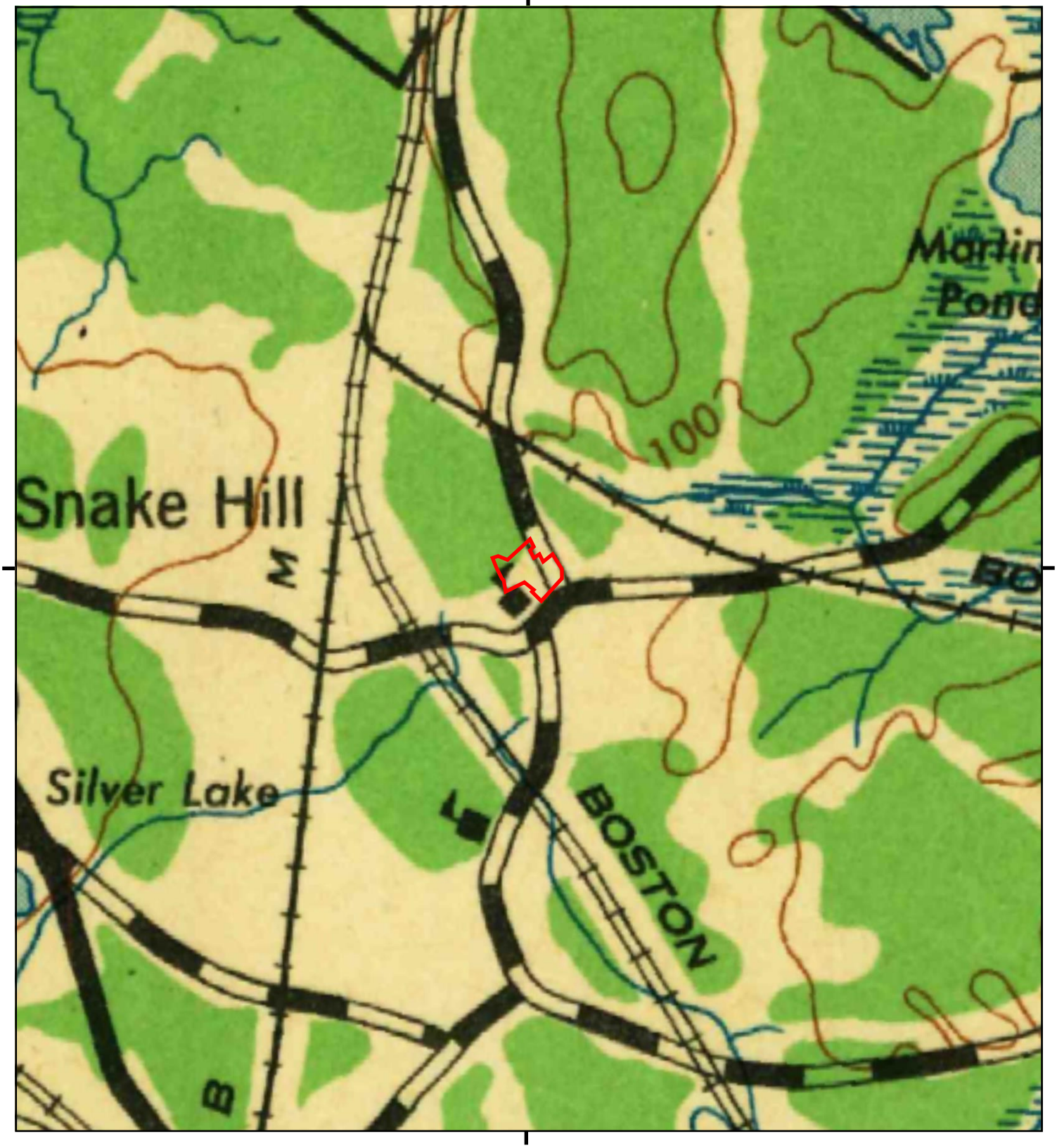
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NW N NE
W E
SW S SE

TP, Wilmington, 1944, 7.5-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N



This report includes information from the following map sheet(s).

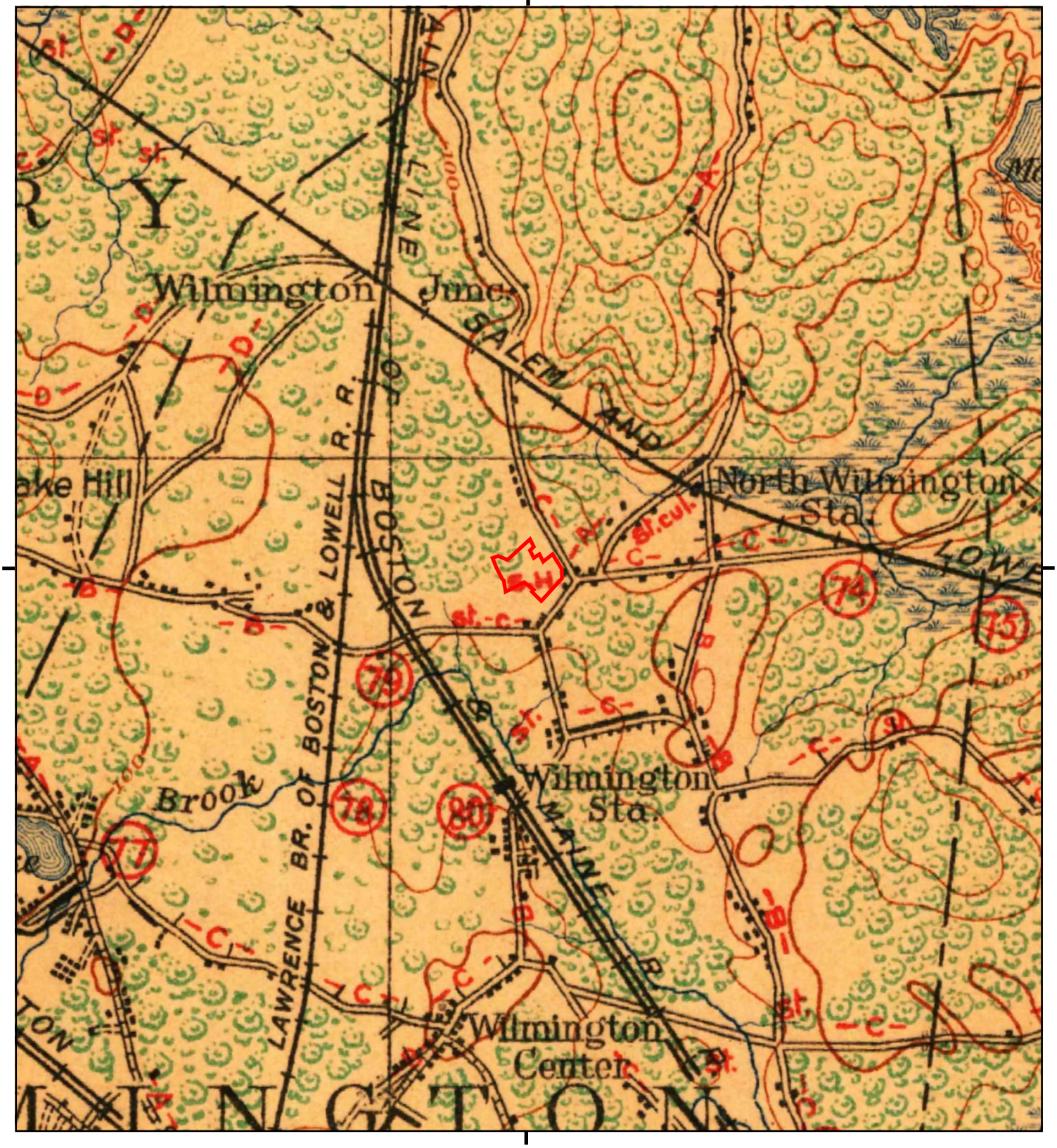
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lowell, 1943, 30-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N



This report includes information from the following map sheet(s).

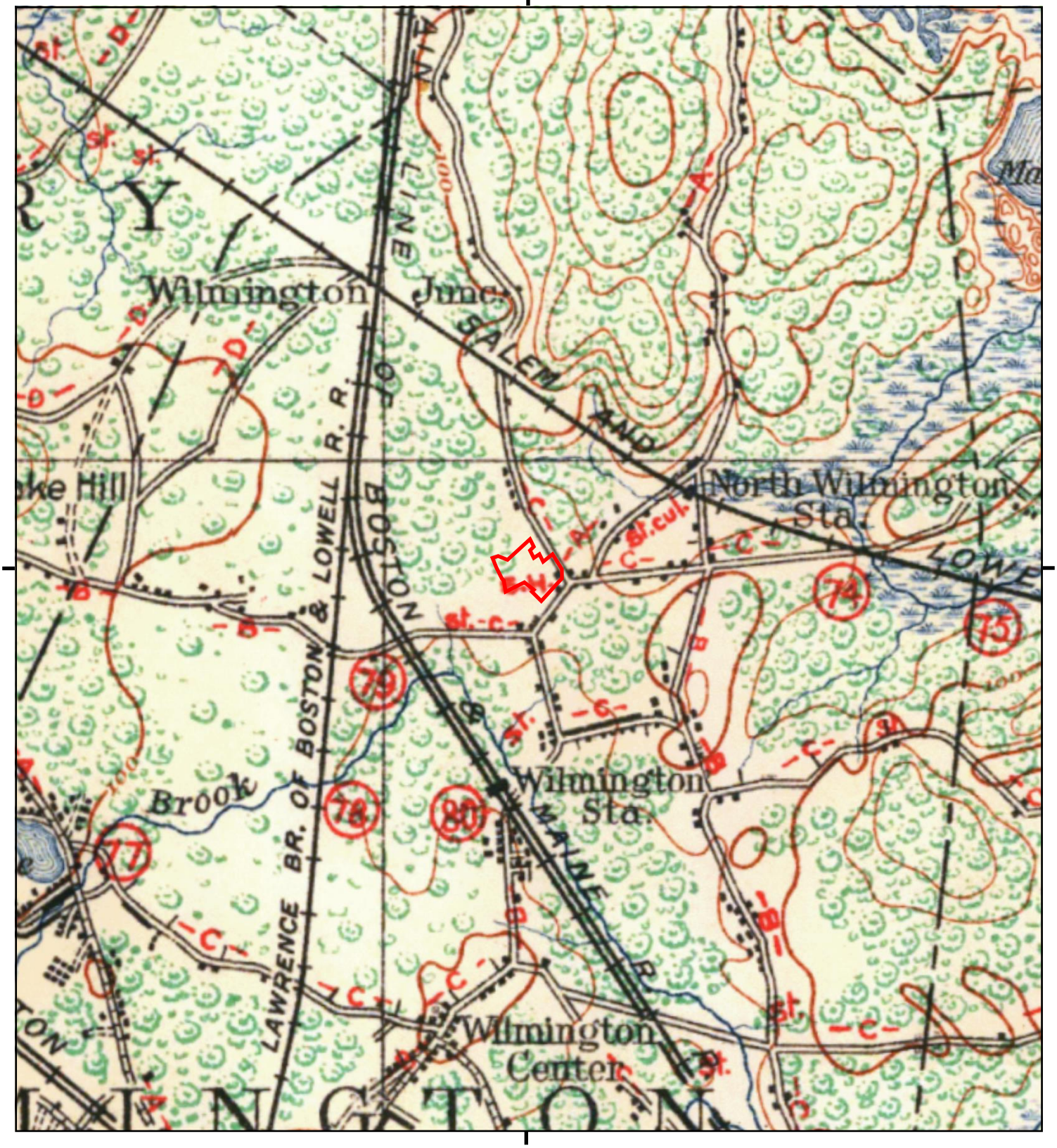
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lawrence, 1918, 15-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N



This report includes information from the following map sheet(s).

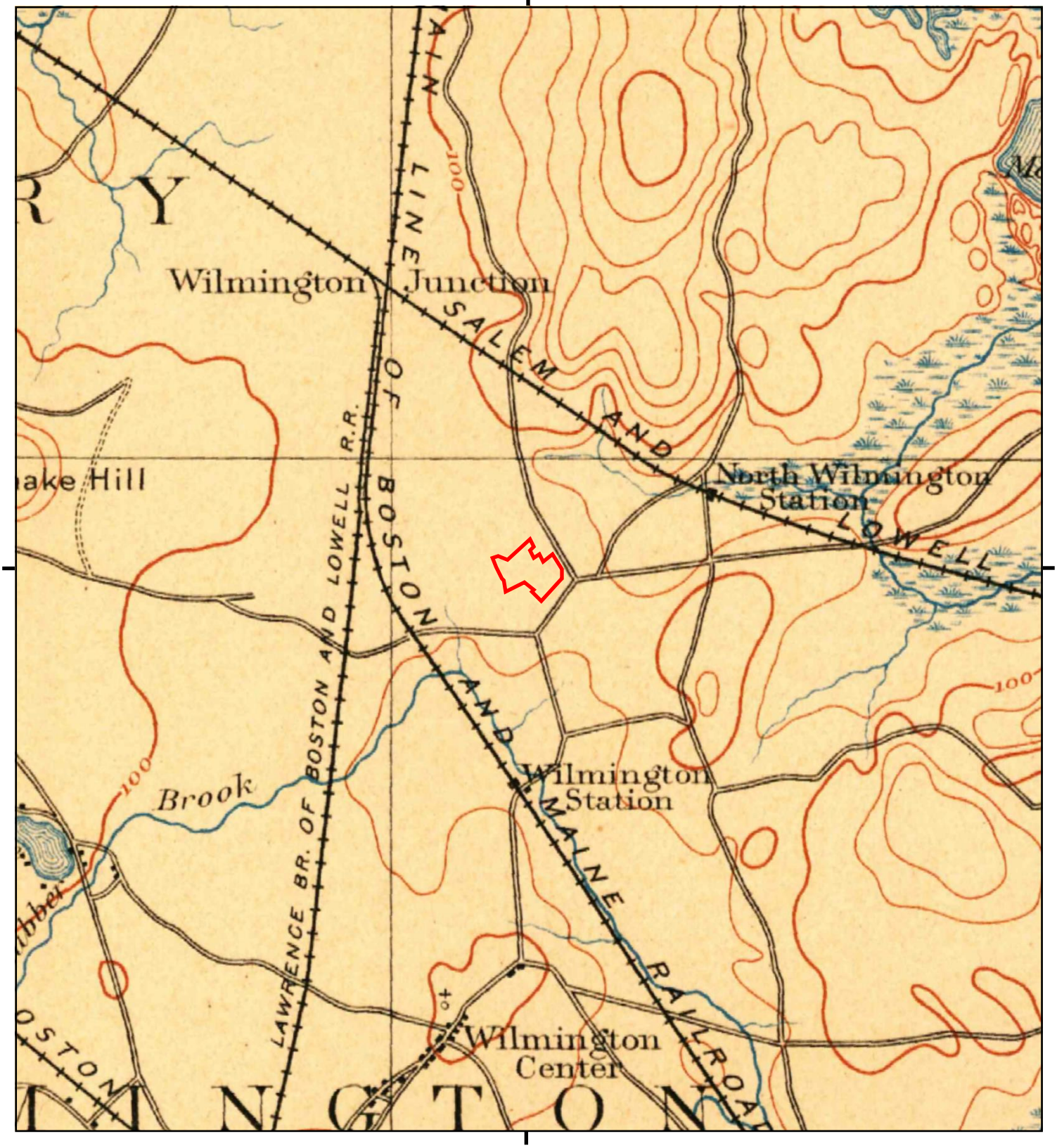
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, LAWRENCE, 1915, 15-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N



This report includes information from the following map sheet(s).

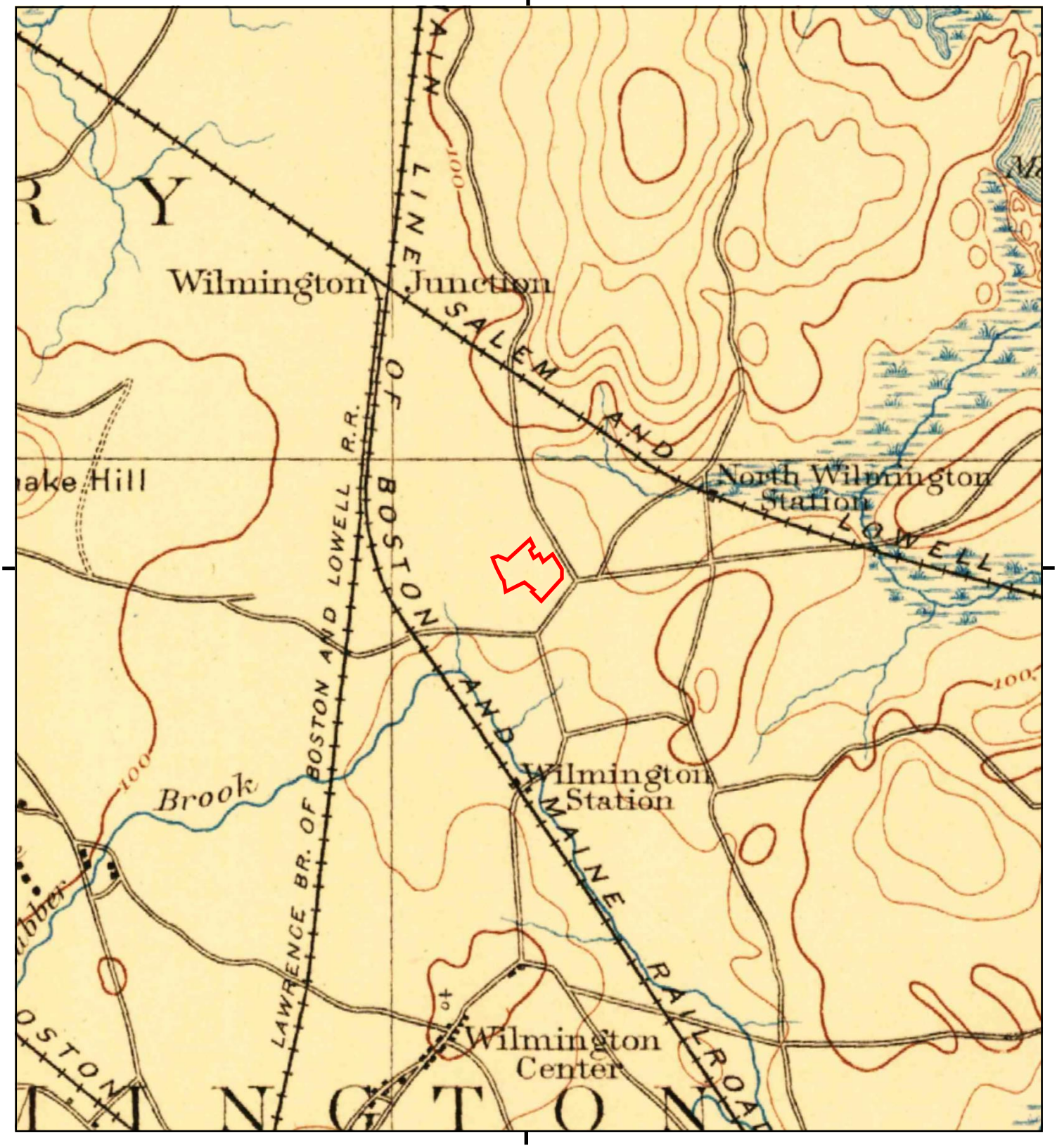
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lawrence, 1893, 15-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lawrence, 1888, 15-minute

SITE NAME: Wildwood School @ North Intermediate S
ADDRESS: 320 Salem Street
Wilmington, MA 01887
CLIENT: PEER Consultants

N

APPENDIX D

The EDR Radius Map™ Report with GeoCheck®

Wildwood School @ North Intermediate School
320 Salem Street
Wilmington, MA 01887

Inquiry Number: 08157807.2r
October 30, 2025

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

LIGHTBOX LIVE

Open LightBox Live to access data, tools, and advanced analytics in one online platform.

http://www.web.edrnet.com/ordering/switchboard/login.aspx?s=goto_lightbox&pguid=B1B60ACD-DADA-4347-8188-A93655270EC2

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	316
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-7
Physical Setting Source Map Findings	A-8
Physical Setting Source Records Searched	PSGR-1

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 23), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

320 SALEM STREET
WILMINGTON, MA 01887

COORDINATES

Latitude (North):	42.5786830 - 42° 34' 43.25''
Longitude (West):	71.1580840 - 71° 9' 29.10''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	322892.5
UTM Y (Meters):	4716073.0
Elevation:	93 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	19020359 WILMINGTON, MA
Version Date:	2021

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20230707
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
320 SALEM STREET
WILMINGTON, MA 01887

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	NORTH INTERMEDIATE S	320 SALEM STREET	MA ASBESTOS		TP
A2	NORTH INTERMEDIATE S	320 SALEM STREET	MA ASBESTOS		TP
A3	NORTH INTERMEDIATE S	320 SALEM STREET	MA ASBESTOS		TP
A4	WILMINGTON SCHOOL	320 SALEM ST.	MA ASBESTOS		TP
A5	NORTH INTERMEDIATE S	320 SALEM STREET	MA ASBESTOS		TP
A6	PUBLIC SCHOOL OF WIL	320 SALEM ST.	MA ASBESTOS		TP
A7	NORTH INTERMEDIAT SC	320 SALEM ST.	MA ASBESTOS		TP
A8	NORTH INTERMEDIATE S	320 SALEM STREET	MA ASBESTOS		TP
A9	NORTH INTERMEDIATE S	320 SALEM ST.	MA ASBESTOS		TP
A10	NORTH INTERMEDIATE S	320 SALEM ST.	MA ASBESTOS		TP
A11	NORTH INTERMEDIAT SC	320 SALEM ST.	MA ASBESTOS		TP
A12	NORTH SCHOOL	320 SALEM ST.	MA ASBESTOS		TP
13	NO INTERMEDIATE SCHO	SALEM ST	MA SPILLS		TP
14	HEFFRON MATERIALS	SALEM ST	MA UST	Higher	14, 0.003, SE
15	SCHMIDT EQUIPMENT IN	17 BALLARDVALE RD	RCRA NonGen / NLR, FINDS, ECHO, RI MANIFEST	Lower	175, 0.033, NE
16	AVALON OAKS APARTMEN	1 AVALON DRIVE	MA SHWS, MA RELEASE	Lower	377, 0.071, NNW
17	BETWEEN RTE 125 AND	I-93 S	MA SHWS, MA RELEASE	Lower	731, 0.138, NE
18	TANKER SPILL	RTE 93 INB TO SALEM	MA SHWS, MA RELEASE	Lower	793, 0.150, East
19	NO LOCATION AID	RTE 93 NORTH AT RTE	MA SHWS, MA RELEASE	Lower	908, 0.172, NE
20	HOMEOWNER	434 MIDDLESEX AVE	MA LUST, MA RELEASE	Higher	1650, 0.312, South
B21	NO LOCATION AID	100 AINSWORTH RD	MA LUST, MA RELEASE	Lower	1732, 0.328, NE
B22	CP MCDONOUGH CONSTRU	100 AINSWORTH RD	MA SHWS, MA LAST, MA RELEASE	Lower	1732, 0.328, NE
23	ROADWAY SPILL	SALEM ST OVER RTE 93	MA SHWS, MA RELEASE	Lower	1913, 0.362, East
24	RESIDENCE	205 SALEM STREET	MA LAST, MA RELEASE	Lower	2097, 0.397, WSW
C25	LUBBER BROOK	382 MIDDLESEX AVE	MA SHWS, MA RELEASE, MA SPILLS, MA DRYCLEANERS	Lower	2587, 0.490, South
C26	COMMERCIAL PROPERTY	382-384 MIDDLESEX AV	MA LUST, MA RELEASE	Lower	2587, 0.490, South
27	VERIZON WIRELESS WIL	200 BALLARDVALE STRE	MA SHWS, MA RELEASE, MA ASBESTOS, MA TIER 2	Higher	2722, 0.516, North
28	NO LOCATION AID	1 SHERIDAN ROAD	MA SHWS, MA LUST, MA RELEASE	Lower	2758, 0.522, ESE
29	VACANT BUILDING	150 BALLARDVALE ST	MA SHWS, MA RELEASE	Higher	2885, 0.546, North
30	COMMERCIAL PROPERTY	362 MIDDLESEX ST	MA SHWS, MA RELEASE	Lower	2995, 0.567, South
D31	NO LOCATION AID	363 MIDDLESEX AVE	MA SHWS, MA RELEASE, MA HW GEN	Lower	3200, 0.606, South
D32	SHELL BRANDED SERVIC	361 MIDDLESEX AVE	MA SHWS, MA RELEASE	Lower	3283, 0.622, South
E33	NO LOCATION AID	500 TO 773 SALEM STR	MA SHWS, MA RELEASE	Lower	3312, 0.627, East
E34	WINCHESTER FAMILY ME	500 SALEM STREET	MA SHWS, MA RELEASE	Lower	3312, 0.627, East
E35	NO LOCATION AID	500 SALEM ST	MA SHWS, MA RELEASE	Lower	3312, 0.627, East
36	RESIDENCE	16 CARSON AVE	MA SHWS, MA LUST, MA RELEASE, MA ENF	Lower	3406, 0.645, ESE
37	NO LOCATION AID	81 HIGH ST	MA SHWS, MA LAST, MA RELEASE, MA ENF	Lower	3410, 0.646, SE
F38	ABIGAIL ISLAND DPW S	135 ANDOVER ST	MA SHWS, MA RELEASE	Lower	3870, 0.733, NE
F39	DPW GARAGE	135 ANDOVER ST	MA SHWS, MA RELEASE	Lower	3870, 0.733, NE

MAPPED SITES SUMMARY

Target Property Address:
320 SALEM STREET
WILMINGTON, MA 01887

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
40	8 WALTHAM STREET	8 WALTHAM ST	MA SHWS, MA INST CONTROL, MA RELEASE, MA ENF	Lower	3871, 0.733, South
41	MCDONALD RD PROPERTY	79 MCDONALD RD	MA SHWS, MA RELEASE, MA ENF	Lower	3964, 0.751, WNW
42	NO LOCATION AID	220 BALLARDVALE ST	MA SHWS, MA RELEASE, MA AIRS	Higher	4156, 0.787, NNW
43	ZELLER & GMELIN	10 UPTON DR	MA SHWS, MA RELEASE, RCRA NonGen / NLR	Higher	4625, 0.876, NNE
44	TRANSFORMER OIL RELE	214 ANDOVER STREET	MA SHWS, MA RELEASE	Higher	4713, 0.893, NNE
45	NO LOCATION AID	77 MACDONALD RD	MA SHWS, MA RELEASE, MA ENF	Higher	4842, 0.917, WNW
46	INDUSTRIAL DEVELOPMN	16 UPTON DR	MA SHWS, MA RELEASE, MA HW GEN	Higher	4846, 0.918, NNE
47	CHARLES RIVER LABORA	251 BALLARDVALE ST	MA SHWS, MA LUST, MA UST, MA RELEASE, MA AIRS, MA...	Higher	4886, 0.925, North
48	NO LOCATION AID	240 BALLARDVALE ST	MA SHWS, MA RELEASE, MA HW GEN, MA TIER 2	Higher	5124, 0.970, North
49	NO LOCATION AID	19 DRAPER DR	MA SHWS, MA RELEASE	Lower	5156, 0.977, East

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
NORTH INTERMEDIATE S 320 SALEM STREET WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIATE S 320 SALEM STREET WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIATE S 320 SALEM STREET WILMINGTON, MA	MA ASBESTOS	N/A
WILMINGTON SCHOOL 320 SALEM ST. WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIATE S 320 SALEM STREET WILMINGTON, MA	MA ASBESTOS	N/A
PUBLIC SCHOOL OF WIL 320 SALEM ST. WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIAT SC 320 SALEM ST. WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIATE S 320 SALEM STREET WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIATE S 320 SALEM ST. WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIATE S 320 SALEM ST. WILMINGTON, MA	MA ASBESTOS	N/A
NORTH INTERMEDIAT SC 320 SALEM ST. WILMINGTON, MA	MA ASBESTOS	N/A

EXECUTIVE SUMMARY

NORTH SCHOOL 320 SALEM ST. WILMINGTON, MA	MA ASBESTOS	N/A
NO INTERMEDIATE SCHO SALEM ST WILMINGTON, MA 01887	MA SPILLS Facility Id: 3-2777 Case Closed: YES Spill ID: N89-1394	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators

RCRA-SQG - RCRA - Small Quantity Generators
RCRA-VSQG - RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS - Land Use Control Information System
US ENG CONTROLS - Engineering Controls Sites List
US INST CONTROLS - Institutional Controls Sites List

Federal ERNS list

ERNS - Emergency Response Notification System

Lists of state and tribal landfills and solid waste disposal facilities

MA SWF/LF - Solid Waste Facility Database/Transfer Stations

Lists of state and tribal leaking storage tanks

INDIAN LUST - Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST - Underground Storage Tank Listing
MA AST - Aboveground Storage Tank Database
INDIAN UST - Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP - Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

MA BROWNFIELDS - Completed Brownfields Covenants Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS - A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI - Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 - Torres Martinez Reservation Illegal Dump Site Locations
ODI - Open Dump Inventory
IHS OPEN DUMPS - Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL - Delisted National Clandestine Laboratory Register
US CDL - National Clandestine Laboratory Register

Local Land Records

MA LIENS - Liens Information Listing

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
MA SPILLS 90	SPILLS 90 data from FirstSearch
MA SPILLS 80	SPILLS 80 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
MINES MRDS	Mineral Resources Data System
ABANDONED MINES	Abandoned Mines
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
FUELS PROGRAM	EPA Fuels Program Registered Listing
PFAS NPL	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES	Federal Sites PFAS Information
PFAS TSCA	PFAS Manufacture and Imports Information
PFAS TRIS	List of PFAS Added to the TRI
PFAS RCRA MANIFEST	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR	PFAS Contamination Site Location Listing
PFAS WQP	Ambient Environmental Sampling for PFAS
PFAS NPDES	Clean Water Act Discharge Monitoring Information
PFAS PROJECT	NORTHEASTERN UNIVERSITY PFAS PROJECT

PFAS ECHO Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAIN Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC Aqueous Foam Related Incidents Listing
BIOSOLIDS ICIS-NPDES Biosolids Facility Data
UST FINDER UST Finder Database
UST FINDER RELEASE UST Finder Releases Database
E MANIFEST Hazardous Waste Electronic Manifest System
MA PFAS PFAS Contaminated Sites Listing
MA GWDP Ground Water Discharge Permits
MA MERCURY Mercury Product Recyling Drop-Off Locations Listing
MA NPDES NPDES Permit Listing
MA TSD TSD Facility
MA UIC Underground Injection Control Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historical Auto Stations
EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

MA RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
MA RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of state- and tribal hazardous waste facilities

MA SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the MA SHWS list, as provided by EDR, and dated 06/30/2025 has revealed that there are 30

EXECUTIVE SUMMARY

MA SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
VERIZON WIRELESS WIL	***200 BALLARDVALE STRE***	***N 1/2 - 1 (0.516 mi.)***	***27***	***59***
Current Status: RAO				
Release Tracking Number: 3-0031804				
VACANT BUILDING	***150 BALLARDVALE ST***	***N 1/2 - 1 (0.546 mi.)***	***29***	***73***
Current Status: RAO				
Release Tracking Number: 3-0027245				
NO LOCATION AID	***220 BALLARDVALE ST***	***NNW 1/2 - 1 (0.787 mi.)***	***42***	***118***
Current Status: RAO				
Release Tracking Number: 3-0015071				
ZELLER & GMELIN	***10 UPTON DR***	***NNE 1/2 - 1 (0.876 mi.)***	***43***	***120***
Current Status: LSPNFA				
Release Tracking Number: 3-0000491				
TRANSFORMER OIL RELE	***214 ANDOVER STREET***	***NNE 1/2 - 1 (0.893 mi.)***	***44***	***125***
Current Status: PSNC				
Release Tracking Number: 3-0034554				
NO LOCATION AID	***77 MACDONALD RD***	***WNW 1/2 - 1 (0.917 mi.)***	***45***	***126***
Current Status: RAO				
Release Tracking Number: 3-0020837				
INDUSTRIAL DEVELOPMN	***16 UPTON DR***	***NNE 1/2 - 1 (0.918 mi.)***	***46***	***133***
Current Status: DPS				
Release Tracking Number: 3-0000056				
CHARLES RIVER LABORA	***251 BALLARDVALE ST***	***N 1/2 - 1 (0.925 mi.)***	***47***	***134***
Current Status: PSNC				
Release Tracking Number: 3-0036843				
NO LOCATION AID	***240 BALLARDVALE ST***	***N 1/2 - 1 (0.970 mi.)***	***48***	***300***
Current Status: RAO				
Release Tracking Number: 3-0016717				

Lower Elevation	Address	Direction / Distance	Map ID	Page
AVALON OAKS APARTMEN	***1 AVALON DRIVE***	***NNW 0 - 1/8 (0.071 mi.)***	***16***	***33***
Current Status: RAO				
Release Tracking Number: 3-0030988				
BETWEEN RTE 125 AND	***I-93 S***	***NE 1/8 - 1/4 (0.138 mi.)***	***17***	***34***
Current Status: RAO				
Release Tracking Number: 3-0024341				
TANKER SPILL	***RTE 93 INB TO SALEM***	***E 1/8 - 1/4 (0.150 mi.)***	***18***	***36***
Current Status: PENNFA				
Release Tracking Number: 3-0001093				
NO LOCATION AID	***RTE 93 NORTH AT RTE***	***NE 1/8 - 1/4 (0.172 mi.)***	***19***	***37***
Current Status: RAO				
Release Tracking Number: 3-0010977				
CP MCDONOUGH CONSTRU	***100 AINSWORTH RD***	***NE 1/4 - 1/2 (0.328 mi.)***	***B22***	***43***
Current Status: RAO				
Release Tracking Number: 3-0003766				
ROADWAY SPILL	***SALEM ST OVER RTE 93***	***E 1/4 - 1/2 (0.362 mi.)***	***23***	***46***
Current Status: DEPNDS				

Release Tracking Number: 3-0001880				
LUBBER BROOK	***382 MIDDLESEX AVE***	***S 1/4 - 1/2 (0.490 mi.)***	***C25***	***55***
Current Status: RAO Release Tracking Number: 3-0015199				
NO LOCATION AID	***1 SHERIDAN ROAD***	***ESE 1/2 - 1 (0.522 mi.)***	***28***	***69***
Current Status: PSNC Release Tracking Number: 3-0034323				
COMMERCIAL PROPERTY	***362 MIDDLESEX ST***	***S 1/2 - 1 (0.567 mi.)***	***30***	***74***
Current Status: LSPNFA Release Tracking Number: 3-0003615				
NO LOCATION AID	***363 MIDDLESEX AVE***	***S 1/2 - 1 (0.606 mi.)***	***D31***	***75***
Current Status: DPS Release Tracking Number: 3-0030079				
SHELL BRANDED SERVIC	***361 MIDDLESEX AVE***	***S 1/2 - 1 (0.622 mi.)***	***D32***	***77***
Current Status: RAO Release Tracking Number: 3-0028069				
NO LOCATION AID	***500 TO 773 SALEM STR***	***E 1/2 - 1 (0.627 mi.)***	***E33***	***79***
Current Status: PSNC Release Tracking Number: 3-0032388				
WINCHESTER FAMILY ME	***500 SALEM STREET***	***E 1/2 - 1 (0.627 mi.)***	***E34***	***81***
Current Status: RAO Release Tracking Number: 3-0031565				
NO LOCATION AID	***500 SALEM ST***	***E 1/2 - 1 (0.627 mi.)***	***E35***	***83***
Current Status: RAO Release Tracking Number: 3-0013037				
RESIDENCE	***16 CARSON AVE***	***ESE 1/2 - 1 (0.645 mi.)***	***36***	***84***
Current Status: PSNC Release Tracking Number: 3-0030148				
NO LOCATION AID	***81 HIGH ST***	***SE 1/2 - 1 (0.646 mi.)***	***37***	***94***
Current Status: PSNC Release Tracking Number: 3-0026750				
ABIGAIL ISLAND DPW S	***135 ANDOVER ST***	***NE 1/2 - 1 (0.733 mi.)***	***F38***	***102***
Current Status: RAO Release Tracking Number: 3-0021979				
DPW GARAGE	***135 ANDOVER ST***	***NE 1/2 - 1 (0.733 mi.)***	***F39***	***103***
Current Status: TMPS Release Tracking Number: 3-0019809				
8 WALTHAM STREET	***8 WALTHAM ST***	***S 1/2 - 1 (0.733 mi.)***	***40***	***108***
Current Status: PSC Release Tracking Number: 3-0031376				
MCDONALD RD PROPERTY	***79 MCDONALD RD***	***WNW 1/2 - 1 (0.751 mi.)***	***41***	***112***
Current Status: RAO Release Tracking Number: 3-0018858				
NO LOCATION AID	***19 DRAPER DR***	***E 1/2 - 1 (0.977 mi.)***	***49***	***313***
Current Status: RAO Release Tracking Number: 3-0026055				

EXECUTIVE SUMMARY

Lists of state and tribal leaking storage tanks

MA LAST: The Leaking Aboveground Storage Tanks database

A review of the MA LAST list, as provided by EDR, and dated 06/30/2025 has revealed that there are 2 MA LAST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CP MCDONOUGH CONSTRU	***100 AINSWORTH RD***	***NE 1/4 - 1/2 (0.328 mi.)***	***B22***	***43***
Release Tracking Number / Current Status: 3-0003766 / RAO				
RESIDENCE	***205 SALEM STREET***	***WSW 1/4 - 1/2 (0.397 mi.)***	***24***	***47***
Release Tracking Number / Current Status: 3-0029605 / RAO				

MA LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the MA LUST list, as provided by EDR, and dated 06/30/2025 has revealed that there are 3 MA LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOMEOWNER	***434 MIDDLESEX AVE***	***S 1/4 - 1/2 (0.312 mi.)***	***20***	***38***
Release Tracking Number / Current Status: 3-0026129 / RAO				

Lower Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID	***100 AINSWORTH RD***	***NE 1/4 - 1/2 (0.328 mi.)***	***B21***	***41***
Release Tracking Number / Current Status: 3-0022652 / RAO				
COMMERCIAL PROPERTY	***382-384 MIDDLESEX AV***	***S 1/4 - 1/2 (0.490 mi.)***	***C26***	***56***
Release Tracking Number / Current Status: 3-0004773 / RAO				

Lists of state and tribal registered storage tanks

MA UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the MA UST list, as provided by EDR, and dated 10/07/2025 has revealed that there is 1 MA UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HEFFRON MATERIALS	SALEM ST	SE 0 - 1/8 (0.003 mi.)	14	23
Tank Status: Tank Removed				
Facility Id: 11408				

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/02/2025 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SCHMIDT EQUIPMENT IN	***17 BALLARDVALE RD***	***NE 0 - 1/8 (0.033 mi.)***	***15***	***25***
EPA ID:: MAD981070451				

RI MANIFEST: Hazardous waste manifest information

A review of the RI MANIFEST list, as provided by EDR, and dated 12/31/2020 has revealed that there is 1 RI MANIFEST site within approximately 0.25 miles of the target property.

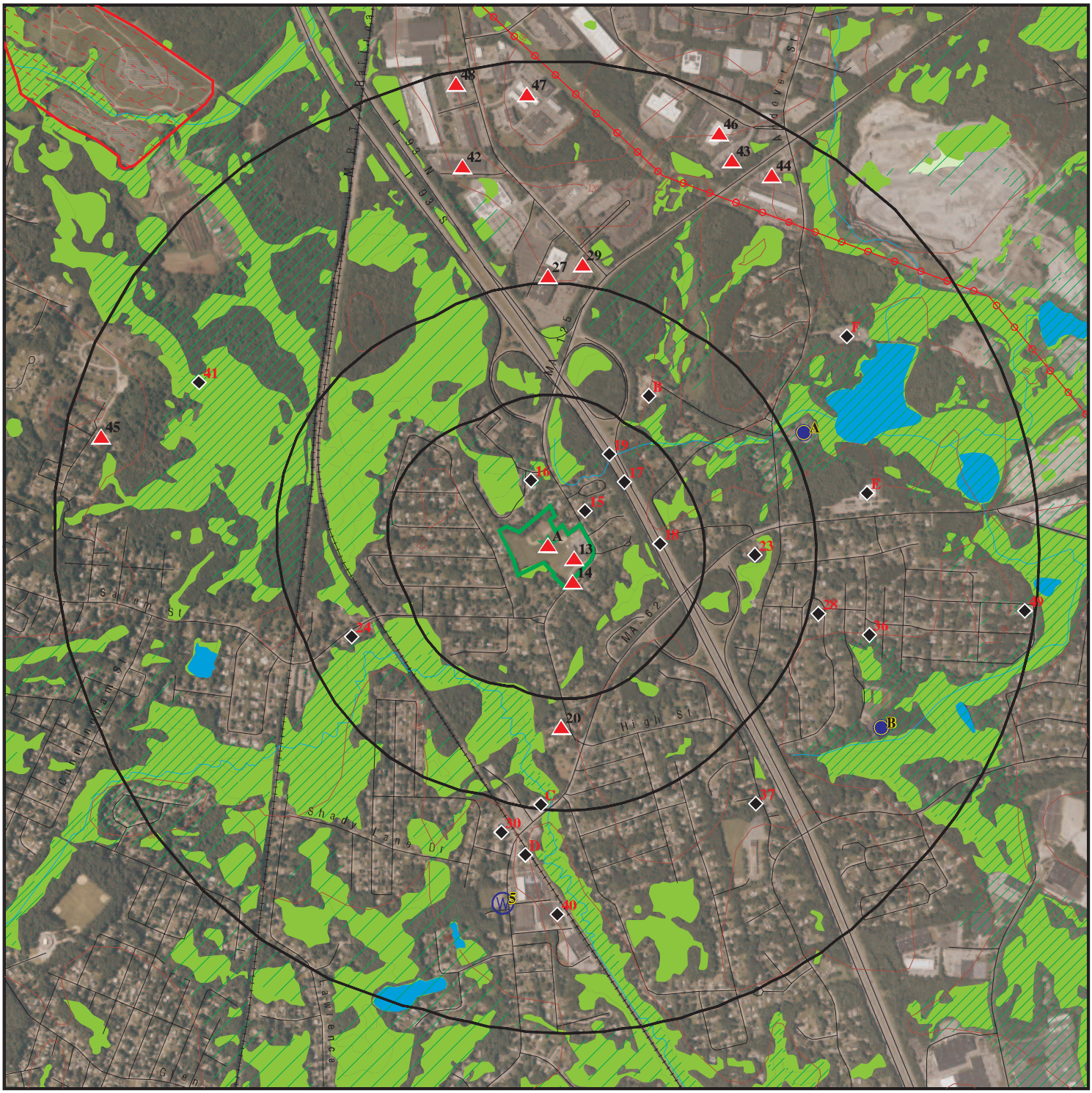
Lower Elevation	Address	Direction / Distance	Map ID	Page
SCHMIDT EQUIPMENT IN	***17 BALLARDVALE RD***	***NE 0 - 1/8 (0.033 mi.)***	***15***	***25***
EPA Id: MAD981070451				
Manifest Document Number: RIG0051586				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 8 records.

Site Name	Database(s)
ROADWAY NEAR 43 SHADY HILL DRIVE	MA SHWS, MA RELEASE
AT WOBURN STREET	MA SHWS, MA RELEASE
NO LOCATION AID	MA SHWS, MA RELEASE
IN FRONT OF 201 BALLARDVALE STREET	MA SHWS, MA RELEASE
DRAINAGE CULVERT	MA SHWS, MA RELEASE
DRUM DISPOSAL SITE	MA SHWS, MA RELEASE, MA ENF
NO LOCATION AID	MA SHWS, MA RELEASE
INTERSTATE 93 NORTHBOUND AFTER EXI	MA SHWS, MA RELEASE

OVERVIEW MAP - 08157807.2R



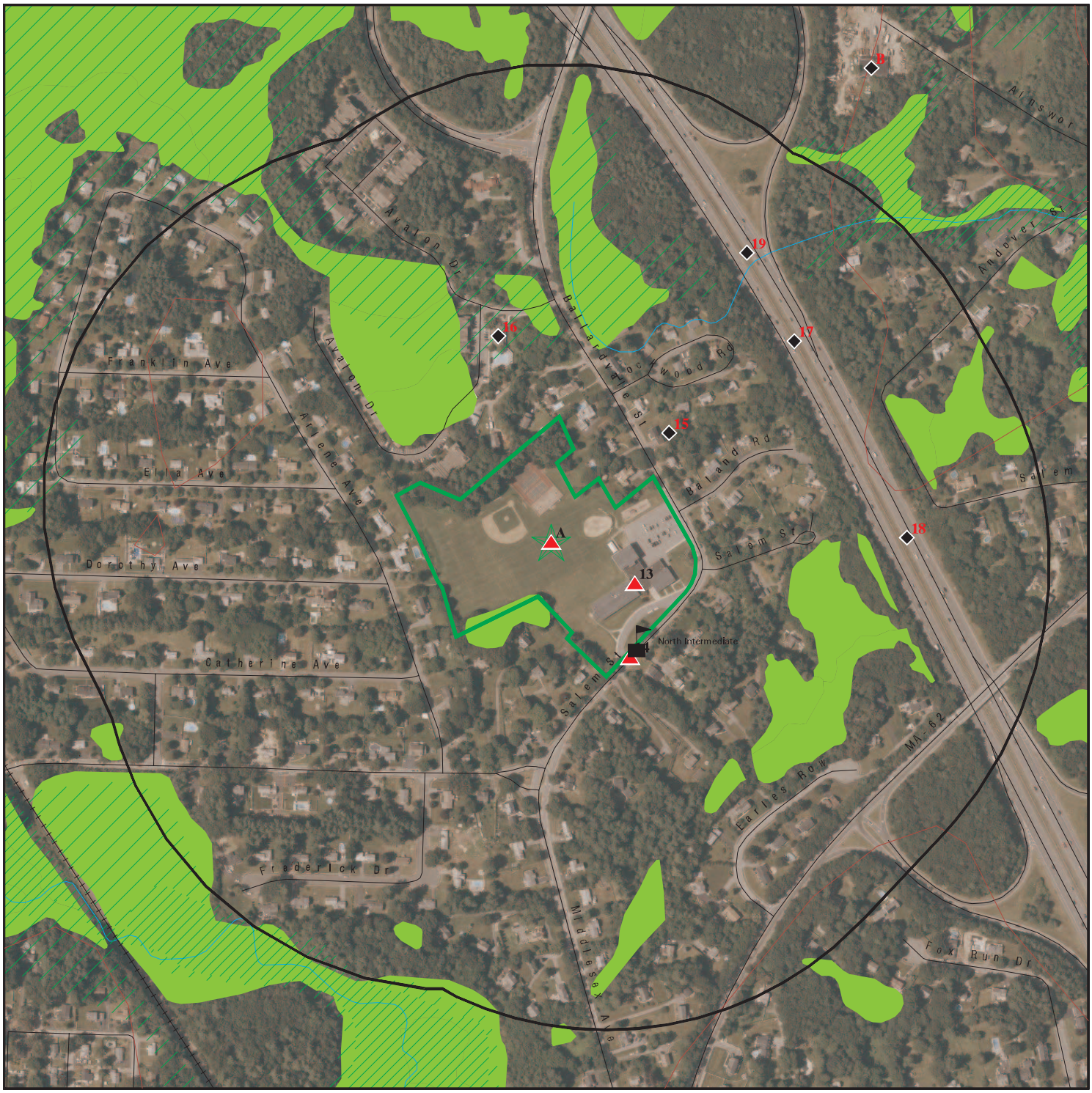
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Wildwood School @ North Intermediate School	CLIENT:	PEER Consultants
ADDRESS:	320 Salem Street Wilmington MA 01887	CONTACT:	Dave Gorden
LAT/LONG:	42.578683 / 71.158084	INQUIRY #:	08157807.2r
		DATE:	October 30, 2025 3:03 pm

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DETAIL MAP - 08157807.2R



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Wildwood School @ North Intermediate School	CLIENT:	PEER Consultants
ADDRESS:	320 Salem Street Wilmington MA 01887	CONTACT:	Dave Gorden
LAT/LONG:	42.578683 / 71.158084	INQUIRY #:	08157807.2r
		DATE:	October 30, 2025 3:03 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
MA SHWS	1.000		1	3	3	23	NR	30
Lists of state and tribal landfills and solid waste disposal facilities								
MA SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
MA LAST	0.500		0	0	2	NR	NR	2

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MA LUST	0.500		0	0	3	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
MA UST	0.250		1	0	NR	NR	NR	1
MA AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
MA INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
MA BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
MA LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
MA SPILLS	TP	1	NR	NR	NR	NR	NR	1
MA RELEASE	TP		NR	NR	NR	NR	NR	0
MA SPILLS 90	TP		NR	NR	NR	NR	NR	0
MA SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	0	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	TP		NR	NR	NR	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
E MANIFEST	0.250		0	0	NR	NR	NR	0
MA PFAS	0.250		0	0	NR	NR	NR	0
MA AIRS	TP		NR	NR	NR	NR	NR	0
MA ASBESTOS	TP	12	NR	NR	NR	NR	NR	12
MA DRYCLEANERS	0.250		0	0	NR	NR	NR	0
MA ENF	TP		NR	NR	NR	NR	NR	0
MA Financial Assurance	TP		NR	NR	NR	NR	NR	0
MA GWDP	TP		NR	NR	NR	NR	NR	0
MA HW GEN	0.250		0	0	NR	NR	NR	0
RI MANIFEST	0.250		1	0	NR	NR	NR	1
MA MERCURY	0.500		0	0	0	NR	NR	0
MA NPDES	TP		NR	NR	NR	NR	NR	0
MA TIER 2	TP		NR	NR	NR	NR	NR	0
MA TSD	0.500		0	0	0	NR	NR	0
MA UIC	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
MA RGA HWS	TP		NR	NR	NR	NR	NR	0
MA RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		13	4	3	8	23	0	51

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **NORTH INTERMEDIATE SCHOOL** **MA ASBESTOS** **S119868567**
Target **320 SALEM STREET** **N/A**
Property **WILMINGTON, MA**

Site 1 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	02/22/2024
End Date:	02/22/2024
Date Entered:	Not reported
Entry Date:	02/07/2024
Quantity Materical Removed SF:	10
Quantity Material Removed LF:	40
Project Description:	PIPEINSUL
AR Tracking ID:	432277
Super Lic Number:	AS052665
Monitor Lic Number:	AA000177
Lab Lic Number:	AA000177
Year:	2024
Sticker Number:	100400835
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9782651231
Sub Town:	Not reported
Worksite:	KITCHEN AREA
Occupied:	-1
Contractor:	AC001010
Contract Type:	WRITTEN
Hours:	7:00-4:00 PM
Project Type:	Repr
Abatement Process:	Glv
Location:	INDOORS
Decon Process:	THREE CHAMBERS DECONTAMINATION SYSTEM.
Disposal Methods:	DOUBLE BAG SEALED AND LABELED.
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	TOWN OF WILMINGTON
Owner Address:	121 GLEN ROAD
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	BRIAN S. SCOUTEN
On Site Manager Phone:	9786583311
Ins Comp:	STAR INSURANCE
Policy Number:	WC0872933
EXP Date:	12/10/2024
Facility Size:	25000
Transporter Name:	NG ENVIRONMENTAL CONTRACTORS INC
Transporter Address:	9 OSGOOD STREET
Transporter City:	LAWRENCE
Transporter State:	MA

NORTH INTERMEDIATE SCHOOL (Continued) **S119868567**

Final Site:	Not reported
Certified Name:	NOLBERTO GALICIA
Cert Sign Date:	02/07/2024
Certified Company:	NG ENVIRONMENTAL CONTRACTORS INC
Certified Phone:	9787947922
Entered_by:	NGENVIRO
Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/27/2012
End Date:	04/27/2012
Date Entered:	Not reported
Entry Date:	04/26/2012
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	50.00
Project Description:	Spr
AR Tracking ID:	156803
Super Lic Number:	AS041906
Monitor Lic Number:	AM061397
Lab Lic Number:	AA000128
Year:	2012
Sticker Number:	100146974
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	9786946060
Sub Town:	Not reported
Worksite:	SAME
Occupied:	-1
Contractor:	AC000735
Contract Type:	WRITTEN
Hours:	Week days: 7AM-7PM Week end:
Project Type:	Renv
Abatement Process:	Glv
Location:	Indoors
Decon Process:	THREE CHAMBER DECON
Disposal Methods:	DOUBLE BAGGED/ WET/ LABELED
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	NE-1204893
DLWD Waiver Number:	3081-2012
Small Owner Occ:	5
Owner Name:	WILMINGTON SCHOOL DEPARTMENT
Owner Address:	159 CHURCH STREET
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	AFFORDABLE ENVIRONMENTAL, INC.
Transporter Address:	43 CHESTNUT STREET

NORTH INTERMEDIATE SCHOOL (Continued) **S119868567**

Transporter City:	RANDOLPH
Transporter State:	Not reported
Final Site:	39
Certified Name:	WILLIAM CONNELLY
Cert Sign Date:	04/26/2012
Certified Company:	AFFORDABLE ENVIRO
Certified Phone:	7818852738
Entered_by:	Not reported

A2 **NORTH INTERMEDIATE SCHOOL** **MA ASBESTOS** **S122925338**
Target **320 SALEM STREET** **N/A**
Property **WILMINGTON, MA**

Site 2 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	02/21/2017
End Date:	02/21/2017
Date Entered:	Not reported
Entry Date:	02/20/2017
Quantity Materical Removed SF:	150.00
Quantity Material Removed LF:	Not reported
Project Description:	OTHER VAT
AR Tracking ID:	260913
Super Lic Number:	AS041908
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000177
Year:	2017
Sticker Number:	100259763
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	0000000000
Sub Town:	Not reported
Worksite:	SECOND FLOOR
Occupied:	-1
Contractor:	AC000412
Contract Type:	WRITTEN
Hours:	8AM - 4PM
Project Type:	Renv
Abatement Process:	Fcontain
Location:	INDOORS
Decon Process:	THREE STAGE DECON ADJACENT TO WORK AREA
Disposal Methods:	WET ACM AND PLACE IN LABELED, DOUBLE 6 MIL DISPOSAL BAGS
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	NAW-17-02-080
DLWD Waiver Number:	18553-2017
Small Owner Occ:	0
Owner Name:	WILMINGTON PUBLIC SCHOOL DEPT.
Owner Address:	161 CHURCH STREET
Owner City:	WILMINGTON
Owner State:	MA

NORTH INTERMEDIATE SCHOOL (Continued) **S122925338**

On Site Manager Name:	NA
On Site Manager Phone:	0000000000
Ins Comp:	TRAVELERS
Policy Number:	6HUB0623N7
EXP Date:	6/12/2017
Facility Size:	100000
Transporter Name:	ENVIRONMENTAL RESPONSE SERVICES
Transporter Address:	9 BLUEBERRY LANE
Transporter City:	DARTMOUTH
Transporter State:	MA
Final Site:	Not reported
Certified Name:	GARY PELLETIER
Cert Sign Date:	02/20/2017
Certified Company:	ERS, INC.
Certified Phone:	5089986229
Entered_by:	GARYP

A3 **NORTH INTERMEDIATE SCHOOL** **MA ASBESTOS** **S119874377**
Target **320 SALEM STREET** **N/A**
Property **WILMINGTON, MA**

Site 3 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	10/19/2012
End Date:	10/19/2012
Date Entered:	Not reported
Entry Date:	10/19/2012
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	60.00
Project Description:	Spr
AR Tracking ID:	164938
Super Lic Number:	AS041906
Monitor Lic Number:	AM061397
Lab Lic Number:	AA000128
Year:	2012
Sticker Number:	100161895
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	9786946000
Sub Town:	Not reported
Worksite:	SAME
Occupied:	-1
Contractor:	AC000735
Contract Type:	WRITTEN
Hours:	Week days: 7AM-7PM Week end:
Project Type:	Renv
Abatement Process:	Glv
Location:	Indoors
Decon Process:	THREE STAGE DECON
Disposal Methods:	DOUBLE BAGGED/ WET/ LABELED
Facility Usage:	RESIDENCE

NORTH INTERMEDIATE SCHOOL (Continued) **S119874377**

Waiver Given:	Not reported
DEP Waiver Number:	NE-1210864
DLWD Waiver Number:	4583-2012
Small Owner Occ:	5
Owner Name:	WILMINGTON SCHOOL DEPT
Owner Address:	161 CHURCH STREET
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	AFFORDABLE ENVIRONMENTAL, INC.
Transporter Address:	43 CHESTNUT STREET
Transporter City:	RANDOLPH
Transporter State:	Not reported
Final Site:	39
Certified Name:	WILLIAM CONNELLY
Cert Sign Date:	10/19/2012
Certified Company:	AFFORDABLE ENVIRO
Certified Phone:	7818852738
Entered_by:	Not reported

A4 **WILMINGTON SCHOOL** **MA ASBESTOS** **S119831762**
Target **320 SALEM ST.** **N/A**
Property **WILMINGTON, MA**

Site 4 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	WILMINGTON SCHOOL
Address:	320 SALEM ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	08/11/2008
End Date:	08/11/2008
Date Entered:	Not reported
Entry Date:	08/11/2008
Quantity Materical Removed SF:	3.00
Quantity Material Removed LF:	20.00
Project Description:	Blr,Spr
AR Tracking ID:	102246
Super Lic Number:	AS052339
Monitor Lic Number:	AM061397
Lab Lic Number:	AA000128
Year:	2008
Sticker Number:	100076385
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	BOILER ROOM
Occupied:	-1
Contractor:	AC000472

WILMINGTON SCHOOL (Continued) **S119831762**

Contract Type:	Off
Hours:	Week days: 8AM-4PM Week end:
Project Type:	Renv
Abatement Process:	Glv
Location:	Indoors
Decon Process:	3 STAGE DECONTAMINATION.
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MILL LABELED ASBESTOS BAGS.
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	080977
DLWD Waiver Number:	NWA088162
Small Owner Occ:	4
Owner Name:	WILMINGTON PUBLIC SCHOOL
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	J.O.B/ ROLLOFF, INC.
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	7
Certified Name:	ZAKARIYA SOULONG
Cert Sign Date:	08/11/2008
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

A5 **NORTH INTERMEDIATE SCHOOL** **MA ASBESTOS** **S119892994**
Target **320 SALEM STREET** **N/A**
Property **WILMINGTON, MA**

Site 5 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/19/2014
End Date:	06/23/2012
Date Entered:	Not reported
Entry Date:	06/06/2014
Quantity Materical Removed SF:	550.00
Quantity Material Removed LF:	600.00
Project Description:	Blr,Spr
AR Tracking ID:	194388
Super Lic Number:	AS061850
Monitor Lic Number:	AM061044
Lab Lic Number:	AA000208
Year:	2014

NORTH INTERMEDIATE SCHOOL (Continued) **S119892994**

Sticker Number:	100200820
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	9786946046
Sub Town:	Not reported
Worksite:	BOILER ROOM
Occupied:	-1
Contractor:	AC000768
Contract Type:	VERBAL
Hours:	7-3
Project Type:	Dem
Abatement Process:	Fcontain
Location:	OUTDOORS
Decon Process:	3 STAGE CONTAINMENT
Disposal Methods:	WET, DOUBLE BAGGED. LABELS ON OUTER BAG
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	WILMINGTON PUBLIC SCHOOLS
Owner Address:	161 CHURCH STREET
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	HOPE KEENOM
On Site Manager Phone:	9786946064
Ins Comp:	EASTERN INSURANCE
Policy Number:	WCA1526836
EXP Date:	1/31/2015
Facility Size:	65000
Transporter Name:	ATLANTIC COAST DISMANTLING
Transporter Address:	155 CRESCENT AVE
Transporter City:	CHELSEA
Transporter State:	MA
Final Site:	Not reported
Certified Name:	BARRY KETSCHKE
Cert Sign Date:	06/06/2014
Certified Company:	ATLANTIC COAST DISMANTLING
Certified Phone:	6178847700
Entered_by:	ACDLLC

A6 **PUBLIC SCHOOL OF WILMINGTON** **MA ASBESTOS** **S119840532**
Target **320 SALEM ST.** **N/A**
Property **WILMINGTON, MA**

Site 6 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	PUBLIC SCHOOL OF WILMINGTON
Address:	320 SALEM ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	08/07/2009
End Date:	08/07/2009
Date Entered:	Not reported
Entry Date:	08/10/2009

PUBLIC SCHOOL OF WILMINGTON (Continued) **S119840532**

Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	3.00
Project Description:	Spr
AR Tracking ID:	116233
Super Lic Number:	AS052339
Monitor Lic Number:	AM061397
Lab Lic Number:	AA000128
Year:	2009
Sticker Number:	100092731
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	BOILER ROOM
Occupied:	-1
Contractor:	AC000472
Contract Type:	Off
Hours:	Week days: 8AM-4PM Week end:
Project Type:	Renv
Abatement Process:	Glv
Location:	Indoors
Decon Process:	3 STAGE DECONTAMINATION.
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN MILL LABELED ASBESTOS BAGS.
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	0908994
DLWD Waiver Number:	HV09234
Small Owner Occ:	4
Owner Name:	PUBLIC SCHOOL OF WILMINGTON
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	J.O.B/ ROLLOFF,INC.
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	7
Certified Name:	ZAKARIYA SOULONG
Cert Sign Date:	08/10/2009
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

A7 **NORTH INTERMEDIAT SCHOOL** **MA ASBESTOS** **S119906688**
Target **320 SALEM ST.** **N/A**
Property **WILMINGTON, MA**

Site 7 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIAT SCHOOL
Address:	320 SALEM ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/14/2015
End Date:	04/14/2015
Date Entered:	Not reported
Entry Date:	04/14/2015
Quantity Materical Removed SF:	3.00
Quantity Material Removed LF:	3.00
Project Description:	,Spr
AR Tracking ID:	210598
Super Lic Number:	AS052339
Monitor Lic Number:	AA000177
Lab Lic Number:	AA000177
Year:	2015
Sticker Number:	100218489
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	0000000000
Sub Town:	Not reported
Worksite:	NA
Occupied:	-1
Contractor:	AC000472
Contract Type:	VERBAL
Hours:	6PM-11PM
Project Type:	Repr
Abatement Process:	Glv
Location:	INDOORS
Decon Process:	3 STAGE DECONTAMINATION.
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MIL LABELED ASBESTOS BAGS
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	NAW1504086
DLWD Waiver Number:	NA
Small Owner Occ:	-1
Owner Name:	TOWN OF WILMNGTON
Owner Address:	121 GLEN RD.
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	NA
On Site Manager Phone:	0000000000
Ins Comp:	TRAVERLER
Policy Number:	US4569PS55
EXP Date:	3/14/2016
Facility Size:	30000
Transporter Name:	JOB/ ROLLOFF,INC.
Transporter Address:	PO BOX 6037
Transporter City:	CHELSEA
Transporter State:	MA

NORTH INTERMEDIAT SCHOOL (Continued) **S119906688**

Final Site:	Not reported
Certified Name:	ZAKARIYA SOULONG
Cert Sign Date:	04/14/2015
Certified Company:	ALLSTATE ASBESTOS ABATEMENT
Certified Phone:	9784234723
Entered_by:	ZAKSOULONG

A8 **NORTH INTERMEDIATE SCHOOL** **MA ASBESTOS** **S119893006**
Target **320 SALEM STREET** **N/A**
Property **WILMINGTON, MA**

Site 8 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/19/2014
End Date:	06/23/2012
Date Entered:	Not reported
Entry Date:	06/06/2014
Quantity Materical Removed SF:	550.00
Quantity Material Removed LF:	600.00
Project Description:	Blr,Spr
AR Tracking ID:	194391
Super Lic Number:	AS061850
Monitor Lic Number:	AM061044
Lab Lic Number:	AA000208
Year:	2014
Sticker Number:	100200835
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	9786946046
Sub Town:	Not reported
Worksite:	BOILER ROOM
Occupied:	-1
Contractor:	AC000768
Contract Type:	VERBAL
Hours:	7-3
Project Type:	Dem
Abatement Process:	Fcontain
Location:	INDOORS
Decon Process:	3 STAGE DECON
Disposal Methods:	WET, DOUBLE BAGGED, LABELS ON OUTER BAG
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	WILMINGTON SCHOOL DEPARTMENT
Owner Address:	161 CHURCH STREET
Owner City:	WILMNGTON
Owner State:	MA
On Site Manager Name:	HOPE KEENOM
On Site Manager Phone:	9786946064

NORTH INTERMEDIATE SCHOOL (Continued) **S119893006**

Ins Comp:	EASTERN INSURANCE
Policy Number:	WCA1526836
EXP Date:	1/31/2015
Facility Size:	65000
Transporter Name:	ATLANTIC COAST DISMANTLING
Transporter Address:	155 CRESCENT AVE
Transporter City:	CHELSEA
Transporter State:	MA
Final Site:	Not reported
Certified Name:	BARRY KETSCHKE
Cert Sign Date:	06/06/2014
Certified Company:	ATLANTC COAST DISMANTLING
Certified Phone:	6178847700
Entered_by:	ACDLLC

A9 **NORTH INTERMEDIATE SCHOOL** **MA ASBESTOS** **S119929934**
Target **320 SALEM ST.** **N/A**
Property **WILMINGTON, MA**

Site 9 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/30/2016
End Date:	07/30/2016
Date Entered:	Not reported
Entry Date:	07/18/2016
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	30.00
Project Description:	PIPEINSUL
AR Tracking ID:	243849
Super Lic Number:	AS052339
Monitor Lic Number:	AA000177
Lab Lic Number:	AA000177
Year:	2016
Sticker Number:	100247390
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	0000000000
Sub Town:	Not reported
Worksite:	BASEMENT
Occupied:	-1
Contractor:	AC000472
Contract Type:	VERBAL
Hours:	8AM-4PM
Project Type:	Renv
Abatement Process:	Glv
Location:	INDOORS
Decon Process:	3 STAGE DECONTAMINATION.
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MIL LABELED ASBESTOS BAGS.
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported

NORTH INTERMEDIATE SCHOOL (Continued) **S119929934**

DLWD Waiver Number:	Not reported
Small Owner Occ:	-1
Owner Name:	WILMINGTON PUBLIC SCHOOL
Owner Address:	161 CHURCH ST.
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	NA
On Site Manager Phone:	0000000000
Ins Comp:	TRAVERLER
Policy Number:	US4569PS55
EXP Date:	3/12/2017
Facility Size:	30000
Transporter Name:	J.O.B/ ROLLOFF, INC.
Transporter Address:	PO BOX6037
Transporter City:	CHELSEA
Transporter State:	MA
Final Site:	Not reported
Certified Name:	ZAKARIYA SOULONG
Cert Sign Date:	07/18/2016
Certified Company:	ALLSTATE ASBESTOS ABATEMENT
Certified Phone:	9784234723
Entered_by:	ZAKSOULONG

A10 **NORTH INTERMEDIATE SCHOOL** **MA ASBESTOS** **S119849531**
Target **320 SALEM ST.** **N/A**
Property **WILMINGTON, MA**

Site 10 of 12 in cluster A

Actual: **93 ft.**

ASBESTOS:

Name:	NORTH INTERMEDIATE SCHOOL
Address:	320 SALEM ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/29/2010
End Date:	07/30/2010
Date Entered:	Not reported
Entry Date:	07/16/2010
Quantity Materical Removed SF:	1800.00
Quantity Material Removed LF:	.00
Project Description:	Trns
AR Tracking ID:	129231
Super Lic Number:	AS052339
Monitor Lic Number:	AM061397
Lab Lic Number:	AA000128
Year:	2010
Sticker Number:	100109837
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	CLASS ROOM 106 &108
Occupied:	-1
Contractor:	AC000472
Contract Type:	Off
Hours:	Week days: 8AM-6PM Week end:

NORTH INTERMEDIATE SCHOOL (Continued) **S119849531**

Project Type:	Renv
Abatement Process:	Fcontain
Location:	Indoors
Decon Process:	3 STAGE DECONTAMINATION.
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MILL LABELED ASBESTOS BAGS.
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	4
Owner Name:	PLUBLIC SCHOOL OF WILMINGTON
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	J.O.B/ ROLLOFF, INC.
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	7
Certified Name:	ZAKARIYA SOULONG
Cert Sign Date:	07/16/2010
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

A11 **NORTH INTERMEDIAT SCHOOL** **MA ASBESTOS** **S119919482**
Target **320 SALEM ST.** **N/A**
Property **WILMINGTON, MA**

Site 11 of 12 in cluster A

Actual:
93 ft.

ASBESTOS:

Name:	NORTH INTERMEDIAT SCHOOL
Address:	320 SALEM ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/23/2015
End Date:	12/23/2015
Date Entered:	Not reported
Entry Date:	12/20/2015
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	10.00
Project Description:	PIPEINSUL
AR Tracking ID:	229142
Super Lic Number:	AS052339
Monitor Lic Number:	AA000177
Lab Lic Number:	AA000177
Year:	2015
Sticker Number:	100234902
Form Type:	ANF-001

NORTH INTERMEDIAT SCHOOL (Continued) **S119919482**

Fee Status:	EXEMPT
Facility Phone:	0000000000
Sub Town:	Not reported
Worksite:	BOILER ROOM
Occupied:	-1
Contractor:	AC000472
Contract Type:	VERBAL
Hours:	3PM-11PM
Project Type:	Renv
Abatement Process:	Glv
Location:	INDOORS
Decon Process:	3 STAGE DECONTAMINATION.
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MIL LABELED ASBESTOS BAGS.
Facility Usage:	SCHOOL
Waiver Given:	Not reported
DEP Waiver Number:	NAW1512115
DLWD Waiver Number:	NA
Small Owner Occ:	-1
Owner Name:	PUBLIC SCHOOL OF WILMINGTON
Owner Address:	159 CHURCH ST.
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	NA
On Site Manager Phone:	0000000000
Ins Comp:	TRAVERLER
Policy Number:	US4569PS55
EXP Date:	3/12/2016
Facility Size:	30000
Transporter Name:	JOB/ ROLLOFF,INC.
Transporter Address:	PO BOX 6037
Transporter City:	CHELSEA
Transporter State:	MA
Final Site:	Not reported
Certified Name:	ZAKARIYA SOULONG
Cert Sign Date:	12/20/2015
Certified Company:	ALLSTATE ASBESTOS ABATEMENT
Certified Phone:	9784234723
Entered_by:	ZAKSOULONG

A12 **NORTH SCHOOL** **MA ASBESTOS** **S119846440**
Target **320 SALEM ST.** **N/A**
Property **WILMINGTON, MA**

Site 12 of 12 in cluster A

Actual:
93 ft.

ASBESTOS:

Name:	NORTH SCHOOL
Address:	320 SALEM ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/02/2010
End Date:	04/02/2010
Date Entered:	Not reported
Entry Date:	04/02/2010
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	10.00

NORTH SCHOOL (Continued) **S119846440**

Project Description:	Spr
AR Tracking ID:	124720
Super Lic Number:	AS052339
Monitor Lic Number:	AM061397
Lab Lic Number:	AA000128
Year:	2010
Sticker Number:	100103740
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	BOILER ROOM
Occupied:	-1
Contractor:	AC000472
Contract Type:	Off
Hours:	Week days: 8AM-4PM Week end:
Project Type:	Rpr
Abatement Process:	Glv
Location:	Indoors
Decon Process:	3 STAGE DECONTAMINATION.
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MILL LABELED ASBESTOS BAGS.
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	1004997
DLWD Waiver Number:	NWA10364
Small Owner Occ:	4
Owner Name:	WILMINGTON PLUBIC SCHOOL
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	J.O.B/ROLLOFF,INC.
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	7
Certified Name:	ZAKARIYA SOULONG
Cert Sign Date:	04/02/2010
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

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13 **NO INTERMEDIATE SCHOOL** **MA SPILLS** **S101024053**
Target **SALEM ST** **N/A**
Property **WILMINGTON, MA 01887**

Actual:
94 ft.

MA Spills:

Facility ID:	3-2777	Spill ID:	N89-1394
Staff Lead:	STUGER, B	Date Entered:	19890926
Last Entered:	19930825	First Response:	19890818
Spill Date:	19890818	Spill Time:	Not reported
Report Date:	19890818	Report Time:	12:30AM
Case Closed:	YES	Mat Type:	PETROLEUM

NO INTERMEDIATE SCHOOL (Continued) **S101024053**

Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	#4 FUEL OIL	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	U.S.T.	Other Source:	Not reported
Incident:	TANK REMOVAL	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	JOHN MURPHY		
Notif Tel:	Not reported		
Days/Close:	0		

14
SE
< 1/8
0.003 mi.
14 ft.

HEFFRON MATERIALS **MA UST** **U003655109**
SALEM ST **N/A**
WILMINGTON, MA 01887

Relative:
Higher

Actual:
100 ft.

UST:

Facility ID:	11408
Name:	HEFFRON MATERIALS
Address:	SALEM ST
Address 2:	Not reported
City,State,Zip:	WILMINGTON, MA 01887
Owner ID:	3014
Owner:	HEFFRON MATERIALS
Owner Address:	68 WINTER ST
Owner Address 2:	Not reported
Owner City,State,Zip:	NORTH READING, MA 01864
Telephone:	Not reported
Description:	Not reported
Contact Name:	Not reported
Contact Address:	Not reported
Contact Address 2:	Not reported
Contact City,State,Zip:	Not reported
Contact Email:	Not reported
Update:	Not reported
Update By:	Not reported
Facility Status:	CLOSED
Operator Name:	Not reported
Operator Contact Name:	Not reported
Last Inspection Date:	Not reported
Next Inspection Due Date:	Not reported
Last Cert Compliance Date:	Not reported
Next Cert Compliance Due Date:	Not reported
Longitude:	-71.15699
Latitude:	42.57750

URL:

UST:

Facility ID:	11408
Tank ID:	3
Capacity:	4000.00000
Substance:	Diesel

HEFFRON MATERIALS (Continued) **U003655109**

Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/07/1966
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/10/1997
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	11408
Tank ID:	4
Capacity:	3000.00000
Substance:	Diesel
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	Not reported
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/10/1997
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported

HEFFRON MATERIALS (Continued) **U003655109**

Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Facility ID:	11408
Tank ID:	2
Capacity:	3000.00000
Substance:	Diesel
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	05/07/1966
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/10/1997
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

---

15 **SCHMIDT EQUIPMENT INC** **RCRA NonGen / NLR** **1000299495**
NE **17 BALLARDVALE RD** **FINDS** **MAD981070451**
< 1/8 **WILMINGTON, MA 01887** **ECHO**
0.033 mi. **RI MANIFEST**
175 ft.

Relative: **Lower**

Actual: **87 ft.**

RCRA Listings:

Date Form Received by Agency:	19850820
Handler Name:	Schmidt Equipment Inc
Handler Address:	17 Ballardvale Rd
Handler City,State,Zip:	WILMINGTON, MA 01887
EPA ID:	MAD981070451
Contact Name:	DENNIS NESLUSAN
Contact Address:	PO BOX 223
Contact City,State,Zip:	NORTH OXFORD, MA 01537
Contact Telephone:	508-657-3994
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	01
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

Non-Notifier:		Not reported
Biennial Report Cycle:		Not reported
Accessibility:		Not reported
Active Site Indicator:		Not reported
State District Owner:		Ma
State District:		N
Mailing Address:		PO BOX 223
Mailing City,State,Zip:		NORTH OXFORD, MA 01537
Owner Name:	Not reported	
Owner Type:		Not reported
Operator Name:	Schmidt Equipment Inc	
Operator Type:		Private
Short-Term Generator Activity:		No
Importer Activity:		No
Mixed Waste Generator:		No
Transporter Activity:		No
Transfer Facility Activity:		No
Recycler Activity with Storage:		No
Small Quantity On-Site Burner Exemption:		No
Smelting Melting and Refining Furnace Exemption:		No
Underground Injection Control:		No
Off-Site Waste Receipt:		No
Universal Waste Indicator:		No
Universal Waste Destination Facility:		No
Federal Universal Waste:		No
Active Site State-Reg Handler:		---
Federal Facility Indicator:		Not reported
Hazardous Secondary Material Indicator:		N
Sub-Part K Indicator:		Not reported
2018 GPRA Permit Baseline:		Not on the Baseline
2018 GPRA Renewals Baseline:		Not on the Baseline
202 GPRA Corrective Action Baseline:		No
Subject to Corrective Action Universe:		No
Non-TSDFs Where RCRA CA has Been Imposed Universe:		No
Corrective Action Priority Ranking:		No NCAPS ranking
Environmental Control Indicator:		No
Institutional Control Indicator:		No
Human Exposure Controls Indicator:		N/A
Groundwater Controls Indicator:		N/A
Significant Non-Complier Universe:		No
Unaddressed Significant Non-Complier Universe:		No
Addressed Significant Non-Complier Universe:		No
Significant Non-Complier With a Compliance Schedule Universe:		No
Financial Assurance Required:		Not reported
Handler Date of Last Change:		20171020
Recognized Trader-Importer:		No
Recognized Trader-Exporter:		No
Importer of Spent Lead Acid Batteries:		No
Exporter of Spent Lead Acid Batteries:		No
Recycler Activity Without Storage:		No
Manifest Broker:		No
Sub-Part P Indicator:		No

Handler - Owner Operator:
Owner/Operator Indicator: Operator
Owner/Operator Name: SCHMIDT EQUIPMENT INC

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

Legal Status:	Private
Date Became Current:	19900301
Date Ended Current:	Not reported
Owner/Operator Address:	PO BOX 223
Owner/Operator City,State,Zip:	NORTH OXFORD, MA 01537
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	19850820
Handler Name: SCHMIDT EQUIPMENT INC	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Ma
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Codes:	No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations:	No Violations Found

Evaluation Action Summary:

Evaluations:	No Evaluations Found

FINDS:

Registry ID: 110003461815

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:

The Massachusetts - Environmental Protection Integrated Computer System (MA-EPICS) is the central repository for all environmental protection data for the State of Massachusetts.
The Resource Conservation and Recovery Act Information System (RCRAInfo) is EPA's comprehensive information system in support of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. It tracks many types of information about generators, transporters, treaters, storers, and disposers of hazardous waste.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000299495
Registry ID:	110003461815

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

DFR URL:
Name: SCHMIDT EQUIPMENT INC
Address: 17 Ballardvale Rd
City,State,Zip: WILMINGTON, MA 01887

RI MANIFEST:
Name: Not reported
Address: 17 BALLARDVALE RD
City,State,Zip: WILMINGTON, MA 01887
EPA Id: MAD981070451
GEN Cert Date: 5/2/1994
Manifest Document Number: RIG0051586
Waste Description: PET NAP
TSDF Id: RID084802842
TSDF Name: CHEM PAK CORP
Qty: 18
WT/Vol Units: G
TSDF Date: Not reported
Transporter 2 Id: Not reported
Item Number: 1
Transporter 2 Name: Not reported
Transporter Name 2: CYCLE SOLVE CORP
Transporter EPAID: RID982194987
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: D001
Waste Code2: Not reported
Waste Code3: Not reported
Waste Code4: Not reported
Waste Code5: Not reported
Waste Code6: Not reported
Fee Exempt Code: Not reported
Comment: Not reported
Transporter Name 2: Not reported
Company Permit Number: Not reported
Year: Not reported
Quarter: Not reported
Transporter Contact Name: Not reported
Transporter Contact Email: Not reported
Filing Date: Not reported
Total Fee: Not reported
Billing Name: Not reported
Paid Date: Not reported
Paid Time: Not reported
Facility Receipt Date: Not reported
Fee: Not reported
Manifest Created Date: Not reported
Manifest Updated Date: Not reported

RI MANIFEST:
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: D001
Waste Code2: Not reported

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	CHEM PAK CORP
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD981070451
Manifest Docket Number:	RIG0051586
Quarter:	Not reported
Waste Description:	PET NAP
Transporter Contact Name:	Not reported
Quantity:	18
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	CYCLE SOLVE CORP
Billing Name:	Not reported
Transporter EPA ID:	RID982194987
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	5/2/1994
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D001
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	CHEM PAK CORP
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD981070451
Manifest Docket Number:	RIG0043256
Quarter:	Not reported
Waste Description:	PET NAP
Transporter Contact Name:	Not reported

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

Quantity:	8
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	CYCLE SOLVE CORP
Billing Name:	Not reported
Transporter EPA ID:	RID982194987
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	1/11/1994
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D001
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	CHEM PAK CORP
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD981070451
Manifest Docket Number:	RIG0041904
Quarter:	Not reported
Waste Description:	PETROLEUM NAPHTHA
Transporter Contact Name:	Not reported
Quantity:	11
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	CYCLE SOLVE CORP
Billing Name:	Not reported
Transporter EPA ID:	RID982194987
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	3/9/1994
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D001
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	CHEM PAK CORP
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD981070451
Manifest Docket Number:	RIG0043256
Quarter:	Not reported
Waste Description:	PET NAP
Transporter Contact Name:	Not reported
Quantity:	8
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	CYCLE SOLVE CORP
Billing Name:	Not reported
Transporter EPA ID:	RID982194987
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	1/11/1994
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D001
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	CHEM PAK CORP

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD981070451
Manifest Docket Number:	RIG0051586
Quarter:	Not reported
Waste Description:	PET NAP
Transporter Contact Name:	Not reported
Quantity:	18
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	CYCLE SOLVE CORP
Billing Name:	Not reported
Transporter EPA ID:	RID982194987
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	5/2/1994
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D001
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	CHEM PAK CORP
TSDF Id:	RID084802842
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD981070451
Manifest Docket Number:	RIG0041904
Quarter:	Not reported
Waste Description:	PETROLEUM NAPHTHA
Transporter Contact Name:	Not reported
Quantity:	11
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	CYCLE SOLVE CORP

SCHMIDT EQUIPMENT INC (Continued) **1000299495**

Billing Name:	Not reported
Transporter EPA ID:	RID982194987
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	3/9/1994
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported

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16 **AVALON OAKS APARTMENT COMPLEX** **MA SHWS** **S112146210**
NNW **1 AVALON DRIVE** **MA RELEASE** **N/A**
< 1/8 **WILMINGTON, MA 01887**
0.071 mi.
377 ft.

Relative:
Lower

Actual:
84 ft.

SHWS:

Name:	AVALON OAKS APARTMENT COMPLEX
Address:	1 AVALON DRIVE
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0030988
Source Type:	VEHICLE
Release Town:	WILMINGTON
Notification Date:	08/08/2012
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	08/30/2012
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Not reported

Release:

Name:	AVALON OAKS APARTMENT COMPLEX
Address:	1 AVALON DRIVE
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0030988 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	08/08/2012
Category:	TWO HR
Status Date:	08/30/2012
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/24/2012

AVALON OAKS APARTMENT COMPLEX (Continued) **S112146210**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/30/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/30/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/30/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/8/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/8/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: GASOLINE
Quantity: 30 gallons
Location Type: RESIDNTIAL
Source: VEHICLE

17
NE
1/8-1/4
0.138 mi.
731 ft.

BETWEEN RTE 125 AND RTE 62
I-93 S
WILMINGTON, MA 01887

MA SHWS **S106775790**
MA RELEASE **N/A**

Relative:
Lower

Actual:
88 ft.

SHWS:
Name: BETWEEN RTE 125 AND RTE 62
Address: I-93 S
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0024341
Source Type: VEHICLE
Release Town: WILMINGTON
Notification Date: 10/19/2004
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 12/22/2004

BETWEEN RTE 125 AND RTE 62 (Continued) **S106775790**

Phase: Not reported
Response Action Outcome: A2
Oil Or Haz Material: Not reported

Release:
Name: BETWEEN RTE 125 AND RTE 62
Address: I-93 S
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0024341 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 10/19/2004
Category: TWO HR
Status Date: 12/22/2004
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/19/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 10/19/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/19/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/18/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/2/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

BETWEEN RTE 125 AND RTE 62 (Continued) **S106775790**

reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/22/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: DIESEL FUEL
Quantity: 100 gallons
Location Type: ROADWAY
Source: VEHICLE

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18 **TANKER SPILL** **MA SHWS** **S100830080**
East **RTE 93 INB TO SALEM ST** **MA RELEASE** **N/A**
1/8-1/4 **WILMINGTON, MA 01887**
0.150 mi.
793 ft.

Relative: **Lower**
Actual: **81 ft.**

SHWS:
Name: TANKER SPILL
Address: RTE 93 INB TO SALEM ST
City,State,Zip: WILMINGTON, MA 01887
Facility ID: 3-0001093
Source Type: Not reported
Release Town: WILMINGTON
Notification Date: 09/02/1986
Category: NONE
Associated ID: Not reported
Current Status: PENNFA
Status Date: 08/09/1995
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Not reported

Release:
Name: TANKER SPILL
Address: RTE 93 INB TO SALEM ST
City,State,Zip: WILMINGTON, MA 01887
Release Tracking Number/Current Status: 3-0001093 / PENNFA
Primary ID: Not reported
Official City: WILMINGTON
Notification: 09/02/1986
Category: NONE
Status Date: 08/09/1995
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: TREGS
Action Status: PENNFA
Action Date: 8/9/1995

TANKER SPILL (Continued) **S100830080**

Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 9/2/1986
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/2/1986
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

19
NE
1/8-1/4
0.172 mi.
908 ft.

NO LOCATION AID
RTE 93 NORTH AT RTE 125
WILMINGTON, MA 01887

MA SHWS **S105810576**
MA RELEASE **N/A**

Relative:
Lower

Actual:
90 ft.

SHWS:
Name: NO LOCATION AID
Address: RTE 93 NORTH AT RTE 125
City,State,Zip: WILMINGTON, MA 01887
Facility ID: 3-0010977
Source Type: FUELTANK
Release Town: WILMINGTON
Notification Date: 05/09/1994
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 10/25/1994
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Not reported

Release:
Name: NO LOCATION AID
Address: RTE 93 NORTH AT RTE 125
City,State,Zip: WILMINGTON, MA 01887
Release Tracking Number/Current Status: 3-0010977 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 05/09/1994
Category: TWO HR
Status Date: 10/25/1994
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RAO - DEP Lead

NO LOCATION AID (Continued) **S105810576**

Action Status:	RAO Statement Received
Action Date:	10/25/1994
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action - DEP Lead
Action Status:	Work Started
Action Date:	5/9/1994
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	5/9/1994
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/9/1994
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/9/1994
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	6/16/1994
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/20/1994
Response Action Outcome:	Not reported

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	75 gallons
Location Type:	ROADWAY
Source:	FUELTANK

20
South
1/4-1/2
0.312 mi.
1650 ft.

HOMEOWNER **MA LUST** **S108117327**
434 MIDDLESEX AVE **MA RELEASE** **N/A**
WILMINGTON, MA 01887

Relative: Higher

Actual: 95 ft.

LUST:

Facility:

Name:	HOMEOWNER
Address:	434 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 018870000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0026129 / RAO
Status Date:	01/19/2007
Source Type:	UST
Release Town:	WILMINGTON
Notification Date:	09/27/2006

HOMEOWNER (Continued) **S108117327**

Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Not reported

Location Type: RESIDNTIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL #2
Quantity: 410 parts per million
Chemical: #2 HEATING FUEL
Quantity: 410 parts per million

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/18/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/8/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/8/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

HOMEOWNER (Continued) **S108117327**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: HOMEOWNER
Address: 434 MIDDLESEX AVE
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0026129 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 09/27/2006
Category: 72 HR
Status Date: 01/19/2007
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/18/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/8/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action

HOMEOWNER (Continued) **S108117327**

Action Status: Oral Approval of Plan or Action
Action Date: 8/8/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 410 parts per million
Chemical: #2 HEATING FUEL
Quantity: 410 parts per million
Location Type: RESIDNTIAL
Source: UST

B21
NE
1/4-1/2
0.328 mi.
1732 ft.

NO LOCATION AID **MA LUST** **S132537735**
100 AINSWORTH RD **MA RELEASE** **N/A**
WILMINGTON, MA 01887

Site 1 of 2 in cluster B

Relative: Lower

Actual: 79 ft.

LUST:

Facility:
Name: NO LOCATION AID
Address: 100 AINSWORTH RD
City,State,Zip: WILMINGTON, MA 018870000
Current Status: **Response Action Outcome**
Release Tracking Number/Current Status: 3-0022652 / RAO
Status Date: 03/12/2004
Source Type: UST
Release Town: WILMINGTON
Notification Date: 03/07/2003
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported

Location Type: INDUSTRIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL #2
Quantity: 232 parts per million
Chemical: FUEL OIL #2
Quantity: 232 parts per million

Actions:
Action Type: Response Action Outcome - RAO

NO LOCATION AID (Continued) **S132537735**

Action Status: RAO Statement Received
Action Date: 3/12/2004
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/19/2004
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/7/2003
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/7/2003
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/1/2003
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/12/2003
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/12/2003
Response Action Outcome: Not reported

Release:
Name: NO LOCATION AID
Address: 100 AINSWORTH RD
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0022652 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 03/07/2003
Category: 72 HR
Status Date: 03/12/2004
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/12/2004
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S132537735**

Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	3/19/2004
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/7/2003
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/7/2003
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/1/2003
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/12/2003
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/12/2003
Response Action Outcome:	Not reported

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	232 parts per million
Chemical:	FUEL OIL #2
Quantity:	232 parts per million
Location Type:	INDUSTRIAL
Source:	UST

B22 **CP MCDONOUGH CONSTRUCTION** **MA SHWS** **S132532621**
NE **100 AINSWORTH RD** **MA LAST** **N/A**
1/4-1/2 **WILMINGTON, MA 01887** **MA RELEASE**
0.328 mi.
1732 ft. **Site 2 of 2 in cluster B**

Relative: **Lower**
Actual: **79 ft.**

SHWS:

Name:	CP MCDONOUGH CONSTRUCTION
Address:	100 AINSWORTH RD
City,State,Zip:	WILMINGTON, MA 01887
Facility ID:	3-0003766
Source Type:	VEHICLE
Release Town:	WILMINGTON
Notification Date:	03/06/1991
Category:	NONE
Associated ID:	Not reported
Current Status:	RAO
Status Date:	10/16/2006
Phase:	Not reported

CP MCDONOUGH CONSTRUCTION (Continued) **S132532621**

Response Action Outcome: B1
Oil Or Haz Material: Not reported

LAST:
Name: CP MCDONOUGH CONSTRUCTION
Address: 100 AINSWORTH RD
City,State,Zip: WILMINGTON, MA 01887
Release Tracking Number/Current Status: 3-0003766 / RAO
Source Type: AST
Release Town: WILMINGTON
Notification Date: 03/06/1991
Category: NONE
Associated ID: Not reported
Status Date: 10/16/2006
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Not reported

Chemicals:
Chemical: WASTE OIL
Quantity: Not reported
Location Type: COMMERCIAL
Source: AST
Source: VEHICLE

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/16/2006
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/16/2006
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/6/1991
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 3/6/1991
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 3/6/1991
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action

CP MCDONOUGH CONSTRUCTION (Continued) **S132532621**

Action Status:	Notice of Non-Compliance Issued
Action Date:	5/8/2006
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	PIP
Action Status:	Public Involvement Petition Received
Action Date:	8/11/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:

Name:	CP MCDONOUGH CONSTRUCTION
Address:	100 AINSWORTH RD
City,State,Zip:	WILMINGTON, MA 01887
Release Tracking Number/Current Status:	3-0003766 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	03/06/1991
Category:	NONE
Status Date:	10/16/2006
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/16/2006
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/16/2006
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/6/1991
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	3/6/1991
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS

CP MCDONOUGH CONSTRUCTION (Continued) **S132532621**

Action Date: 3/6/1991
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/8/2006
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: PIP
Action Status: Public Involvement Petition Received
Action Date: 8/11/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: WASTE OIL
Quantity: Not reported
Location Type: COMMERCIAL
Source: AST
Source: VEHICLE

23
East
1/4-1/2
0.362 mi.
1913 ft.

ROADWAY SPILL **MA SHWS S100830084**
SALEM ST OVER RTE 93 **MA RELEASE N/A**
WILMINGTON, MA 01887

Relative: Lower

Actual: 81 ft.

SHWS:
Name: ROADWAY SPILL
Address: SALEM ST OVER RTE 93
City,State,Zip: WILMINGTON, MA 01887
Facility ID: 3-0001880
Source Type: Not reported
Release Town: WILMINGTON
Notification Date: 09/02/1986
Category: NONE
Associated ID: Not reported
Current Status: DEPNDS
Status Date: 05/23/1996
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Not reported

Release:
Name: ROADWAY SPILL
Address: SALEM ST OVER RTE 93
City,State,Zip: WILMINGTON, MA 01887
Release Tracking Number/Current Status: 3-0001880 / DEPNDS
Primary ID: Not reported
Official City: WILMINGTON
Notification: 09/02/1986
Category: NONE
Status Date: 05/23/1996
Phase: Not reported
Response Action Outcome: -

ROADWAY SPILL (Continued) **S100830084**

Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: TREGS
Action Status: DEPNDS
Action Date: 5/23/1996
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 9/2/1986
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/2/1986
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

24
WSW
1/4-1/2
0.397 mi.
2097 ft.

RESIDENCE **MA LAST** **S110684387**
205 SALEM STREET **MA RELEASE** **N/A**
WILMINGTON, MA 01887

Relative:
Lower

Actual:
88 ft.

LAST:
Name: RESIDENCE
Address: 205 SALEM STREET
City,State,Zip: WILMINGTON, MA 018871123
Release Tracking Number/Current Status: 3-0029605 / RAO
Source Type: AST
Release Town: WILMINGTON
Notification Date: 10/25/2010
Category: TWO HR
Associated ID: Not reported
Status Date: 01/13/2014
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Not reported

Chemicals:
Chemical: FUEL OIL #2
Quantity: 10 gallons
Location Type: RESIDNTIAL
Source: AST

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/13/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENCE (Continued) **S110684387**

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 1/15/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/25/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/2/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 10/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 10/31/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 11/19/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/2/2011

RESIDENCE (Continued) **S110684387**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/27/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/8/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/7/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/8/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/12/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 3/15/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/22/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/17/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/22/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENCE (Continued) **S110684387**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/3/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/11/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/31/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/11/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 6/17/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/15/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/22/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 8/5/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/5/2014

RESIDENCE (Continued) **S110684387**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: RESIDENCE
Address: 205 SALEM STREET
City,State,Zip: WILMINGTON, MA 018871123
Release Tracking Number/Current Status: 3-0029605 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 10/25/2010
Category: TWO HR
Status Date: 01/13/2014
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/13/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 1/15/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/25/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/2/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

RESIDENCE (Continued) **S110684387**

reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 10/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 10/31/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 11/19/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/2/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/27/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/8/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/7/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

RESIDENCE (Continued) **S110684387**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/8/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/12/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 3/15/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/22/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/17/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/22/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/3/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/11/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/31/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

RESIDENCE (Continued) **S110684387**

reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/11/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 6/17/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/15/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/22/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 8/5/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 8/5/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 10 gallons
Location Type: RESIDNTIAL
Source: AST

C25 **LUBBER BROOK** **MA SHWS** **S101045400**
South **382 MIDDLESEX AVE** **MA RELEASE** **N/A**
1/4-1/2 **WILMINGTON, MA 01887** **MA SPILLS**
0.490 mi. **MA DRYCLEANERS**
2587 ft. **Site 1 of 2 in cluster C**

Relative:
Lower

Actual:
81 ft.

SHWS:

Name:	NO LOCATION AID
Address:	382 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0015199
Source Type:	Not reported
Release Town:	WILMINGTON
Notification Date:	06/09/1997
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	11/05/1997
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	NO LOCATION AID
Address:	382 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0015199 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	06/09/1997
Category:	120 DY
Status Date:	11/05/1997
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/20/1997
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	11/10/1997
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	11/5/1997
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/9/1997
Response Action Outcome:	Not reported

LUBBER BROOK (Continued) **S101045400**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/9/1997
Response Action Outcome: Not reported

Chemicals:
Chemical: VINYL CHLORIDE
Quantity: 180 micrograms per liter

MA Spills:

Facility ID:	3-4773	Spill ID:	N93-0002
Staff Lead:	NDI, K	Date Entered:	19940207
Last Entered:	19940207	First Response:	19930101
Spill Date:	19930101	Spill Time:	07:30AM
Report Date:	19930101	Report Time:	11:30AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	#2 FUEL OIL	Other Material:	Not reported
Qty Reported:	11-50	Qty Actual:	----------
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	----------
Source:	U.S.T.	Other Source:	Not reported
Incident:	SPILL	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	ERIC WOOD		
Notif Tel:	Not reported		
Days/Close:	0		

DRYCLEANERS:
Name: K AND M CLEANERS
Address: 382 MIDDLESEX AVE
City,State,Zip: WILMINGTON, MA 18872152
City,State,Zip: WILMINGTON, MA 18872152
Facility ID: 298582
Classification Type: Non-applicability classification--still in business but not using perc
Reg Obj Contact: Not reported
Reg Obj Mail Address: 382 Middlesex Ave
Mail Town Name: Wilmington
Mail Zip Code: 18872152
DEP Region Code: NE
Mailing State: MA
Reg Obj Phone: 9786589320

C26 **COMMERCIAL PROPERTY** **MA LUST** **S100830066**
South **382-384 MIDDLESEX AVE** **MA RELEASE** **N/A**
1/4-1/2 **WILMINGTON, MA 01887**
0.490 mi.
2587 ft. **Site 2 of 2 in cluster C**

Relative: LUST:
Lower
Actual: Facility:
81 ft. Name: COMMERCIAL PROPERTY
Address: 382-384 MIDDLESEX AVE

COMMERCIAL PROPERTY (Continued) **S100830066**

City,State,Zip:	WILMINGTON, MA 01887
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	3-0004773 / RAO
Status Date:	10/31/1997
Source Type:	UST
Release Town:	WILMINGTON
Notification Date:	10/01/1993
Category:	NONE
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PETROLEUM BASED OIL
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/1/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/31/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/8/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/8/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	8/8/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

COMMERCIAL PROPERTY (Continued) **S100830066**

Release:

Name:	COMMERCIAL PROPERTY
Address:	382-384 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 01887
Release Tracking Number/Current Status:	3-0004773 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	10/01/1993
Category:	NONE
Status Date:	10/31/1997
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/1/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/31/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/8/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/8/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	8/8/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	PETROLEUM BASED OIL
Quantity:	Not reported
Location Type:	COMMERCIAL
Source:	UST

27
North
1/2-1
0.516 mi.
2722 ft.

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA374040
200 BALLARDVALE STREET
WILMINGTON, MA 01888

MA SHWS
MA RELEASE
MA ASBESTOS
MA TIER 2

S112290231
N/A

Relative:
Higher

Actual:
100 ft.

SHWS:

Name:	PROPOSED DETENTION POND AREA
Address:	200 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA 018871074
Facility ID:	3-0031804
Source Type:	UNKNOWN
Release Town:	WILMINGTON
Notification Date:	10/09/2013
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	10/17/2013
Phase:	Not reported
Response Action Outcome:	B1
Oil Or Haz Material:	Hazardous Material

Release:

Name:	PROPOSED DETENTION POND AREA
Address:	200 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA 018871074
Release Tracking Number/Current Status:	3-0031804 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	10/09/2013
Category:	120 DY
Status Date:	10/17/2013
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	1/29/2014
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/17/2013
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/9/2013
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/9/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/19/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: ARSENIC
Quantity: 20.6 milligrams per kilogram
Source: UNKNOWN

ASBESTOS:
Name: BUILDING
Address: 200 BALLARDVALE ST
City,State,Zip: WILMINGTON, MA
Notification: Not reported
DEP Region: Not reported
Notifiers Name: Not reported
Start Date: 01/25/2006
End Date: 02/15/2006
Date Entered: Not reported
Entry Date: 01/13/2006
Quantity Materical Removed SF: 500.00
Quantity Material Removed LF: 2000.00
Project Description: WINDOW,DOOR,CAULK,GLAZING,VAT,MASTIC
AR Tracking ID: 63398
Super Lic Number: AS032358
Monitor Lic Number: AA000162
Lab Lic Number: AA000162
Year: 2006
Sticker Number: 302457
Form Type: ANF-001
Fee Status: F
Facility Phone: Not reported
Sub Town: Not reported
Worksite: GROUND FLR
Occupied: -1
Contractor: AC000427
Contract Type: Not reported
Hours: 6-2
Project Type: Not reported
Abatement Process: Not reported
Location: Not reported
Decon Process: 3 CHAMBER

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	GRIFFITH PROPERTIES
Owner Address:	ONE POST OFFICE SQ
Owner City:	BOSTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	CHARLES GEORGE TRUCKING
Transporter Address:	209 NASHUA RD
Transporter City:	LONDONDERRY
Transporter State:	MA
Final Site:	9
Certified Name:	RICHARD QUINN
Cert Sign Date:	01/11/2006
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	mmitchell

Name:	BUILDING
Address:	200 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	05/25/2005
End Date:	11/25/2005
Date Entered:	Not reported
Entry Date:	05/16/2005
Quantity Materical Removed SF:	30900.00
Quantity Material Removed LF:	Not reported
Project Description:	WATERPROOFING/FLASHING, WINDOW/DOOR CAULKING/GLAZI
AR Tracking ID:	53503
Super Lic Number:	AS031849
Monitor Lic Number:	AA000162
Lab Lic Number:	AA000162
Year:	2005
Sticker Number:	302120
Form Type:	ANF-001
Fee Status:	F
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	BUILDING AND CONNECTOR BUILDING
Occupied:	-1
Contractor:	AC000427
Contract Type:	Not reported
Hours:	7A-4P
Project Type:	Not reported
Abatement Process:	Not reported

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Location:	Not reported
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	GRIFFITH PROPERTIES
Owner Address:	1 POST OFFICE SQUARE
Owner City:	BOSTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	CHARLES GEORGE TRUCKING
Transporter Address:	209 NASHUA RD
Transporter City:	LONDONDERRY
Transporter State:	NH
Final Site:	7
Certified Name:	RICHARD QUINN
Cert Sign Date:	05/13/2005
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	ESandler

Name:	BLDG
Address:	200 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	11/22/2004
End Date:	06/30/2005
Date Entered:	Not reported
Entry Date:	11/12/2004
Quantity Materical Removed SF:	15600.00
Quantity Material Removed LF:	Not reported
Project Description:	WATERPROOFING/FLASHING, TRANSITE BRD,WALL BRD
AR Tracking ID:	47255
Super Lic Number:	AS031849
Monitor Lic Number:	AA000162
Lab Lic Number:	AA000162
Year:	2004
Sticker Number:	300678
Form Type:	ANF-001
Fee Status:	F
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	BLDG 2- THROUGHOUT
Occupied:	-1
Contractor:	AC000427
Contract Type:	Not reported
Hours:	7-4

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	GRIFFITH PROPERTIES
Owner Address:	ONE POST OFFICE SQ
Owner City:	BOSTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	CHARLES GEORGE TRUCKING
Transporter Address:	209 NASHUA RD
Transporter City:	LONDONDERRY
Transporter State:	MA
Final Site:	18
Certified Name:	RICHARD QUINN
Cert Sign Date:	08/11/2004
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	MMitchell

Name:	BUILDING
Address:	200 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/20/2011
End Date:	05/20/2011
Date Entered:	Not reported
Entry Date:	04/08/2011
Quantity Materical Removed SF:	4500.00
Quantity Material Removed LF:	.00
Project Description:	Trns
AR Tracking ID:	140086
Super Lic Number:	AS032358
Monitor Lic Number:	AA000162
Lab Lic Number:	AA000162
Year:	2011
Sticker Number:	100123932
Form Type:	ANF-001
Fee Status:	Fifty
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	-1
Contractor:	AC000427

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Contract Type:	Off
Hours:	Week days: 6A-2P Week end:
Project Type:	Renv
Abatement Process:	Fcontain
Location:	Indoors
Decon Process:	3 STAGE DECONTAMINATION UNIT
Disposal Methods:	ALL MATERIALS TO BE WETTED AND DOUBLE BAGGED
Facility Usage:	OFFICE SPACE
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	GRIFFITH PROPERTIES
Owner Address:	ONE POST OFFICE SQUARE
Owner City:	BOSTON
Owner State:	MA
On Site Manager Name:	N/A
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	200,000
Transporter Name:	THE AULSON COMPANY
Transporter Address:	49 DANTON DRIVE
Transporter City:	METHUEN
Transporter State:	Not reported
Final Site:	39
Certified Name:	MARK MORTIMER
Cert Sign Date:	04/08/2011
Certified Company:	AULSON COMPANY
Certified Phone:	9789754500
Entered_by:	Not reported

TIER 2:

Facility ID:	8250
Name:	OSRAM SYLVANIA
Address:	200 BALLARDVALE ST
City,State,Zip:	BUILDING 2 WILMINGTON, MA 01887
Country:	Not reported
Mailing Address:	Not reported
Mailing City,State,Zip:	Not reported
Mailing Country:	Not reported
Report Year:	2019
All Chemicals Same As Last Year:	Not reported
Longitude:	Not reported
Date Signed:	Not reported
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	Not reported
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	Not reported
Fees Total:	Not reported
Number of Employees:	Not reported
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	Not reported

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Submitted By:	Not reported
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

Facility ID:	7426
Name:	VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403)
Address:	200 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA 01887
Country:	Not reported
Mailing Address:	Not reported
Mailing City,State,Zip:	Not reported
Mailing Country:	Not reported
Report Year:	2014
All Chemicals Same As Last Year:	Not reported
Longitude:	Not reported
Date Signed:	Not reported
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	Not reported
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	Not reported
Fees Total:	Not reported
Number of Employees:	Not reported
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	Not reported
Submitted By:	Not reported
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

Facility ID:	3740403
Name:	VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403)
Address:	200 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA 018887
Country:	USA
Mailing Address:	One Verizon Way VC51N069
Mailing City,State,Zip:	Basking Ridge, NJ 07920
Mailing Country:	USA
Report Year:	2011
All Chemicals Same As Last Year:	N
Longitude:	Not reported
Date Signed:	2/10/2012
Notes:	Not reported
Dike Or Other Safeguard:	Not reported

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Latitude:	Not reported
Facility Dept:	Verizon Wireless - Network
Failed Validation:	Not reported
Date Modified:	12/05/2012
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	MA2011
Submitted By:	Richard A. Craig
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	Id132871598661003188
ID:	517212
Type:	NAICS
Description:	RADIOTELEPHONE COMMUNICATIONS
Last Modified:	02/08/2012

TIER 2:

Contact:

Contact Record ID:	ID2011VZW0053
Title:	Director, Network Operations
Contact Name:	Sarno-Bowen
Contact Email:	Susan.Calderon@VerizonWireless.com
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Emergency Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	2/20/2012

Contact:

Contact Record ID:	ID2011VZW0066
Title:	EPCRA Coordinator
Contact Name:	Calderon
Contact Email:	Susan.Calderon@VerizonWireless.com
Contact Mail Address:	One Verizon Way VC51N069
Contact Mail Country:	Not reported
Contact1 Type:	Regulatory Point of Contact
Contact2 Type:	Submitter
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/15/2012

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Contact:

Contact Record ID:	ID2011VZW0067
Title:	Director, Compliance
Contact Name:	Craig
Contact Email:	Richard.Craig@VerizonWireless.com
Contact Mail Address:	One Verizon Way VC51N069
Contact Mail Country:	USA
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	2/20/2012

Facility ID:	37404032012
Name:	VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403)
Address:	200 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA 01887
Country:	USA
Mailing Address:	One Verizon Way VC51N069
Mailing City,State,Zip:	Basking Ridge, NJ 07920
Mailing Country:	USA
Report Year:	2012
All Chemicals Same As Last Year:	N
Longitude:	Not reported
Date Signed:	2/10/2013
Notes:	Not reported
Dike Or Other Safeguard:	Not reported
Latitude:	Not reported
Facility Dept:	Verizon Wireless - Network
Failed Validation:	Not reported
Date Modified:	11/15/2013
Fees Total:	Not reported
Number of Employees:	0
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	MA2012
Submitted By:	Richard A. Craig, Director, Compliance
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	Id1359747716367007812012
ID:	517212
Type:	NAICS
Description:	RADIOTELEPHONE COMMUNICATIONS
Last Modified:	02/01/2013

TIER 2:

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Contact:

Contact Record ID:	ID2012VZW0053
Title:	Director, Network Operations
Contact Name:	Sarno-Bowen
Contact Email:	Susan.Calderon@VerizonWireless.com
Contact Mail Address:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Emergency Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	11/15/2013

Contact:

Contact Record ID:	ID2012VZW0066
Title:	EPCRA Coordinator
Contact Name:	Calderon
Contact Email:	Susan.Calderon@VerizonWireless.com
Contact Mail Address:	One Verizon Way VC51N069
Contact Mail Country:	Not reported
Contact1 Type:	Regulatory Point of Contact
Contact2 Type:	Submitter
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/15/2013

Contact:

Contact Record ID:	ID2012VZW0067
Title:	Director, Compliance
Contact Name:	Craig
Contact Email:	Susan.Calderon@VerizonWireless.com
Contact Mail Address:	One Verizon Way VC51N069
Contact Mail Country:	USA
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	11/15/2013

Facility ID:	8250
Name:	OSRAM SYLVANIA
Address:	200 BALLARDVALE ST
City,State,Zip:	BUILDING 2 WILMINGTON, MA 01887
Country:	Not reported
Mailing Address:	Not reported
Mailing City,State,Zip:	Not reported
Mailing Country:	Not reported
Report Year:	2019
All Chemicals Same As Last Year:	Not reported
Longitude:	Not reported
Date Signed:	Not reported
Notes:	Not reported

VERIZON WIRELESS WILMINGTON (VZW OFFICE) (MA3740403) (Continued) **S112290231**

Dike Or Other Safeguard:	Not reported
Latitude:	Not reported
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	Not reported
Fees Total:	Not reported
Number of Employees:	Not reported
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	Not reported
Submitted By:	Not reported
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Inactive
Latest Report:	2019 Tier II Report Annual (02/20/2020) - Completed
EHS Above TPQ:	Not reported

---

28 **NO LOCATION AID** **MA SHWS** **S121146162**
ESE **1 SHERIDAN ROAD** **MA LUST** **N/A**
1/2-1 **WILMINGTON, MA 01887** **MA RELEASE**
0.522 mi.
2758 ft.

Relative:
Lower

Actual:
84 ft.

SHWS:

Name:	NO LOCATION AID
Address:	1 SHERIDAN ROAD
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0034323
Source Type:	TANK
Release Town:	WILMINGTON
Notification Date:	07/07/2017
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	02/09/2018
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Oil

LUST:

Facility:

Name:	NO LOCATION AID
Address:	1 SHERIDAN ROAD
City,State,Zip:	WILMINGTON, MA 018870000
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0034323 / PSNC
Status Date:	02/09/2018
Source Type:	UST
Release Town:	WILMINGTON
Notification Date:	07/07/2017
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN

NO LOCATION AID (Continued) **S121146162**

Oil Or Haz Material: Oil

Location Type: RESIDNTIAL
Source: TANK
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL VOCS
Quantity: 255 parts per million

Actions:
Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/20/2017
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/20/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/14/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/15/2017
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/21/2017
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/14/2018
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/9/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 2/9/2018
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC

NO LOCATION AID (Continued) **S121146162**

Action Date: 2/9/2018
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/31/2017
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/7/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/7/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/10/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: DEPRET
Action Date: 8/10/2017
Response Action Outcome: PN

Release:
Name: NO LOCATION AID
Address: 1 SHERIDAN ROAD
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0034323 / PSNC
Primary ID: Not reported
Official City: WILMINGTON
Notification: 07/07/2017
Category: 72 HR
Status Date: 02/09/2018
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/20/2017
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/20/2017
Response Action Outcome: PN

NO LOCATION AID (Continued) **S121146162**

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/14/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/15/2017
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/21/2017
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/14/2018
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/9/2018
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 2/9/2018
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 2/9/2018
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/31/2017
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/7/2017
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/7/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/10/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: DEPRET

NO LOCATION AID (Continued) **S121146162**

Action Date: 8/10/2017
Response Action Outcome: PN

Chemicals:
Chemical: #2 FUEL OIL VOCS
Quantity: 255 parts per million
Location Type: RESIDNTIAL
Source: TANK
Source: UST

---

29 North 1/2-1 0.546 mi. 2885 ft.

VACANT BUILDING
150 BALLARDVALE ST
WILMINGTON, MA 01887

MA SHWS **S108962950**
MA RELEASE **N/A**

Relative: Higher

Actual: 104 ft.

SHWS:
Name: VACANT BUILDING
Address: 150 BALLARDVALE ST
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0027245
Source Type: Not reported
Release Town: WILMINGTON
Notification Date: 11/07/2007
Category: 120 DY
Associated ID: Not reported
Current Status: RAO
Status Date: 03/04/2008
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Release:
Name: VACANT BUILDING
Address: 150 BALLARDVALE ST
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0027245 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 11/07/2007
Category: 120 DY
Status Date: 03/04/2008
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/15/2007
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E

VACANT BUILDING (Continued) **S108962950**

Action Date: 11/7/2007
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/7/2007
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/4/2008
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/1/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 33 milligrams per kilogram

---

30 South 1/2-1 0.567 mi. 2995 ft. **COMMERCIAL PROPERTY** **MA SHWS S100362557**
362 MIDDLESEX ST **MA RELEASE N/A**
WILMINGTON, MA 01887

Relative: Lower
Actual: 77 ft.

SHWS:
Name: COMMERCIAL PROPERTY
Address: 362 MIDDLESEX ST
City,State,Zip: WILMINGTON, MA 01887
Facility ID: 3-0003615
Source Type: UNKNOWN
Release Town: WILMINGTON
Notification Date: 07/15/1991
Category: NONE
Associated ID: Not reported
Current Status: LSPNFA
Status Date: 07/29/1997
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Not reported

Release:
Name: COMMERCIAL PROPERTY
Address: 362 MIDDLESEX ST
City,State,Zip: WILMINGTON, MA 01887
Release Tracking Number/Current Status: 3-0003615 / LSPNFA
Primary ID: Not reported
Official City: WILMINGTON
Notification: 07/15/1991
Category: NONE
Status Date: 07/29/1997
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

COMMERCIAL PROPERTY (Continued) **S100362557**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	7/15/1991
Response Action Outcome:	Not reported
Action Type:	TREGS
Action Status:	LSPNFA
Action Date:	7/29/1997
Response Action Outcome:	Not reported

Chemicals:

Chemical:	PETROLEUM BASED OIL
Quantity:	Not reported
Location Type:	COMMERCIAL
Source:	UNKNOWN

D31 **NO LOCATION AID** **MA SHWS** **S111085952**
South **363 MIDDLESEX AVE** **MA RELEASE** **N/A**
1/2-1 **WILMINGTON, MA 01887** **MA HW GEN**
0.606 mi.
3200 ft. **Site 1 of 2 in cluster D**

Relative:
Lower

Actual:
81 ft.

SHWS:

Name:	NO LOCATION AID
Address:	363 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0030079
Source Type:	Not reported
Release Town:	WILMINGTON
Notification Date:	06/14/2011
Category:	120 DY
Associated ID:	Not reported
Current Status:	DPS
Status Date:	06/14/2012
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	NO LOCATION AID
Address:	363 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0030079 / DPS
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	06/14/2011
Category:	120 DY
Status Date:	06/14/2012
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

NO LOCATION AID (Continued) **S111085952**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	4/9/2012
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/14/2011
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/14/2011
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/14/2011
Response Action Outcome:	Not reported
Action Type:	Downgradient Property Status
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/14/2012
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/30/2011
Response Action Outcome:	Not reported

Chemicals:

Chemical:	2-METHYLNAPHTHALENE
Quantity:	10.3 milligrams per kilogram
Chemical:	ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity:	236 milligrams per kilogram
Chemical:	AROMATIC HYDROCARBONS C9 THROUGH C10
Quantity:	169 milligrams per kilogram
Chemical:	NAPHTHALENE
Quantity:	4.65 milligrams per kilogram

HW GEN:

Name:	NORTHERN LIGHTS PAINTING
Address:	363 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 01887
EPA Id:	MAR000568410
RCRA Generator Status:	SQG
State Generator Status:	Not reported

D32
South
1/2-1
0.622 mi.
3283 ft.

SHELL BRANDED SERVICE STATION
361 MIDDLESEX AVE
WILMINGTON, MA 01887

Site 2 of 2 in cluster D

MA SHWS **S132539884**
MA RELEASE **N/A**

Relative:
Lower

Actual:
81 ft.

SHWS:

Name:	SHELL BRANDED SERVICE STATION
Address:	361 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0028069
Source Type:	Not reported
Release Town:	WILMINGTON
Notification Date:	10/08/2008
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	08/30/2013
Phase:	PHASE II
Response Action Outcome:	B1
Oil Or Haz Material:	Hazardous Material

Release:

Name:	SHELL BRANDED SERVICE STATION
Address:	361 MIDDLESEX AVE
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0028069 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	10/08/2008
Category:	120 DY
Status Date:	08/30/2013
Phase:	PHASE II
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	1/27/2014
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/2/2012
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	10/3/2011
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

SHELL BRANDED SERVICE STATION (Continued) **S132539884**

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 10/3/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/6/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/6/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/6/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/6/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 10/8/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/26/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/26/2008

SHELL BRANDED SERVICE STATION (Continued) **S132539884**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/29/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/11/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/30/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: CHROMIUM (TOTAL)
Quantity: 203 milligrams per kilogram
Chemical: MTBE
Quantity: 0.142 milligrams per kilogram

E33 **NO LOCATION AID** **MA SHWS S116756104**
East **500 TO 773 SALEM STREET** **MA RELEASE N/A**
1/2-1 **WILMINGTON, MA 01887**
0.627 mi.
3312 ft. **Site 1 of 3 in cluster E**

Relative: **Lower**
Actual: **85 ft.**

SHWS:
Name: NO LOCATION AID
Address: 500 TO 773 SALEM STREET
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0032388
Source Type: FUELTANK
Release Town: WILMINGTON
Notification Date: 08/21/2014
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 10/20/2014
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Name: NO LOCATION AID
Address: 500 TO 773 SALEM STREET
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0032388
Source Type: SADDLE
Release Town: WILMINGTON
Notification Date: 08/21/2014
Category: TWO HR

NO LOCATION AID (Continued) **S116756104**

Associated ID: Not reported
Current Status: PSNC
Status Date: 10/20/2014
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Name: NO LOCATION AID
Address: 500 TO 773 SALEM STREET
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0032388
Source Type: TANKS
Release Town: WILMINGTON
Notification Date: 08/21/2014
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 10/20/2014
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Name: NO LOCATION AID
Address: 500 TO 773 SALEM STREET
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0032388
Source Type: 2 VEHICLE
Release Town: WILMINGTON
Notification Date: 08/21/2014
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 10/20/2014
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Release:
Name: NO LOCATION AID
Address: 500 TO 773 SALEM STREET
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0032388 / PSNC
Primary ID: Not reported
Official City: WILMINGTON
Notification: 08/21/2014
Category: TWO HR
Status Date: 10/20/2014
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received

NO LOCATION AID (Continued) **S116756104**

Action Date: 10/20/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 10/20/2014
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/21/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/21/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/4/2014
Response Action Outcome: PN

Chemicals:
Chemical: DIESEL FUEL
Quantity: 35 gallons
Location Type: ROADWAY
Source: 2 VEHICLE
Source: SADDLE
Source: FUELTANK
Source: TANKS

E34 **WINCHESTER FAMILY MEDICAL CENTER** **MA SHWS S132541212**
East **500 SALEM STREET** **MA RELEASE N/A**
1/2-1 **WILMINGTON, MA**
0.627 mi.
3312 ft. **Site 2 of 3 in cluster E**

Relative: Lower
Actual: 85 ft.

SHWS:
Name: WINCHESTER FAMILY MEDICAL CENTER
Address: 500 SALEM STREET
City,State,Zip: WILMINGTON, MA
Facility ID: 3-0031565
Source Type: VEHICLE
Release Town: WILMINGTON
Notification Date: 06/04/2013
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 07/26/2013
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Not reported

Release:
Name: WINCHESTER FAMILY MEDICAL CENTER
Address: 500 SALEM STREET

WINCHESTER FAMILY MEDICAL CENTER (Continued) **S132541212**

City,State,Zip: WILMINGTON, MA
Release Tracking Number/Current Status: 3-0031565 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 06/04/2013
Category: TWO HR
Status Date: 07/26/2013
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/28/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 6/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 6/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 6/5/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/10/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

WINCHESTER FAMILY MEDICAL CENTER (Continued) **S132541212**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/10/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/26/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: GASOLINE
Quantity: 33 gallons
Location Type: COMMERCIAL
Source: VEHICLE

E35 **NO LOCATION AID** **MA SHWS S132533949**
East **500 SALEM ST** **MA RELEASE N/A**
1/2-1 **WILMINGTON, MA 01887**
0.627 mi.
3312 ft. **Site 3 of 3 in cluster E**

Relative: **Lower**
Actual: **85 ft.**

SHWS:
Name: NO LOCATION AID
Address: 500 SALEM ST
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0013037
Source Type: Not reported
Release Town: WILMINGTON
Notification Date: 10/12/1995
Category: 120 DY
Associated ID: Not reported
Current Status: RAO
Status Date: 10/12/1995
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Not reported

Release:
Name: NO LOCATION AID
Address: 500 SALEM ST
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0013037 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 10/12/1995
Category: 120 DY
Status Date: 10/12/1995
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Not reported

NO LOCATION AID (Continued) **S132533949**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/12/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/12/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/12/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	TOTAL PETROLEUM HYDROCARBONS (TPH)
Quantity:	1800 parts per million

36
ESE
1/2-1
0.645 mi.
3406 ft.

RESIDENCE
16 CARSON AVE
WILMINGTON, MA 01887

MA SHWS **S111277267**
MA LUST **N/A**
MA RELEASE
MA ENF

Relative:
Lower

Actual:
78 ft.

SHWS:

Name:	RESIDENCE
Address:	16 CARSON AVE
City,State,Zip:	WILMINGTON, MA 018871443
Facility ID:	3-0030148
Source Type:	TANK
Release Town:	WILMINGTON
Notification Date:	07/12/2011
Category:	72 HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	01/05/2015
Phase:	PHASE II
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

LUST:

Facility:

Name:	RESIDENCE
Address:	16 CARSON AVE
City,State,Zip:	WILMINGTON, MA 018871443
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	3-0030148 / PSNC
Status Date:	01/05/2015
Source Type:	UST

RESIDENCE (Continued) **S111277267**

Release Town: WILMINGTON
Notification Date: 07/12/2011
Category: 72 HR
Associated ID: Not reported
Phase: PHASE II
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Location Type: RESIDNTIAL
Source: TANK
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL #2
Quantity: 238 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/17/2014
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/17/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/18/2013
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 1/18/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/23/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/5/2015
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 1/5/2015
Response Action Outcome: PN

Action Type: RLFA

RESIDENCE (Continued) **S111277267**

Action Status: FOLOFF
Action Date: 10/19/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 10/26/2016
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 10/6/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/7/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/9/2011
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2013
Response Action Outcome: PN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: EPETOP
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 3/21/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 5/2/2012

RESIDENCE (Continued) **S111277267**

Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/12/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/23/2012
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/26/2011
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/26/2011
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDD1U
Action Date: 7/27/2011
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/2/2011
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 8/30/2013
Response Action Outcome: PN

RESIDENCE (Continued) **S111277267**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/30/2013
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/13/2013
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/13/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/15/2011
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 9/19/2012
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/26/2012
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/3/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 9/4/2013
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/7/2011
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/9/2011
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/9/2011
Response Action Outcome: PN

Action Type: BWS03
Action Status: APPROV

RESIDENCE (Continued) **S111277267**

Action Date: Not reported
Response Action Outcome: PN

Release:
Name: RESIDENCE
Address: 16 CARSON AVE
City,State,Zip: WILMINGTON, MA 018871443
Release Tracking Number/Current Status: 3-0030148 / PSNC
Primary ID: Not reported
Official City: WILMINGTON
Notification: 07/12/2011
Category: 72 HR
Status Date: 01/05/2015
Phase: PHASE II
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/17/2014
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/17/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/18/2013
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 1/18/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/23/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/5/2015
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 1/5/2015
Response Action Outcome: PN

RESIDENCE (Continued) **S111277267**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/19/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 10/26/2016
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 10/6/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/7/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/9/2011
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2013
Response Action Outcome: PN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: EPETOP
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/27/2013
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 3/21/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT

RESIDENCE (Continued) **S111277267**

Action Date: 5/2/2012
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/12/2011
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 7/19/2012
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/23/2012
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/26/2011
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/26/2011
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDD1U
Action Date: 7/27/2011
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/2/2011
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 8/30/2013
Response Action Outcome: PN

RESIDENCE (Continued) **S111277267**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/30/2013
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/13/2013
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/13/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/15/2011
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 9/19/2012
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/26/2012
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/3/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 9/4/2013
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/7/2011
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/9/2011
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/9/2011
Response Action Outcome: PN

Action Type: BWS03
Action Status: APPROV

RESIDENCE (Continued) **S111277267**

Action Date: Not reported
Response Action Outcome: PN

Chemicals:
Chemical: FUEL OIL #2
Quantity: 238 parts per million
Location Type: RESIDNTIAL
Source: TANK
Source: UST

ENFORCEMENT:
Name: CENTRAL DEVELOPMENT, LLC
Address: 16 CARSON AVE
City,State,Zip: WILMINGTON, MA 018871443
Region: NERO
DEP Region: NERO
DEP Program: 3c
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0030148
High Or Low Level Enforcement: LLE
FMF #: 0
Town Where Violation Occurred: WILMINGTON
Date Executed: 09/13/2013
ENF #: Faux Enf- 2279
Document Type: IDL
AG Ref (Y/N): Not reported
Doc Archived (Y/N): NO
EJ Community (Y/N): YES
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Commercially Owned

Name: CENTRAL DEVELOPMENT LLC
Address: 16 CARSON AVE
City,State,Zip: WILMINGTON, MA 018871443
Region: NERO
DEP Region: NERO
DEP Program: 3c
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0030148
High Or Low Level Enforcement: LLE
FMF #: 0
Town Where Violation Occurred: WILMINGTON
Date Executed: 08/30/2013
ENF #: Faux Enf- 2264
Document Type: IDL

RESIDENCE (Continued) **S111277267**

AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	NO
EJ Community (Y/N):	YES
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

37
SE
1/2-1
0.646 mi.
3410 ft.

NO LOCATION AID
81 HIGH ST
WILMINGTON, MA 01887

MA SHWS **S108476878**
MA LAST **N/A**
MA RELEASE
MA ENF

Relative:
Lower

Actual:
91 ft.

SHWS:

Name:	NO LOCATION AID
Address:	81 HIGH ST
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0026750
Source Type:	PIPE
Release Town:	WILMINGTON
Notification Date:	04/16/2007
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	05/08/2024
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

LAST:

Name:	NO LOCATION AID
Address:	81 HIGH ST
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0026750 / PSNC
Source Type:	AST
Release Town:	WILMINGTON
Notification Date:	04/16/2007
Category:	TWO HR
Associated ID:	Not reported
Status Date:	05/08/2024
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Not reported

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	100 gallons
Chemical:	FUEL OIL #2
Quantity:	Not reported
Location Type:	RESIDNTIAL

NO LOCATION AID (Continued) **S108476878**

Source: AST
Source: PIPE

Actions:

Action Type: FTLI
Action Status: APPREC
Action Date: 10/19/2010
Response Action Outcome: PN

Action Type: FTLI
Action Status: APPACC
Action Date: 11/5/2010
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/12/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/28/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 3/5/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/5/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDD1A
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/18/2007
Response Action Outcome: PN

NO LOCATION AID (Continued) **S108476878**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/18/2007
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/19/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLFLD
Action Date: 5/7/2007
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/8/2024
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 5/8/2024
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/2007
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/15/2007
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 7/17/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 7/23/2007
Response Action Outcome: PN

Action Type: FTLI
Action Status: Action Status or AUL Terminated
Action Date: 7/30/2012
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/16/2007
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received

NO LOCATION AID (Continued) **S108476878**

Action Date: 8/16/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRUN
Action Date: 9/17/2007
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/17/2007
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 9/23/2009
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 9/5/2007
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/7/2023
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/7/2023
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 9/8/2010
Response Action Outcome: PN

Release:
Name: NO LOCATION AID
Address: 81 HIGH ST
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0026750 / PSNC
Primary ID: Not reported
Official City: WILMINGTON
Notification: 04/16/2007
Category: TWO HR
Status Date: 05/08/2024
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

NO LOCATION AID (Continued) **S108476878**

Action Type: FTLI
Action Status: APPREC
Action Date: 10/19/2010
Response Action Outcome: PN

Action Type: FTLI
Action Status: APPACC
Action Date: 11/5/2010
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 2/12/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/28/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 3/5/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/5/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDD1A
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 4/16/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/18/2007
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action

NO LOCATION AID (Continued) **S108476878**

Action Date: 4/18/2007
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/19/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLFLD
Action Date: 5/7/2007
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/8/2024
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 5/8/2024
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/2007
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/15/2007
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 7/17/2008
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 7/23/2007
Response Action Outcome: PN

Action Type: FTLI
Action Status: Action Status or AUL Terminated
Action Date: 7/30/2012
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/16/2007
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/16/2007
Response Action Outcome: PN

NO LOCATION AID (Continued) **S108476878**

Action Type: RLFA
Action Status: FLDRUN
Action Date: 9/17/2007
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/17/2007
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 9/23/2009
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 9/5/2007
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/7/2023
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/7/2023
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 9/8/2010
Response Action Outcome: PN

Chemicals:
Chemical: FUEL OIL #2
Quantity: 100 gallons
Chemical: FUEL OIL #2
Quantity: Not reported
Location Type: RESIDNTIAL
Source: AST
Source: PIPE

ENFORCEMENT:
Name: SCHOFIELD, LEANE
Address: 81 HIGH ST
City,State,Zip: WILMINGTON, MA 018870000
Region: NERO
DEP Region: NERO
DEP Program: 3a
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0026750
High Or Low Level Enforcement: LLE
FMF #: 0

NO LOCATION AID (Continued) **S108476878**

Town Where Violation Occurred:	Not reported
Date Executed:	07/17/2008
ENF #:	NON-NE-08-3A069
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	NO
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Name:	JARET AND BARBARA BALTER, JEFFREY WOODMAN
Address:	81 HIGH ST
City,State,Zip:	WILMINGTON, MA 018870000
Region:	NERO
DEP Region:	NERO
DEP Program:	3
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0026750
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Town Where Violation Occurred:	WILMINGTON
Date Executed:	09/07/2023
ENF #:	00016194
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	YES
EJ Community (Y/N):	NO
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

F38
NE
1/2-1
0.733 mi.
3870 ft.

ABIGAIL ISLAND DPW STORAGE YARD
135 ANDOVER ST
WILMINGTON, MA 01887

Site 1 of 2 in cluster F

MA SHWS **S132537462**
MA RELEASE **N/A**

Relative:
Lower

Actual:
80 ft.

SHWS:

Name:	ABIGAIL ISLAND DPW STORAGE YARD
Address:	135 ANDOVER ST
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0021979
Source Type:	Not reported
Release Town:	WILMINGTON
Notification Date:	07/22/2002
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/22/2002
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Hazardous Material

Release:

Name:	ABIGAIL ISLAND DPW STORAGE YARD
Address:	135 ANDOVER ST
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0021979 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	07/22/2002
Category:	120 DY
Status Date:	07/22/2002
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/22/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	7/22/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/22/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

ABIGAIL ISLAND DPW STORAGE YARD (Continued) **S132537462**

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	7/22/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/22/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	ARSENIC
Quantity:	240 milligrams per kilogram

F39 **DPW GARAGE** **MA SHWS** **S132536539**
NE **135 ANDOVER ST** **MA RELEASE** **N/A**
1/2-1 **WILMINGTON, MA 01887**
0.733 mi.
3870 ft. **Site 2 of 2 in cluster F**

Relative:
Lower

Actual:
80 ft.

SHWS:

Name:	DPW GARAGE
Address:	135 ANDOVER ST
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0019809
Source Type:	UNKNOWN
Release Town:	WILMINGTON
Notification Date:	08/08/2000
Category:	120 DY
Associated ID:	Not reported
Current Status:	TMPS
Status Date:	09/14/2015
Phase:	PHASE V
Response Action Outcome:	TN
Oil Or Haz Material:	Not reported

Release:

Name:	DPW GARAGE
Address:	135 ANDOVER ST
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0019809 / TMPS
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	08/08/2000
Category:	120 DY
Status Date:	09/14/2015
Phase:	PHASE V
Response Action Outcome:	TN - TN
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Abatement Measure

DPW GARAGE (Continued) **S132536539**

Action Status: Written Plan Received
Action Date: 10/13/2000
Response Action Outcome: TN

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/16/2000
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/12/2008
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 2/12/2008
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/14/2011
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 2/14/2011
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 2/16/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/16/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 2/17/2010
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/17/2010
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/2/2015
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 2/2/2015

DPW GARAGE (Continued) **S132536539**

Response Action Outcome: TN

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 2/7/2001
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 2/7/2002
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINI
Action Date: 2/8/2007
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 2/8/2007
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 3/24/2006
Response Action Outcome: TN

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 7/14/2022
Response Action Outcome: TN

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 7/14/2022
Response Action Outcome: TN

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 7/24/2001
Response Action Outcome: TN

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 7/30/2003
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/12/2014
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 8/12/2014
Response Action Outcome: TN

DPW GARAGE (Continued) **S132536539**

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 8/13/2007
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/13/2007
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 8/14/2006
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 8/14/2006
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 8/14/2006
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: REVMP
Action Date: 8/14/2006
Response Action Outcome: TN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/14/2006
Response Action Outcome: TN

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/15/2001
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/15/2001
Response Action Outcome: TN

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 8/15/2001
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/17/2010
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received

DPW GARAGE (Continued) **S132536539**

Action Date: 8/17/2010
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/19/2008
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/19/2008
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 8/19/2008
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/2/2006
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 8/20/2009
Response Action Outcome: TN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/20/2009
Response Action Outcome: TN

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 8/21/2003
Response Action Outcome: TN

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/21/2003
Response Action Outcome: TN

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 8/23/2004
Response Action Outcome: TN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/8/2000
Response Action Outcome: TN

Action Type: Release Abatement Measure
Action Status: Oral Approval of Plan or Action
Action Date: 8/8/2000
Response Action Outcome: TN

DPW GARAGE (Continued) **S132536539**

Action Type: Response Action Outcome - RAO
Action Status: TSNRCD
Action Date: 9/14/2015
Response Action Outcome: TN

Action Type: Phase 5
Action Status: Action Status or AUL Terminated
Action Date: 9/14/2015
Response Action Outcome: TN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/27/2000
Response Action Outcome: TN

Action Type: BWS03
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: TN

Chemicals:
Chemical: PETROLEUM BASED OIL
Quantity: Not reported
Location Type: MUNICIPAL
Source: UNKNOWN

---

40 South 1/2-1 0.733 mi. 3871 ft.

8 WALTHAM STREET
8 WALTHAM ST
WILMINGTON, MA 01887

MA SHWS **S113411740**
MA INST CONTROL **N/A**
MA RELEASE
MA ENF

Relative: Lower

Actual: 81 ft.

SHWS:
Name: 8 WALTHAM STREET
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Facility ID: 3-0031376
Source Type: Not reported
Release Town: WILMINGTON
Notification Date: 02/06/2013
Category: 120 DY
Associated ID: Not reported
Current Status: PSC
Status Date: 02/12/2015
Phase: PHASE II
Response Action Outcome: PA
Oil Or Haz Material: Hazardous Material

INST CONTROL:
Name: 8 WALTHAM STREET
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Release Tracking Number: 3-0031376
Action Type: AUL
Action Stat: CONFRM
Action Date: 02/28/2019
Response Action Outcome: PA - PA

8 WALTHAM STREET (Continued) **S113411740**

Name: 8 WALTHAM STREET
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Release Tracking Number: 3-0031376
Action Type: AUL
Action Stat: LEGNOT
Action Date: 03/04/2015
Response Action Outcome: PA - PA

Name: 8 WALTHAM STREET
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Release Tracking Number: 3-0031376
Action Type: AUL
Action Stat: RECPT
Action Date: 02/12/2015
Response Action Outcome: PA - PA

Name: 8 WALTHAM STREET
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Release Tracking Number: 3-0031376
Action Type: AUL
Action Stat: SNAUDI
Action Date: 11/13/2018
Response Action Outcome: PA - PA

Name: 8 WALTHAM STREET
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Release Tracking Number: 3-0031376
Action Type: AUL
Action Stat: TSAUD
Action Date: 11/04/2015
Response Action Outcome: PA - PA

Release:
Name: 8 WALTHAM STREET
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Release Tracking Number/Current Status: 3-0031376 / PSC
Primary ID: Not reported
Official City: WILMINGTON
Notification: 02/06/2013
Category: 120 DY
Status Date: 02/12/2015
Phase: PHASE II
Response Action Outcome: PA - PA
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/4/2021

8 WALTHAM STREET (Continued) **S113411740**

Response Action Outcome: PA

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 11/13/2018
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 11/13/2018
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/3/2015
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 11/4/2015
Response Action Outcome: PA

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/9/2013
Response Action Outcome: PA

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/12/2014
Response Action Outcome: PA

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/12/2014
Response Action Outcome: PA

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/12/2014
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 2/12/2015
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/12/2015
Response Action Outcome: PA

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/22/2013
Response Action Outcome: PA

8 WALTHAM STREET (Continued) **S113411740**

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 2/28/2019
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Confirmatory AUL received
Action Date: 2/28/2019
Response Action Outcome: PA

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/6/2013
Response Action Outcome: PA

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/6/2013
Response Action Outcome: PA

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/6/2013
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/4/2015
Response Action Outcome: PA

Action Type: RLFA
Action Status: FLDRUN
Action Date: 5/11/2018
Response Action Outcome: PA

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 7/2/2021
Response Action Outcome: PA

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/8/2020
Response Action Outcome: PA

Chemicals:
Chemical: CHROMIUM (TOTAL)
Quantity: 1270 milligrams per kilogram
Chemical: ARSENIC
Quantity: 85.5 milligrams per kilogram

ENFORCEMENT:
Name: 351 REALTY CORPORATION
Address: 8 WALTHAM ST
City,State,Zip: WILMINGTON, MA 018872123
Region: NERO

8 WALTHAM STREET (Continued) **S113411740**

DEP Region:	NERO
DEP Program:	3a
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0031376
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Town Where Violation Occurred:	WILMINGTON
Date Executed:	11/13/2018
ENF #:	00005950
Document Type:	NON
AG Ref (Y/N):	NO
Doc Archived (Y/N):	YES
EJ Community (Y/N):	NO
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

---

41 **MCDONALD RD PROPERTY** **MA SHWS** **S104482290**
WNW **79 MCDONALD RD** **MA RELEASE** **N/A**
1/2-1 **WILMINGTON, MA 01887** **MA ENF**
0.751 mi.
3964 ft.

Relative:
Lower

Actual:
87 ft.

SHWS:

Name:	MCDONALD RD PROPERTY
Address:	79 MCDONALD RD
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0018858
Source Type:	DRUMS
Release Town:	WILMINGTON
Notification Date:	10/19/1999
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	03/12/2008
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Release:

Name:	MCDONALD RD PROPERTY
Address:	79 MCDONALD RD
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0018858 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	10/19/1999
Category:	120 DY

MCDONALD RD PROPERTY (Continued) **S104482290**

Status Date: 03/12/2008
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/21/2000
Response Action Outcome: Not reported

Action Type: PIP
Action Status: Action Status or AUL Terminated
Action Date: 10/12/2022
Response Action Outcome: Not reported

Action Type: PIP
Action Status: Legal Notice Published
Action Date: 10/12/2022
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/17/2002
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/19/1999
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 10/30/2007
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: RMRINT
Action Date: 10/30/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 11/6/2000
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/6/2000
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/6/2000
Response Action Outcome: Not reported

MCDONALD RD PROPERTY (Continued) **S104482290**

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/6/2000
Response Action Outcome: Not reported

Action Type: PIP
Action Status: Public Involvement Petition Received
Action Date: 12/18/2000
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: RMRFIN
Action Date: 3/12/2008
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 3/12/2008
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/12/2008
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 3/12/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 3/15/2001
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 3/15/2023
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 3/18/2013
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 3/23/2018
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 3/26/2003
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received

MCDONALD RD PROPERTY (Continued) **S104482290**

Action Date: 3/26/2003
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 3/26/2007
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/3/2011
Response Action Outcome: Not reported

Action Type: PIP
Action Status: Written Plan Received
Action Date: 4/20/2001
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Public Comment Period Initiated on Submittal
Action Date: 4/25/2003
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Public Comment Period Initiated on Submittal
Action Date: 4/4/2008
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Public Comment Period Initiated on Submittal
Action Date: 4/4/2008
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/18/2007
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: RMRINI
Action Date: 5/29/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 5/31/2006
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/7/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/7/2006
Response Action Outcome: Not reported

MCDONALD RD PROPERTY (Continued) **S104482290**

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 7/15/2006
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 7/27/2006
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Public Comment Period Initiated on Submittal
Action Date: 9/18/2002
Response Action Outcome: Not reported

Action Type: PIP
Action Status: Legal Notice Published
Action Date: 9/30/2005
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 9/8/2005
Response Action Outcome: Not reported

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: Not reported

Action Type: BWS02
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: Not reported

Chemicals:
Chemical: ALIPHATIC HYDROCARBONS C5 THROUGH C8
Quantity: 108 milligrams per liter
Chemical: UNKNOWN CHEMICAL OF TYPE - HAZARDOUS MATERIAL
Quantity: Not reported
Chemical: TRICHLOROETHENE
Quantity: 1.1 milligrams per liter
Chemical: BENZENE
Quantity: 2.5 milligrams per liter
Source: DRUMS

ENFORCEMENT:
Name: 79 MCDONALD ROAD LLC
Address: 79 MCDONALD RD
City,State,Zip: WILMINGTON, MA 018870000
Region: NERO
DEP Region: NERO
DEP Program: 3r
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0018858

MCDONALD RD PROPERTY (Continued) **S104482290**

High Or Low Level Enforcement:	LLE
FMF #:	0
Town Where Violation Occurred:	Not reported
Date Executed:	05/18/2007
ENF #:	NON-NE-07-3R012
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	YES
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Name:	79 MCDONALD ROAD LLC
Address:	79 MCDONALD RD
City,State,Zip:	WILMINGTON, MA 018870000
Region:	NERO
DEP Region:	NERO
DEP Program:	3p
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0018858
High Or Low Level Enforcement:	LLE
FMF #:	0
Town Where Violation Occurred:	Not reported
Date Executed:	07/27/2006
ENF #:	NON-NE-06-3P006
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	YES
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

42
NNW
1/2-1
0.787 mi.
4156 ft.

NO LOCATION AID
220 BALLARDVALE ST
WILMINGTON, MA 01887

MA SHWS **S102618490**
MA RELEASE **N/A**
MA AIRS

Relative:
Higher

Actual:
103 ft.

SHWS:

Name:	NO LOCATION AID
Address:	220 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0015071
Source Type:	PIPE
Release Town:	WILMINGTON
Notification Date:	05/05/1997
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	10/23/1997
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Oil

Release:

Name:	NO LOCATION AID
Address:	220 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0015071 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	05/05/1997
Category:	TWO HR
Status Date:	10/23/1997
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/17/1997
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	10/2/1997
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/23/1997
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/23/1997
Response Action Outcome:	Not reported

NO LOCATION AID (Continued) **S102618490**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/5/1997
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 5/5/1997
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/5/1997
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/5/1997
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/2/1997
Response Action Outcome: Not reported

Chemicals:
Chemical: HYDRAULIC FLUID
Quantity: 50 gallons
Chemical: HYDRAULIC OIL
Quantity: 80 gallons
Location Type: COMMERCIAL
Source: PIPE

AIRS:
AQID: Not reported
Name: ATLANTIC RESEARCH CORPORATION
Address: 220 BALLARDVALE ST
Address 2: Not reported
City,State,Zip: WILMINGTON, MA 01887
Branch: NE
Facility Status: APPROV
Permit Code: AQ01
Permit Name: Plan Approval Limited
Owner Name: Not reported
Region: NE
Application Tracking Number: 88585
Facility Account: 324130
Date Closed: 10/02/1996
Applicant Name: ATLANTIC IMT
Applicant Address: 220 BALLLARDVALE
Applicant City: WILMINGTON
Applicant State: MA
Applicant Zip: 01887
Applicant Telephone: Not reported
Primary NAICS: Not reported
NAICS Code: Not reported

NO LOCATION AID (Continued) **S102618490**

NAICS Description: Not reported
Latitude: Not reported
Longitude: Not reported

43
NNE
1/2-1
0.876 mi.
4625 ft.

ZELLER & GMELIN
10 UPTON DR
WILMINGTON, MA 01887

MA SHWS **1000422521**
MA RELEASE **MAD053465506**
RCRA NonGen / NLR

Relative:
Higher

Actual:
105 ft.

SHWS:
Name: CENTURY REPRODUCTIONS INC
Address: 10 UPTON DR
City,State,Zip: WILMINGTON, MA 01887
Facility ID: 3-0000491
Source Type: Not reported
Release Town: WILMINGTON
Notification Date: 01/15/1987
Category: NONE
Associated ID: Not reported
Current Status: LSPNFA
Status Date: 08/09/1995
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Not reported

Release:
Name: CENTURY REPRODUCTIONS INC
Address: 10 UPTON DR
City,State,Zip: WILMINGTON, MA 01887
Release Tracking Number/Current Status: 3-0000491 / LSPNFA
Primary ID: Not reported
Official City: WILMINGTON
Notification: 01/15/1987
Category: NONE
Status Date: 08/09/1995
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: PENNFA
Action Date: 7/28/1994
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: LSPNFA
Action Date: 8/9/1995
Response Action Outcome: Not reported

ZELLER & GMELIN (Continued) **1000422521**

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

RCRA Listings:

Date Form Received by Agency:	20040630
Handler Name:	Zeller & Gmelin
Handler Address:	10 Upton Dr
Handler City,State,Zip:	WILMINGTON, MA 01887
EPA ID:	MAD053465506
Contact Name:	MICHAEL HUGHES
Contact Address:	10 UPTON DR
Contact City,State,Zip:	WILMINGTON, MA 01887-0000
Contact Telephone:	999-999-9999
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	Not reported
EPA Region:	01
Land Type:	Private
Federal Waste Generator Description:	Not a generator, verified
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Not reported
State District Owner:	Ma
State District:	N
Mailing Address:	10 UPTON DR
Mailing City,State,Zip:	WILMINGTON, MA 01887-0000
Owner Name:	Ogirra Inc/Woburn Prop/C/O/Joan Franchi
Owner Type:	Private
Operator Name:	Zeller & Gmelin
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No

ZELLER & GMELIN (Continued) **1000422521**

Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20171020
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste
Waste Code:	F003
Waste Description:	The Following Spent Nonhalogenated Solvents: Xylene, Acetone, Ethyl Acetate, Ethyl Benzene, Ethyl Ether, Methyl Isobutyl Ketone, N-Butyl Alcohol, Cyclohexanone, And Methanol; All Spent Solvent Mixtures/Blends Containing, Before Use, Only The Above Spent Nonhalogenated Solvents; And All Spent Solvent Mixtures/Blends Containing, Before Use, One Or More Of The Above Nonhalogenated Solvents, And A Total Of Ten Percent Or More (By Volume) Of One Or More Of Those Solvents Listed In F001, F002, F004, And F005; And Still Bottoms From The Recovery Of These Spent Solvents And Spent Solvent Mixtures.

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	ZELLER & GMELIN
Legal Status:	Private
Date Became Current:	19000101
Date Ended Current:	Not reported
Owner/Operator Address:	10 UPTON DR
Owner/Operator City,State,Zip:	WILMINGTON, MA 01887
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	OGIRRA INC/WOBURN PROP/C/O/JOAN FRANCHI
Legal Status:	Private
Date Became Current:	20011025
Date Ended Current:	Not reported
Owner/Operator Address:	10 UPTON DR
Owner/Operator City,State,Zip:	WILMINGTON, MA 01887-0000
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported

ZELLER & GMELIN (Continued) **1000422521**

Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: ZELLER & GMELIN
Legal Status: Private
Date Became Current: 20011025
Date Ended Current: Not reported
Owner/Operator Address: 10 UPTON DR
Owner/Operator City,State,Zip: WILMINGTON, MA 01887
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Owner
Owner/Operator Name: OGIRRA INC/WOBURN PROP/C/O/JOAN FRANCHI
Legal Status: Private
Date Became Current: 19000101
Date Ended Current: Not reported
Owner/Operator Address: 10 UPTON DR
Owner/Operator City,State,Zip: WILMINGTON, MA 01887
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: ZELLER & GMELIN
Legal Status: Private
Date Became Current: 20011025
Date Ended Current: Not reported
Owner/Operator Address: 10 UPTON DR
Owner/Operator City,State,Zip: WILMINGTON, MA 01887-0000
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: ZELLER & GMELIN
Legal Status: Private
Date Became Current: 20011025
Date Ended Current: Not reported
Owner/Operator Address: 10 UPTON DR
Owner/Operator City,State,Zip: WILMINGTON, MA 01887-0000
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Owner/Operator Indicator: Operator
Owner/Operator Name: ZELLER & GMELIN
Legal Status: Private
Date Became Current: 20011025
Date Ended Current: Not reported
Owner/Operator Address: 10 UPTON DR

ZELLER & GMELIN (Continued) **1000422521**

Owner/Operator City,State,Zip:	WILMINGTON, MA 01887-0000
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20040630
Handler Name: ZELLER & GMELIN	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Ma
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	19851025
Handler Name: ZELLER & GMELIN	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Ma
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	19931231
Handler Name: ZELLER & GMELIN	
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Ma
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	20011025
Handler Name: ZELLER & GMELIN	
Federal Waste Generator Description:	Small Quantity Generator
State District Owner:	Ma
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported

ZELLER & GMELIN (Continued) **1000422521**

Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Code: 32551
NAICS Description: Paint And Coating Manufacturing

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

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44 NNE 1/2-1 0.893 mi. 4713 ft. **TRANSFORMER OIL RELEASE** **MA SHWS S112555049**
214 ANDOVER STREET **MA RELEASE N/A**
WILMINGTON, MA 01887

Relative: Higher
Actual: 102 ft.

SHWS:
Name: TRANSFORMER OIL RELEASE
Address: 214 ANDOVER STREET
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0034554
Source Type: TRANSFORM
Release Town: WILMINGTON
Notification Date: 10/29/2017
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 01/13/2018
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Release:
Name: TRANSFORMER OIL RELEASE
Address: 214 ANDOVER STREET
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0034554 / PSNC
Primary ID: Not reported
Official City: WILMINGTON
Notification: 10/29/2017
Category: TWO HR
Status Date: 01/13/2018
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/13/2018

TRANSFORMER OIL RELEASE (Continued) **S112555049**

Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 1/13/2018
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/13/2018
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/29/2017
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/29/2017
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/28/2017
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/7/2017
Response Action Outcome: PN

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/7/2017
Response Action Outcome: PN

Chemicals:
Chemical: MINERAL OIL
Quantity: 60 gallons
Location Type: COMMERCIAL
Source: TRANSFORM

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45 WNW 1/2-1 0.917 mi. 4842 ft. **NO LOCATION AID** **MA SHWS S105125065**
77 MACDONALD RD **MA RELEASE N/A**
WILMINGTON, MA 01887 **MA ENF**

Relative: Higher
Actual: 117 ft.

SHWS:
Name: NO LOCATION AID
Address: 77 MACDONALD RD
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0020837
Source Type: UNKNOWN
Release Town: WILMINGTON
Notification Date: 06/25/2001

NO LOCATION AID (Continued) **S105125065**

Category: 72 HR
Associated ID: Not reported
Current Status: RAO
Status Date: 02/14/2014
Phase: PHASE V
Response Action Outcome: A2
Oil Or Haz Material: Not reported

Release:
Name: NO LOCATION AID
Address: 77 MACDONALD RD
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0020837 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 06/25/2001
Category: 72 HR
Status Date: 02/14/2014
Phase: PHASE V
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/2/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/20/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 1/27/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Revised Statement or Transmittal Received
Action Date: 1/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Work Started
Action Date: 1/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S105125065**

Action Type: Phase 5
Action Status: RMRINI
Action Date: 1/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 1/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 10/12/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 10/19/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 10/7/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 10/7/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/27/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/11/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 2/11/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/12/2010

NO LOCATION AID (Continued) **S105125065**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 2/12/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/14/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 2/22/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/22/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/5/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/2/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/25/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S105125065**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/25/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/1/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 7/1/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/1/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/1/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/1/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 7/1/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 7/1/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Amendment Received or Issued
Action Date: 7/2/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/23/2001

NO LOCATION AID (Continued) **S105125065**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/22/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/22/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 200 gallons
Chemical: FUEL OIL #2
Quantity: 100 gallons
Location Type: RESIDNTIAL
Source: UNKNOWN

ENFORCEMENT:
Name: CARROLL JR., KENNETH J.
Address: 77 MACDONALD RD
City,State,Zip: WILMINGTON, MA 018870000
Region: NERO
DEP Region: NERO
DEP Program: 3a
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0020837
High Or Low Level Enforcement: HLE
FMF #: 0
Town Where Violation Occurred: Not reported
Date Executed: 07/02/2010
ENF #: ACOP-NE-10-3A018A AMENDED
Document Type: AMEND
AG Ref (Y/N): Not reported
Doc Archived (Y/N): NO
EJ Community (Y/N): YES
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Individually Owned

Name: CARROLL JR., KENNETH J.
Address: 77 MACDONALD RD

NO LOCATION AID (Continued) **S105125065**

City,State,Zip:	WILMINGTON, MA 018870000
Region:	NERO
DEP Region:	NERO
DEP Program:	3a
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0020837
High Or Low Level Enforcement:	HLE
FMF #:	0
Town Where Violation Occurred:	WILMINGTON
Date Executed:	01/27/2010
ENF #:	ACOP-NE-10-3A018
Document Type:	ACOP
AG Ref (Y/N):	NO
Doc Archived (Y/N):	YES
EJ Community (Y/N):	NO
Regional Comment:	Not reported
Final Payment Due Date:	12/05/2010
ACOP $:	1000
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	9000
Ownership:	Individually Owned

Name:	CARROLL, KENNETH
Address:	77 MACDONALD RD
City,State,Zip:	WILMINGTON, MA 018870000
Region:	NERO
DEP Region:	NERO
DEP Program:	3a
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0020837
High Or Low Level Enforcement:	LLE
FMF #:	0
Town Where Violation Occurred:	Not reported
Date Executed:	01/02/2008
ENF #:	NON-NE-07-3A132
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	YES
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

46
NNE
1/2-1
0.918 mi.
4846 ft.

INDUSTRIAL DEVELOPMNT SITE
16 UPTON DR
WILMINGTON, MA 01887

MA SHWS
MA RELEASE
MA HW GEN

S100042385
N/A

Relative:
Higher

Actual:
122 ft.

SHWS:

Name:	INDUSTRIAL DEVELOPMNT SITE
Address:	16 UPTON DR
City,State,Zip:	WILMINGTON, MA 01887
Facility ID:	3-0000056
Source Type:	Not reported
Release Town:	WILMINGTON
Notification Date:	01/15/1987
Category:	NONE
Associated ID:	Not reported
Current Status:	DPS
Status Date:	12/11/1996
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Oil

Release:

Name:	INDUSTRIAL DEVELOPMNT SITE
Address:	16 UPTON DR
City,State,Zip:	WILMINGTON, MA 01887
Release Tracking Number/Current Status:	3-0000056 / DPS
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	01/15/1987
Category:	NONE
Status Date:	12/11/1996
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1987
Response Action Outcome:	Not reported
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	12/10/1996
Response Action Outcome:	Not reported
Action Type:	Downgradient Property Status
Action Status:	Fee Received - FMCRA Use Only
Action Date:	12/11/1996
Response Action Outcome:	Not reported
Action Type:	Downgradient Property Status
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	12/11/1996
Response Action Outcome:	Not reported

INDUSTRIAL DEVELOPMNT SITE (Continued) **S100042385**

Chemicals:
Chemical: VOCS
Quantity: Not reported
Location Type: INDUSTRIAL

HW GEN:
Name: INDUSTRIAL MOTIONS ENGINEERING INC
Address: 16 UPTON DR
City,State,Zip: WILMINGTON, MA 01887
EPA Id: MAR000571927
RCRA Generator Status: Not reported
State Generator Status: VQG-MA

47
North
1/2-1
0.925 mi.
4886 ft.

Relative:
Higher

Actual:
168 ft.

CHARLES RIVER LABORATORIES **MA SHWS** **U000227244**
251 BALLARDVALE ST **MA LUST** **N/A**
WILMINGTON, MA 01887 **MA UST**
MA RELEASE
MA AIRS
MA ASBESTOS
MA Financial Assurance
MA HW GEN

SHWS:
Name: CHARLES RIVER LABORATORIES, INC.
Address: 251 BALLARDVALE STREET
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0036843
Source Type: TANK
Release Town: WILMINGTON
Notification Date: 05/12/2021
Category: 72 HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 09/30/2021
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

LUST:

Facility:
Name: CHARLES RIVER LABORATORIES, INC.
Address: 251 BALLARDVALE STREET
City,State,Zip: WILMINGTON, MA 018870000
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 3-0036843 / PSNC
Status Date: 09/30/2021
Source Type: UST
Release Town: WILMINGTON
Notification Date: 05/12/2021
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Location Type: COMMERCIAL

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Source: USTPIPE
Source: TANK
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TOTAL VOC
Quantity: 237 parts per million

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/26/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/1/2022
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/12/2021
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/27/2021
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/28/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/12/2021
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/19/2021
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/13/2021
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 9/30/2021
Response Action Outcome: PN

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/30/2021
Response Action Outcome: PN

Facility:
Name: CHARLES RIVER LABORATORIES, INC.
Address: 251 BALLARDVALE STREET
City,State,Zip: WILMINGTON, MA 018870000
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 3-0036843 / PSNC
Status Date: 09/30/2021
Source Type: USTPIPE
Release Town: WILMINGTON
Notification Date: 05/12/2021
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN
Oil Or Haz Material: Not reported

Location Type: COMMERCIAL
Source: USTPIPE
Source: TANK
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TOTAL VOC
Quantity: 237 parts per million

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/26/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/1/2022
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/12/2021
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/27/2021
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/28/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/12/2021
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/19/2021
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/13/2021
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 9/30/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/30/2021
Response Action Outcome: PN

UST:
Facility ID: 11420
Name: CHARLES RIVER LABORATORIES
Address: 251 BALLARDVALE ST
Address 2: Not reported
City,State,Zip: WILMINGTON, MA 01887
Owner ID: 1165
Owner: CHARLES RIVER LABORATORIES
Owner Address: 251 BALLARDVALE ST
Owner Address 2: Not reported
Owner City,State,Zip: WILMINGTON, MA 01887
Telephone: 78122260006346
Description: Manufacturing
Contact Name: Gerald Hornok
Contact Address: 251 Ballardvale Street
Contact Address 2: Not reported
Contact City,State,Zip: Wilmington, MA 01887
Contact Email: gerald.hornok@crl.com
Update: 2018-06-27 00:00:00
Update By: Gerald Hornok
Facility Status: OPEN
Operator Name: Not reported
Operator Contact Name: Not reported
Last Inspection Date: Not reported
Next Inspection Due Date: Not reported
Last Cert Compliance Date: Not reported
Next Cert Compliance Due Date: Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Longitude: -71.16153
Latitude: 42.59448

URL:

UST:
Facility ID: 11420
Tank ID: 10
Capacity: 3000.00000
Substance: Diesel
Tank Construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Tank Usage: Emergency Power Generator
Pipe Construct: Double-walled non-corrodible material (No corrosion protection required)
Pipe Type: Not reported
Latitude: Not reported
Longitude: Not reported
Date Installed: 04/16/1970
Number of Compartment: Not reported
Pipe Install Date: Not reported
Pipe Leak Install Date: Not reported
Submersible Sump: N
Submersible Sump Install Date: Not reported
Turbine Sump: N
Turbine Sump Sensor: N
Intermediate Sump: N
Intermediate Sump Sensor: N
Spill Bucket Installed Date: Not reported
Spill Bucket Sensor: N
Tank Status: Tank Removed
Status Date: 09/10/2014
Overfill Protect Install: Not reported
Overfill Protect Type: Not reported
Automatic Line Leak Detect: Not reported
Tank Corrosion Type: Not reported
Leak Corrosion Type: Not reported
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Quarterly visual inspection and annual product line tightness test (only if installed prior to 5/28/

Facility ID: 11420
Tank ID: 4
Capacity: Not reported
Substance: Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Construct: Not reported
Tank Usage: Not reported
Pipe Construct: Not reported
Pipe Type: Not reported
Latitude: Not reported
Longitude: Not reported
Date Installed: 04/17/1963
Number of Compartment: Not reported
Pipe Install Date: Not reported
Pipe Leak Install Date: Not reported
Submersible Sump: N
Submersible Sump Install Date: Not reported
Turbine Sump: N

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/31/1990
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	11420
Tank ID:	2
Capacity:	Not reported
Substance:	Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/16/1956
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/31/1989
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	11420
Tank ID:	8
Capacity:	10000.00000
Substance:	Kerosene
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Date Installed:	04/17/1979
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/31/1993
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Facility ID:	11420
Tank ID:	11
Capacity:	2000.00000
Substance:	Diesel
Tank Construct:	Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Tank Usage:	Emergency Power Generator
Pipe Construct:	Double-walled non-corrodible material (No corrosion protection required)
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/16/1980
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	09/06/2014
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Continuous Interstitial Monitoring
Pipe Leak Detection:	Quarterly visual inspection and annual product line tightness test (only if installed prior to 5/28/

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Facility ID:	11420
Tank ID:	5
Capacity:	Not reported
Substance:	Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/16/1968
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/31/1990
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Facility ID:	11420
Tank ID:	3
Capacity:	Not reported
Substance:	Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/17/1959
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Closure In-Place
Status Date:	12/31/1990
Overfill Protect Install:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Facility ID:	11420
Tank ID:	7
Capacity:	5000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/16/1974
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	07/05/1992
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Facility ID:	11420
Tank ID:	1
Capacity:	Not reported
Substance:	Bulk Heating or Fuel Oil (#2,#4,#6)
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Date Installed:	04/16/1956
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	12/31/1989
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Facility ID:	11420
Tank ID:	9
Capacity:	5000.00000
Substance:	Diesel
Tank Construct:	Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Tank Usage:	Emergency Power Generator
Pipe Construct:	Double-walled non-corrodible material (No corrosion protection required)
Pipe Type:	Non-European suction System
Latitude:	42.59458
Longitude:	-71.16032
Date Installed:	12/01/1998
Number of Compartment:	Not reported
Pipe Install Date:	12/01/1998
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	Y
Turbine Sump Sensor:	Y
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	12/01/1998
Spill Bucket Sensor:	N
Tank Status:	In Use
Status Date:	Not reported
Overfill Protect Install:	12/01/1998
Overfill Protect Type:	High level alarm
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Continuous Interstitial Monitoring
Pipe Leak Detection:	Continuous Interstitial Space Monitoring
Facility ID:	11420
Tank ID:	6
Capacity:	5000.00000
Substance:	Gasoline
Tank Construct:	Not reported
Tank Usage:	Not reported
Pipe Construct:	Not reported
Pipe Type:	Not reported
Latitude:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Longitude:	Not reported
Date Installed:	04/16/1974
Number of Compartment:	Not reported
Pipe Install Date:	Not reported
Pipe Leak Install Date:	Not reported
Submersible Sump:	N
Submersible Sump Install Date:	Not reported
Turbine Sump:	N
Turbine Sump Sensor:	N
Intermediate Sump:	N
Intermediate Sump Sensor:	N
Spill Bucket Installed Date:	Not reported
Spill Bucket Sensor:	N
Tank Status:	Tank Removed
Status Date:	07/05/1992
Overfill Protect Install:	Not reported
Overfill Protect Type:	Not reported
Automatic Line Leak Detect:	Not reported
Tank Corrosion Type:	Not reported
Leak Corrosion Type:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported

Release:

Name:	CHARLES RIVER LABORATORIES, INC.
Address:	251 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0036843 / PSNC
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	05/12/2021
Category:	72 HR
Status Date:	09/30/2021
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	10/26/2021
Response Action Outcome:	PN

Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	2/1/2022
Response Action Outcome:	PN

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/12/2021
Response Action Outcome:	PN

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/27/2021
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/28/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/12/2021
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/19/2021
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/13/2021
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 9/30/2021
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/30/2021
Response Action Outcome: PN

Chemicals:
Chemical: TOTAL VOC
Quantity: 237 parts per million
Location Type: COMMERCIAL
Source: USTPIPE
Source: TANK
Source: UST

AIRS:
AQID: Not reported
Name: CHARLES RIVER LABORATORIES INC
Address: 251 BALLARDVALE ST
Address 2: Not reported
City,State,Zip: WILMINGTON, MA 01887
Branch: Not reported
Facility Status: Active
Permit Code: AQ5025
Permit Name: AQ50-25
Owner Name: Not reported
Region: Not reported
Application Tracking Number: AQ5025-0000042

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Facility Account:	Not reported
Date Closed:	09/02/2021
Applicant Name:	GERALD HORNOK
Applicant Address:	Not reported
Applicant City:	Not reported
Applicant State:	Not reported
Applicant Zip:	Not reported
Applicant Telephone:	Not reported
Primary NAICS:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
Latitude:	Not reported
Longitude:	Not reported

AQID:	1190095
Name:	CHARLES RIVER LABORATORIES
Address:	251 BALLARDVALE ST
Address 2:	Not reported
City,State,Zip:	WILMINGTON, MA 01887
Branch:	Not reported
Facility Status:	Not reported
Permit Code:	Not reported
Permit Name:	Not reported
Owner Name:	CHARLES RIVER LABORATORIES
Region:	Not reported
Application Tracking Number:	Not reported
Facility Account:	Not reported
Date Closed:	Not reported
Applicant Name:	Not reported
Applicant Address:	Not reported
Applicant City:	Not reported
Applicant State:	Not reported
Applicant Zip:	Not reported
Applicant Telephone:	Not reported
Primary NAICS:	Y
NAICS Code:	541380
NAICS Description:	Testing Laboratories
Latitude:	42.592251
Longitude:	-71.160959

EMI:

AQID:	1190095
Pollutant:	PM, CONDENSABLE
Actual Emission:	0
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	PM10, FILTERABLE
Actual Emission:	0.1069
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	LEAD
Actual Emission:	0

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	VOLATILE ORGANIC COMPOUNDS (VOC)
Actual Emission:	0.40350000000000003
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	NITROGEN OXIDES (NOx)
Actual Emission:	4.9573
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	SULFUR DIOXIDE
Actual Emission:	0.0528
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	CARBON MONOXIDE
Actual Emission:	1.9785999999999999
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	AMMONIA
Actual Emission:	3.6888000000000001
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	PM2.5, FILTERABLE
Actual Emission:	0.1069
Emission Year:	2023
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	AMMONIA
Actual Emission:	4.5521
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	CARBON MONOXIDE
Actual Emission:	1.5484
Emission Year:	2013

CHARLES RIVER LABORATORIES (Continued) **U000227244**

DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	HALOGENATED ORGANIC COMPOUND
Actual Emission:	0
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	HYDROCARBON
Actual Emission:	0
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	NITROGEN OXIDES (NOx)
Actual Emission:	3.9261
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	PM10, FILTERABLE
Actual Emission:	0.1301
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	PM2.5, FILTERABLE
Actual Emission:	0.1179
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	SULFUR DIOXIDE
Actual Emission:	0.5675
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	VOLATILE ORGANIC COMPOUNDS (VOC)
Actual Emission:	0.2434
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	AMMONIA
Actual Emission:	3.6777
Emission Year:	2020
DEP Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	CARBON MONOXIDE
Actual Emission:	1.9101
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	NITROGEN OXIDES (NOx)
Actual Emission:	4.9802
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	PM10, FILTERABLE
Actual Emission:	0.1435
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	PM2.5, FILTERABLE
Actual Emission:	0.1435
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	SULFUR DIOXIDE
Actual Emission:	0.0957
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	VOLATILE ORGANIC COMPOUNDS (VOC)
Actual Emission:	0.2847
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2020
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1190095
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2013
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

ASBESTOS:

Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST

CHARLES RIVER LABORATORIES (Continued) **U000227244**

City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	01/14/2021
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	357471
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337529R2
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	01/13/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	03/29/2021
Date Entered:	Not reported
Entry Date:	02/09/2021
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	358789
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337529R3
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	02/09/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	03/29/2021
Date Entered:	Not reported
Entry Date:	02/10/2021
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	358854
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337529R4
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	02/09/2021

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	04/29/2021
Date Entered:	Not reported
Entry Date:	03/10/2021
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	360431
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337529R5
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Certified Name:	KIERAN SEAVEY
Cert Sign Date:	03/10/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	04/29/2021
Date Entered:	Not reported
Entry Date:	03/10/2021
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	360440
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337529R6
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	03/10/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	04/22/2021
Date Entered:	Not reported
Entry Date:	04/22/2021
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	363215
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337529R7
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	04/22/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 13
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	03/29/2021
Date Entered:	Not reported
Entry Date:	02/09/2021
Quantity Materical Removed SF:	9120
Quantity Material Removed LF:	75
Project Description:	PIPEINSUL TRANSPANEL CLOTHS INSCEMENT OTHER GLUE TILE FIREDOORS
AR Tracking ID:	358790
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337745R2
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain, oth:WHOLE COMPONENT REMOVAL
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, FULL CONTAINMENT, WET METHODS, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226327
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Facility Size:	14010
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	02/09/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 13
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	04/29/2021
Date Entered:	Not reported
Entry Date:	03/10/2021
Quantity Materical Removed SF:	9120
Quantity Material Removed LF:	75
Project Description:	PIPEINSUL TRANSPANEL CLOTHS INSCEMENT OTHER GLUE TILE FIREDOORS
AR Tracking ID:	360437
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337745R3
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain, oth:WHOLE COMPONENT REMOVAL
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, FULL CONTAINMENT, WET METHODS, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226327
Ins Comp:	GREAT DIVIDE INSURANCE

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	14010
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	03/10/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 13
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	04/22/2021
Date Entered:	Not reported
Entry Date:	04/22/2021
Quantity Materical Removed SF:	9120
Quantity Material Removed LF:	75
Project Description:	PIPEINSUL TRANSPANEL CLOTHS INSCEMENT OTHER GLUE TILE FIREDOORS
AR Tracking ID:	363217
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337745R4
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain, oth:WHOLE COMPONENT REMOVAL
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, FULL CONTAINMENT, WET METHODS, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO

CHARLES RIVER LABORATORIES (Continued) **U000227244**

On Site Manager Phone:	7812226327
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	14010
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	04/22/2021
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LAB
Address:	251 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/17/2002
End Date:	06/18/2002
Date Entered:	Not reported
Entry Date:	06/03/2002
Quantity Materical Removed SF:	500.00
Quantity Material Removed LF:	.00
Project Description:	Not reported
AR Tracking ID:	14183
Super Lic Number:	AS030534
Monitor Lic Number:	AA000122
Lab Lic Number:	AA000122
Year:	2002
Sticker Number:	554412
Form Type:	ANF-001
Fee Status:	50
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Building
Occupied:	-1
Contractor:	AC000035
Contract Type:	Not reported
Hours:	7am-4pm
Project Type:	Renovation
Abatement Process:	Full Containment
Location:	Indoors
Decon Process:	3 chamber
Disposal Methods:	2 Ply Poly Bag with Label
Facility Usage:	R & D Facility
Waiver Given:	0
DEP Waiver Number:	N/A
DLWD Waiver Number:	N/A
Small Owner Occ:	0
Owner Name:	Charles River Lab
Owner Address:	251 Ballardvale Street
Owner City:	WILMINGTON

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	New Hampshire Ins
Policy Number:	WC5825620
EXP Date:	12/28/02
Facility Size:	N/A
Transporter Name:	JOB ROLLOFF INC
Transporter Address:	PO BOX 6037
Transporter City:	CHELSEA
Transporter State:	MA
Final Site:	29
Certified Name:	Brent Morgenstern
Cert Sign Date:	05/31/2002
Certified Company:	Not reported
Certified Phone:	(978) 470-2860
Entered_by:	Not reported

Name:	CHARLES RIVER LABS
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	10/22/2003
End Date:	10/24/2003
Date Entered:	Not reported
Entry Date:	10/03/2003
Quantity Materical Removed SF:	2400.00
Quantity Material Removed LF:	Not reported
Project Description:	FLOOR TILE & MASTIC
AR Tracking ID:	31680
Super Lic Number:	AS030419
Monitor Lic Number:	AA000122
Lab Lic Number:	AA000122
Year:	2003
Sticker Number:	202560
Form Type:	ANF-001
Fee Status:	F
Facility Phone:	(978) 658-6000
Sub Town:	Not reported
Worksite:	BLDG 5 RECEIVING RM
Occupied:	-1
Contractor:	AC000035
Contract Type:	Not reported
Hours:	7A-4P
Project Type:	Renovation
Abatement Process:	Full Containment
Location:	Indoors
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	RESEARCH
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	CHARLES RIVER LAB

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	SERVICE TRANS GRP
Transporter Address:	58 PYLES LANE
Transporter City:	NEW CASTLE
Transporter State:	DE
Final Site:	29
Certified Name:	BRENTON MORGENSTEM
Cert Sign Date:	09/29/2003
Certified Company:	Not reported
Certified Phone:	(978) 470-2860
Entered_by:	mmitchell

Name:	CHARLES RIVER LABS
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	10/16/2003
End Date:	10/16/2003
Date Entered:	Not reported
Entry Date:	10/03/2003
Quantity Materical Removed SF:	Not reported
Quantity Material Removed LF:	25.00
Project Description:	Thermal solid core
AR Tracking ID:	31683
Super Lic Number:	AS030534
Monitor Lic Number:	AA000122
Lab Lic Number:	AA000122
Year:	2003
Sticker Number:	202561
Form Type:	ANF-001
Fee Status:	F
Facility Phone:	(978) 658-6000
Sub Town:	Not reported
Worksite:	BLDG 5/6 HALLWAY PIPE TUNNEL OUTSIDE ARE 51
Occupied:	-1
Contractor:	AC000035
Contract Type:	Not reported
Hours:	7A-4P
Project Type:	Repair
Abatement Process:	Glove Bag
Location:	Indoors
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	RESEARCH
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Small Owner Occ:	Not reported
Owner Name:	CHARLES RIVER LABS
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	SERVICE TRANS GRP
Transporter Address:	58 PYLES LANE
Transporter City:	NEW CASTLE
Transporter State:	DE
Final Site:	29
Certified Name:	BRENTON MORGENSTEM
Cert Sign Date:	09/29/2003
Certified Company:	Not reported
Certified Phone:	(978) 470-2860
Entered_by:	mmitchell

Name:	CHARLES RIVER LABS BUILDING 13
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	12/02/2020
Quantity Materical Removed SF:	8920
Quantity Material Removed LF:	275
Project Description:	PIPEINSUL TRANSPANEL CLOTHS INSCEMENT OTHER GLUE
AR Tracking ID:	355297
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100338093
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000850
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain, oth:WHOLE COMPONENT REMOVAL
Location:	INOUTDOORS
Decon Process:	STAGE DECON, FULL CONTAINMENT, WET METHODS, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226327
Ins Comp:	TRAVELERS
Policy Number:	7B JUB 6B054514
EXP Date:	6/8/2021
Facility Size:	14010
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	FRANKLIN SUARDI
Cert Sign Date:	12/02/2020
Certified Company:	FJC ENTERPRISES, INC.
Certified Phone:	9786555078
Entered_by:	FSUARDI

Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	11/30/2020
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	355099
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337529R
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	CURT KNIGHTLY
Cert Sign Date:	11/30/2020
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE

Name:	CHARLES RIVER LABS BUILDING 22
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	10/26/2020
End Date:	12/20/2020
Date Entered:	Not reported
Entry Date:	10/07/2020
Quantity Materical Removed SF:	9600
Quantity Material Removed LF:	Not reported
Project Description:	OTHER MASTIC REMOVAL
AR Tracking ID:	351881
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100335158
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGH OUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM- 3:30PM
Project Type:	Renv
Abatement Process:	oth:CRITICAL BARRIERS, WET METHODS, NEGATIVE PRESS
Location:	INDOORS

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Decon Process:	WET METHODS, CRITICAL BARRIERS, SPLASH GUARDS, NEGATIVE PRESSURE
Disposal Methods:	MATERIAL WILL BE ABSORBED USING WOOD CHIPS, SAWDUST OR SPEEDI-DRI. MATERIAL WILL BE WRAPPED IN 20 MILS OF POLY FOR TRANSPORTATION, LABELED WITH GENERATOR LABELS AND CLASS 9 LABELS.
Facility Usage:	MEDICAL LABORATRY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226327
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	60000
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	HOWARD KNIGHTLY
Cert Sign Date:	10/07/2020
Certified Company:	ENVIROVANTAGE
Certified Phone:	6036799682
Entered_by:	LEADSOURCE

Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	12/04/2020
Quantity Materical Removed SF:	3100
Quantity Material Removed LF:	0
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	355474
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100338092R
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000850
Contract Type:	WRITTEN

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv
Location:	INOUTDOORS
Decon Process:	STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	TRAVELERS
Policy Number:	7B JUB 6B054514
EXP Date:	6/8/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	FRANKLIN SUARDI
Cert Sign Date:	12/04/2020
Certified Company:	FJC ENTERPRISES, INC.
Certified Phone:	9786555078
Entered_by:	FSUARDI

Name:	CHARLES RIVER LABS BUILDING 13
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	12/04/2020
Quantity Materical Removed SF:	8920
Quantity Material Removed LF:	275
Project Description:	PIPEINSUL TRANSPANEL CLOTHS INSCEMENT OTHER GLUE
AR Tracking ID:	355476
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100338093R
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Contractor:	AC000850
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain, oth:WHOLE COMPONENT REMOVAL
Location:	INOUTDOORS
Decon Process:	STAGE DECON, FULL CONTAINMENT, WET METHODS, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226327
Ins Comp:	TRAVELERS
Policy Number:	7B JUB 6B054514
EXP Date:	6/8/2021
Facility Size:	14010
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	FRANKLIN SUARDI
Cert Sign Date:	12/04/2020
Certified Company:	FJC ENTERPRISES, INC.
Certified Phone:	9786555078
Entered_by:	FSUARDI

Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	12/02/2020
Quantity Materical Removed SF:	3100
Quantity Material Removed LF:	0
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	355294
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100338092
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7812226000
Sub Town:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000850
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv
Location:	INOUTDOORS
Decon Process:	STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	TRAVELERS
Policy Number:	7B JUB 6B054514
EXP Date:	6/8/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	FRANKLIN SUARDI
Cert Sign Date:	12/02/2020
Certified Company:	FJC ENTERPRISES, INC.
Certified Phone:	9786555078
Entered_by:	FSUARDI

Name:	CHARLES RIVER LABS BUILDING 13
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	11/30/2020
Quantity Materical Removed SF:	9120
Quantity Material Removed LF:	75
Project Description:	PIPEINSUL TRANSPANEL CLOTHS INSCEMENT OTHER GLUE
AR Tracking ID:	355105
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337745R
Form Type:	ANF-001
Fee Status:	THIRTY FIVE

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain, oth:WHOLE COMPONENT REMOVAL
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, FULL CONTAINMENT, WET METHODS, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226327
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	14010
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	CURT KNIGHTLY
Cert Sign Date:	11/30/2020
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 13
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	11/24/2020
Quantity Materical Removed SF:	9120
Quantity Material Removed LF:	75
Project Description:	PIPEINSUL TRANSPANEL CLOTHS INSCEMENT OTHER GLUE
AR Tracking ID:	354931
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006
Year:	2020
Sticker Number:	100337745

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain, oth:WHOLE COMPONENT REMOVAL
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, FULL CONTAINMENT, WET METHODS, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226327
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	14010
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	11/24/2020
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LABS BUILDING 3
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	12/14/2020
End Date:	02/15/2021
Date Entered:	Not reported
Entry Date:	11/24/2020
Quantity Materical Removed SF:	2100
Quantity Material Removed LF:	1000
Project Description:	PIPEINSUL INSCEMENT OTHER LAP SEAL CAULK GLUE
AR Tracking ID:	354932
Super Lic Number:	AS901575
Monitor Lic Number:	AM900324
Lab Lic Number:	AA000006

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Year:	2020
Sticker Number:	100337529
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7812226000
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	0
Contractor:	AC000510
Contract Type:	WRITTEN
Hours:	7AM-3:30PM
Project Type:	Renv
Abatement Process:	Glv,Fcontain
Location:	INOUTDOORS
Decon Process:	3 STAGE DECON, WET METHODS, FULL CONTAINMENT, PROPER PPE
Disposal Methods:	WRAPPED IN 6MIL POLY, SENT TO PROPERLY LICENSED LANDFILL
Facility Usage:	MEDICAL LABORATORY
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	BALLARDVALE LABORATORIES LLC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TROCCO
On Site Manager Phone:	7812226000
Ins Comp:	GREAT DIVIDE INSURANCE
Policy Number:	WCA2029799-100
EXP Date:	9/14/2021
Facility Size:	5640
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	301 OXFORD VALLEY ROAD SUITE 803B
Transporter City:	YARDLEY
Transporter State:	PA
Final Site:	Not reported
Certified Name:	KIERAN SEAVEY
Cert Sign Date:	11/24/2020
Certified Company:	ENVIROVANTAGE
Certified Phone:	8006405323
Entered_by:	LEADSOURCE
Name:	CHARLES RIVER LAB
Address:	251 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	05/09/2002
End Date:	05/14/2002
Date Entered:	Not reported
Entry Date:	04/25/2002
Quantity Materical Removed SF:	2600.00
Quantity Material Removed LF:	400.00
Project Description:	BOILER COATINGS
AR Tracking ID:	202
Super Lic Number:	AS000084

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	2002
Sticker Number:	554188
Form Type:	ANF-001
Fee Status:	50
Facility Phone:	(978) 658-6000
Sub Town:	Not reported
Worksite:	BUILDING #6- HALLWAY
Occupied:	0
Contractor:	AC000035
Contract Type:	Not reported
Hours:	7:00a.m.-4:00p.m.
Project Type:	RENOVATION
Abatement Process:	FULL CONTAINMENT
Location:	INDOORS
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	RESEARCH LAB
Waiver Given:	0
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	CHARLES RIVER LAB
Owner Address:	251 BALLARDVALE STREET
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	N.H. INSURANCE
Policy Number:	WC5825620
EXP Date:	12/28/02
Facility Size:	Not reported
Transporter Name:	JOB ROLLOFF INC
Transporter Address:	PO BOX 6037
Transporter City:	CHELSEA
Transporter State:	MA
Final Site:	29
Certified Name:	BRENT MORENSTERN
Cert Sign Date:	04/23/2002
Certified Company:	Not reported
Certified Phone:	(978) 470-2860
Entered_by:	Not reported

Name:	CHARLES RIVER LABS
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	01/04/2008
End Date:	01/04/2008
Date Entered:	Not reported
Entry Date:	01/09/2008
Quantity Materical Removed SF:	Not reported
Quantity Material Removed LF:	40.00
Project Description:	Thermal solid core

CHARLES RIVER LABORATORIES (Continued) **U000227244**

AR Tracking ID:	93304
Super Lic Number:	AS030571
Monitor Lic Number:	AA000006
Lab Lic Number:	AA000006
Year:	2008
Sticker Number:	305350
Form Type:	ANF-001
Fee Status:	F
Facility Phone:	(781) 222-6629
Sub Town:	Not reported
Worksite:	BLDG 5
Occupied:	-1
Contractor:	AC000035
Contract Type:	Not reported
Hours:	7-330
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	3 CHAMBER
Disposal Methods:	WET 2 PLY POLY BAG
Facility Usage:	Not reported
Waiver Given:	-1
DEP Waiver Number:	0801996
DLWD Waiver Number:	HV08006
Small Owner Occ:	Not reported
Owner Name:	CHARLES RIVER LABS
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	SERVICE TRANS
Transporter Address:	58 PYLES LN
Transporter City:	NEW CASTLE
Transporter State:	DE
Final Site:	39
Certified Name:	MICHAEL S MORRIS
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	mmitchell
Name:	CHARLES RIVER LABS
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/03/2014
End Date:	04/03/2014
Date Entered:	Not reported
Entry Date:	03/17/2014
Quantity Materical Removed SF:	130.00

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Quantity Material Removed LF:	.00
Project Description:	Insl,Trns
AR Tracking ID:	186422
Super Lic Number:	AS061745
Monitor Lic Number:	AA000184
Lab Lic Number:	AA000184
Year:	2014
Sticker Number:	100195185
Form Type:	ANF-001
Fee Status:	Fifty
Facility Phone:	7812226152
Sub Town:	Not reported
Worksite:	BUILDING 1
Occupied:	-1
Contractor:	AC000673
Contract Type:	WRITTEN
Hours:	Week days: 7AM-4PM Week end:
Project Type:	Renv
Abatement Process:	Fcontain
Location:	Indoors
Decon Process:	3 CHAMBERS W/SHOWER
Disposal Methods:	DOUBLE 6 MIL POLY BAGS
Facility Usage:	RESEARCH
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	CHARLES RIVER LABS, INC
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON, MA
Owner State:	MA
On Site Manager Name:	JASON BURRILL
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	10000
Transporter Name:	UNIVERSAL ABATEMENT SERVICES, INC
Transporter Address:	57 CHASE ST, UNIT 3A-2
Transporter City:	METHUEN, MA
Transporter State:	Not reported
Final Site:	39
Certified Name:	RAMON ARIAS
Cert Sign Date:	03/17/2014
Certified Company:	UNIVERSAL ABT SVCS, INC
Certified Phone:	9786551684
Entered_by:	Not reported

Name:	CHARLES RIVER LABORATORIES
Address:	251 BALLARDVALE ST.
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	02/03/2003
End Date:	02/05/2003
Date Entered:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Entry Date:	01/17/2003
Quantity Materical Removed SF:	500.00
Quantity Material Removed LF:	Not reported
Project Description:	vat
AR Tracking ID:	21819
Super Lic Number:	AS030534
Monitor Lic Number:	AA000006
Lab Lic Number:	AA000006
Year:	2003
Sticker Number:	560037
Form Type:	ANF-001
Fee Status:	60
Facility Phone:	(978) 658-6000
Sub Town:	Not reported
Worksite:	bldg. #13 - hallway
Occupied:	-1
Contractor:	AC000035
Contract Type:	Not reported
Hours:	7 - 4
Project Type:	Renovation
Abatement Process:	Full Containment
Location:	Indoors
Decon Process:	3 chamber
Disposal Methods:	Wet 2 Ply Poly Bag with Dumpster
Facility Usage:	research lab
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Charles River Lab
Owner Address:	251 Ballardvale St.
Owner City:	Wilmington
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Commerce & Industry
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Service Transport
Transporter Address:	58 Pyles Lane
Transporter City:	New Castle
Transporter State:	DE
Final Site:	29
Certified Name:	Brent Morgenstern
Cert Sign Date:	01/16/2003
Certified Company:	Not reported
Certified Phone:	(978) 470-2860
Entered_by:	Not reported
Name:	CHARLES RIVER LABS
Address:	251 BALLARDVALE ST
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	11/20/2014

CHARLES RIVER LABORATORIES (Continued) **U000227244**

End Date:	11/20/2014
Date Entered:	Not reported
Entry Date:	11/20/2014
Quantity Materical Removed SF:	.00
Quantity Material Removed LF:	20.00
Project Description:	Spr
AR Tracking ID:	202826
Super Lic Number:	AS061745
Monitor Lic Number:	AA000184
Lab Lic Number:	AA000184
Year:	2014
Sticker Number:	100211690
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7742702093
Sub Town:	Not reported
Worksite:	BUILDING 6 BASEMENT BOILER ROOM
Occupied:	-1
Contractor:	AC000673
Contract Type:	WRITTEN
Hours:	6PM-12PM
Project Type:	Repr
Abatement Process:	Glv
Location:	INDOORS
Decon Process:	THREE CHAMBERS W/SHOWER
Disposal Methods:	DOUBLE 6 MIL POLY BAGS
Facility Usage:	RESEARCH
Waiver Given:	Not reported
DEP Waiver Number:	141-1984
DLWD Waiver Number:	11209-2014
Small Owner Occ:	0
Owner Name:	CHARLES RIVER LABS
Owner Address:	251 BALLARDVALE ST
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	PETER TORROCO
On Site Manager Phone:	7742702093
Ins Comp:	LIBERTY MUTUAL INS
Policy Number:	WC2-31S-359246-054
EXP Date:	5/1/2015
Facility Size:	4000
Transporter Name:	UNIVERSAL ABATEMENT SEVICES, INC
Transporter Address:	57 CHASE ST, UNIT 3A-2
Transporter City:	METHUEN,
Transporter State:	MA
Final Site:	Not reported
Certified Name:	RAMON ARIAS
Cert Sign Date:	11/20/2014
Certified Company:	UNIVERSAL ABATEMENT SERVICES, INC
Certified Phone:	9786551684
Entered_by:	ABELITO
Name:	INDUSTRIAL OFFICE BUILDING
Address:	251 BALLARDVALE STREET
City,State,Zip:	WILMINGTON, MA
Notification:	Not reported
DEP Region:	Not reported

CHARLES RIVER LABORATORIES (Continued) **U000227244**

Notifiers Name:	Not reported
Start Date:	11/05/2013
End Date:	11/05/2013
Date Entered:	Not reported
Entry Date:	10/22/2013
Quantity Materical Removed SF:	400.00
Quantity Material Removed LF:	20.00
Project Description:	Trns
AR Tracking ID:	180905
Super Lic Number:	AS060373
Monitor Lic Number:	Not reported
Lab Lic Number:	AA000144
Year:	2013
Sticker Number:	100187753
Form Type:	ANF-001
Fee Status:	Fifty
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	CHARLES RIVER PARK
Occupied:	-1
Contractor:	AC000767
Contract Type:	Off
Hours:	Week days: 7-3 Week end:
Project Type:	Oth:REMOVAL
Abatement Process:	Glv,Fcontain
Location:	Indoors
Decon Process:	FULL CONTAINMENT/GLOVE BAG
Disposal Methods:	ALL METHODS WILL COMPLY
Facility Usage:	OFFICE BUILDING
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	5
Owner Name:	CHARLES RIVER PARK, LLC
Owner Address:	251 BALLARDVALE STREET
Owner City:	WILMINGTON
Owner State:	MA
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	E & F ENVIRONMENTAL SERVICES, LLC
Transporter Address:	86 CAROLAN AVENUE
Transporter City:	HAMPTON, NH
Transporter State:	Not reported
Final Site:	39
Certified Name:	FRANK BALOGH
Cert Sign Date:	10/22/2013
Certified Company:	E & F ENVIRO
Certified Phone:	6039742503
Entered_by:	Not reported

MA Financial Assurance 2:

Name:	CHARLES RIVER LABORATORIES
Address:	251 BALLARDVALE ST

CHARLES RIVER LABORATORIES (Continued) **U000227244**

City,State,Zip: WILMINGTON, MA 01887
Facility Id: 11420
Description: Private
FR Type: Commercial Insurance

HW GEN:
Name: CHARLES RIVER LABORATORIES
Address: 251 BALLARDVALE ST
City,State,Zip: WILMINGTON, MA 01887
EPA Id: MAD019716729
RCRA Generator Status: SQG
State Generator Status: VQG-MA

48
North
1/2-1
0.970 mi.
5124 ft.

NO LOCATION AID
240 BALLARDVALE ST
WILMINGTON, MA 01887

MA SHWS **S103043531**
MA RELEASE **N/A**
MA HW GEN
MA TIER 2

Relative:
Higher

Actual:
117 ft.

SHWS:
Name: NO LOCATION AID
Address: 240 BALLARDVALE ST
City,State,Zip: WILMINGTON, MA 018870000
Facility ID: 3-0016717
Source Type: Not reported
Release Town: WILMINGTON
Notification Date: 04/17/1998
Category: 120 DY
Associated ID: Not reported
Current Status: RAO
Status Date: 11/20/1998
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Hazardous Material

Release:
Name: NO LOCATION AID
Address: 240 BALLARDVALE ST
City,State,Zip: WILMINGTON, MA 018870000
Release Tracking Number/Current Status: 3-0016717 / RAO
Primary ID: Not reported
Official City: WILMINGTON
Notification: 04/17/1998
Category: 120 DY
Status Date: 11/20/1998
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/20/1998
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S103043531**

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/24/1998
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/17/1998
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/17/1998
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/22/1998
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/24/1998
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/3/1998
Response Action Outcome: Not reported

Chemicals:
Chemical: CHROMIUM (TOTAL)
Quantity: 628 milligrams per kilogram
Chemical: ARSENIC
Quantity: 136 milligrams per kilogram
Chemical: SILVER
Quantity: 346 milligrams per kilogram

HW GEN:
Name: TESLA ENERGY WAREHOUSE
Address: 240 BALLARDVALE ST
City,State,Zip: WILMINGTON, MA 01887
EPA Id: MAR000612317
RCRA Generator Status: SQG
State Generator Status: VQG-MA

TIER 2:
Facility ID: FATR2016000000028894
Name: ECOLAB; INC.
Address: 240 BALLARDVALE
City,State,Zip: WILMINGTON, MA 01887
Country: USA
Mailing Address: 240 Ballardvale Street
Mailing City,State,Zip: Wilmington, MA 01887-887-
Mailing Country: United States
Report Year: 2016

NO LOCATION AID (Continued) **S103043531**

All Chemicals Same As Last Year:	Not reported
Longitude:	-71.16156
Date Signed:	02/20/2017
Notes:	Not reported
Dike Or Other Safeguard:	F
Latitude:	42.59342
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	08/08/2017
Fees Total:	Not reported
Number of Employees:	5
Site Coord Abbreviated?:	F
Site Map:	F
State Label Code:	Not reported
Submitted By:	John Hemmen
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	FDTR2016000000026090
ID:	Not reported
Type:	RMP
Description:	RMP
Last Modified:	Not reported
Record Key:	FDTR2016000000026091
ID:	Not reported
Type:	State ID
Description:	State ID
Last Modified:	Not reported
Record Key:	FDTR2016000000026092
ID:	Not reported
Type:	TRI
Description:	TRI
Last Modified:	Not reported
Record Key:	FDTR2016000000026093
ID:	410231510
Type:	EIN
Description:	EIN
Last Modified:	Not reported
Record Key:	FDTR2016000000026094
ID:	4214
Type:	SIC
Description:	SIC
Last Modified:	Not reported
Record Key:	FDTR2016000000026095
ID:	493110
Type:	NAICS

NO LOCATION AID (Continued) **S103043531**

Description:	General Warehousing and Storage
Last Modified:	Not reported
Record Key:	FDTR2016000000026096
ID:	555425784
Type:	DUN & BradStreet
Description:	DUN & BradStreet
Last Modified:	Not reported

Chemcials:

Acute:	T
Average Amount:	36357
Average Amount Code:	7
Chem Inv Record ID:	CVTR2016000000108258
Chem Same As Last Year:	Not reported
Chronic:	T
CICAS:	1310732
CI EHS Chemical:	No
CI Last Modified:	2017-02-12T12:53:52.
Days On Site:	365
Entered Chemical Name:	Sodium Hydroxide
Fire:	F
Gas:	F
Liquid:	T
Max Amount:	8.079000000000000e+004
Max Amount Code:	9
Max Amount Container:	0
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	F
Solid:	T
State01 Checkbox:	T
State01 Number:	0
State01 Text:	N/A
State02 Checkbox:	F
State02 Number:	2
State02 Text:	Week
State03 Checkbox:	F
State03 Number:	15000
State03 Text:	Not reported
State04 Checkbox:	F
State04 Number:	0
State04 Text:	Liquid
State05 Checkbox:	F
State05 Text:	Not reported
State06 Checkbox:	F
State06 Text:	Not reported
State07 Checkbox:	F
State07 Text:	Outbound: Ballardvale Street to Route 125 to I-93 North or South. Inbound: reverse
State Label Code:	Not reported
Trade Secret:	F

Location:

Type Code:	Plastic or nonmetallic drum
Pressure Code:	Ambient pressure

NO LOCATION AID (Continued) **S103043531**

Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs
Type Code:	Plastic bottles or jugs
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs
Type Code:	Tote bin
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs
Type Code:	Box
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs

TIER 2:

Contact:

Contact Record ID:	CTTR2016265550P28894
Title:	Not reported
Contact Name:	Inc.
Contact Email:	john.hemmen@ecolab.com
Contact Mail Address:	370 Wabasha Street North
Contact Mail Country:	US
Contact1 Type:	Parent Company
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Contact:

Contact Record ID:	CTTR2016265554P28894
Title:	Not reported
Contact Name:	Not reported
Contact Email:	trey.mcduffie@ecolab.com
Contact Mail Address:	240 Ballardvale
Contact Mail Country:	US
Contact1 Type:	Other
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

NO LOCATION AID (Continued) **S103043531**

Contact:
Contact Record ID: CTTR2016265555P28894
Title: SHE Manager
Contact Name: Hemmen
Contact Email: john.hemmen@ecolab.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Tier II Information Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016265556P28894
Title: Logistics Manager
Contact Name: Mcduffie
Contact Email: trey.mcduffie@ecolab.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016108260P28894
Title: Not reported
Contact Name: Transport
Contact Email: Not reported
Contact Mail Address: 1062 Florida Ave.
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016108259P28894
Title: Not reported
Contact Name: Transport
Contact Email: Not reported
Contact Mail Address: 1062 Florida Ave.
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

NO LOCATION AID (Continued) **S103043531**

Contact:
Contact Record ID: CTTR2016108258P28894
Title: Not reported
Contact Name: Transport
Contact Email: Not reported
Contact Mail Address: 1062 Florida Ave.
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016265557P28894
Title: SHE Manager
Contact Name: Hemmen
Contact Email: john.hemmen@ecolab.com
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016265552P28894
Title: Not reported
Contact Name: Not reported
Contact Email: Not reported
Contact Mail Address: Not reported
Contact Mail Country: Not reported
Contact1 Type: Billing
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Contact Record ID: CTTR2016108261P28894
Title: Not reported
Contact Name: Transport
Contact Email: Not reported
Contact Mail Address: 1062 Florida Ave.
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

NO LOCATION AID (Continued) **S103043531**

Contact:

Contact Record ID:	CTTR2016265551P28894
Title:	Not reported
Contact Name:	McDuffie
Contact Email:	trey.mcduffie@ecolab.com
Contact Mail Address:	240 Ballardvale Street
Contact Mail Country:	US
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Facility ID:	FATR2015000000009670
Name:	ECOLAB; INC.
Address:	240 BALLARDVALE
City,State,Zip:	WILMINGTON, MA 01887
Country:	USA
Mailing Address:	240 Ballardvale Street
Mailing City,State,Zip:	Wilmington, MA 01887-
Mailing Country:	United States
Report Year:	2015
All Chemicals Same As Last Year:	Not reported
Longitude:	-71.1616
Date Signed:	02/20/2016
Notes:	Not reported
Dike Or Other Safeguard:	F
Latitude:	42.5934
Facility Dept:	Not reported
Failed Validation:	Not reported
Date Modified:	05/19/2016
Fees Total:	Not reported
Number of Employees:	5
Site Coord Abbreviated?:	F
Site Map:	F
State Label Code:	Not reported
Submitted By:	John Hemmen
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
LEPC Name:	Not reported
Facility Status:	Not reported
Latest Report:	Not reported
EHS Above TPQ:	Not reported

TIER 2:

Record Key:	96700000000001
ID:	Not reported
Type:	State ID
Description:	State ID
Last Modified:	Not reported

Record Key:	96700000000002
ID:	493110

NO LOCATION AID (Continued) **S103043531**

Type: NAICS
Description: General Warehousing and Storage
Last Modified: Not reported

Record Key: 96700000000003
ID: 555425784
Type: DUN & BradStreet
Description: DUN & BradStreet
Last Modified: Not reported

Record Key: 96700000000004
ID: 4214
Type: SIC
Description: SIC
Last Modified: Not reported

Record Key: 96700000000005
ID: Not reported
Type: RMP
Description: RMP
Last Modified: Not reported

Record Key: 96700000000006
ID: 410231510
Type: EIN
Description: EIN
Last Modified: Not reported

Record Key: 96700000000007
ID: Not reported
Type: TRI
Description: TRI
Last Modified: Not reported

Chemcials:
Acute: T
Average Amount: 17754
Average Amount Code: 6
Chem Inv Record ID: 93677
Chem Same As Last Year: Not reported
Chronic: T
CICAS: 497198
CI EHS Chemical: No
CI Last Modified: 2016-02-20T08:48:46.
Days On Site: 365
Entered Chemical Name: Dense Soda Ash (Sodium Carbonate (soda))
Fire: F
Gas: F
Liquid: T
Max Amount: 38977
Max Amount Code: 7
Max Amount Container: 0
Mixture: T
Pressure: F
Pure: F
Reactive: T
Solid: T

NO LOCATION AID (Continued) **S103043531**

State01 Checkbox: T
State01 Number: 0
State01 Text: N/A
State02 Checkbox: F
State02 Number: 2
State02 Text: Week
State03 Checkbox: F
State03 Number: 15000
State03 Text: Not reported
State04 Checkbox: F
State04 Number: 0
State04 Text: Liquid
State05 Checkbox: F
State05 Text: Not reported
State06 Checkbox: F
State06 Text: Not reported
State07 Checkbox: F
State07 Text: Outbound: Ballardvale Street to Route 125 to I-93 North or South. Inbound: reversed
State Label Code: Not reported
Trade Secret: F

Location:
Type Code: Plastic or nonmetallic drum
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Warehouse
Amount: 0
Amount Unit: lbs

Type Code: Plastic bottles or jugs
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Warehouse
Amount: 0
Amount Unit: lbs

Type Code: Box
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Warehouse
Amount: 0
Amount Unit: lbs

Acute: T
Average Amount: 12447
Average Amount Code: 6
Chem Inv Record ID: 93678
Chem Same As Last Year: Not reported
Chronic: T
CICAS: 68551122
CI EHS Chemical: No
CI Last Modified: 2016-02-20T08:49:20.
Days On Site: 365
Entered Chemical Name: Ethoxylated Alcohols; C12-C16
Fire: F
Gas: F

NO LOCATION AID (Continued) **S103043531**

Liquid:	T
Max Amount:	23979
Max Amount Code:	6
Max Amount Container:	0
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	F
Solid:	T
State01 Checkbox:	T
State01 Number:	0
State01 Text:	N/A
State02 Checkbox:	F
State02 Number:	2
State02 Text:	Week
State03 Checkbox:	F
State03 Number:	20000
State03 Text:	Not reported
State04 Checkbox:	F
State04 Number:	10000
State04 Text:	Liquid
State05 Checkbox:	F
State05 Text:	Not reported
State06 Checkbox:	F
State06 Text:	Not reported
State07 Checkbox:	F
State07 Text:	Outbound: Ballardvale Street to Route 125 to I-93 North or South. Inbound: reversed
State Label Code:	Not reported
Trade Secret:	F

Location:

Type Code:	Plastic or nonmetallic drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs

Type Code:	Box
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs

Type Code:	Plastic bottles or jugs
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs

Acute:	T
Average Amount:	38800
Average Amount Code:	7
Chem Inv Record ID:	93291

NO LOCATION AID (Continued) **S103043531**

Chem Same As Last Year:	Not reported
Chronic:	T
CICAS:	1310732
CI EHS Chemical:	No
CI Last Modified:	2016-02-20T08:49:54.
Days On Site:	365
Entered Chemical Name:	Sodium Hydroxide
Fire:	F
Gas:	F
Liquid:	T
Max Amount:	72948
Max Amount Code:	8
Max Amount Container:	0
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	F
Solid:	T
State01 Checkbox:	T
State01 Number:	0
State01 Text:	N/A
State02 Checkbox:	F
State02 Number:	2
State02 Text:	Week
State03 Checkbox:	F
State03 Number:	15000
State03 Text:	Not reported
State04 Checkbox:	F
State04 Number:	0
State04 Text:	Liquid
State05 Checkbox:	F
State05 Text:	Not reported
State06 Checkbox:	F
State06 Text:	Not reported
State07 Checkbox:	F
State07 Text:	Outbound: Ballardvale Street to Route 125 to I-93 North or South. Inbound: reverse
State Label Code:	Not reported
Trade Secret:	F

Location:

Type Code:	Tote bin
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs

Type Code:	Plastic bottles or jugs
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs

Type Code:	Plastic or nonmetallic drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature

NO LOCATION AID (Continued) **S103043531**

Location:	Warehouse
Amount:	0
Amount Unit:	lbs
Type Code:	Box
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs
Acute:	T
Average Amount:	5431
Average Amount Code:	5
Chem Inv Record ID:	93679
Chem Same As Last Year:	Not reported
Chronic:	T
CICAS:	7681529
CI EHS Chemical:	No
CI Last Modified:	2016-02-20T08:48:03.
Days On Site:	365
Entered Chemical Name:	Sodium Hypochlorite
Fire:	F
Gas:	F
Liquid:	T
Max Amount:	11450
Max Amount Code:	6
Max Amount Container:	0
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	F
Solid:	F
State01 Checkbox:	T
State01 Number:	0
State01 Text:	N/A
State02 Checkbox:	F
State02 Number:	2
State02 Text:	Month
State03 Checkbox:	F
State03 Number:	5000
State03 Text:	Not reported
State04 Checkbox:	F
State04 Number:	2500
State04 Text:	Liquid
State05 Checkbox:	F
State05 Text:	Not reported
State06 Checkbox:	F
State06 Text:	Not reported
State07 Checkbox:	F
State07 Text:	Outbound: Ballardvale Street to Route 125 to I-93 North or South. Inbound: reversed
State Label Code:	Not reported
Trade Secret:	F

Location:

Type Code:	Plastic or nonmetallic drum

NO LOCATION AID (Continued) **S103043531**

Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs
Type Code:	Plastic bottles or jugs
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Warehouse
Amount:	0
Amount Unit:	lbs

---

49 **NO LOCATION AID** **MA SHWS** **S108117433**
East **19 DRAPER DR** **MA RELEASE** **N/A**
1/2-1 **WILMINGTON, MA 01887**
0.977 mi.
5156 ft.

Relative:
Lower

Actual:
76 ft.

SHWS:

Name:	NO LOCATION AID
Address:	19 DRAPER DR
City,State,Zip:	WILMINGTON, MA 018870000
Facility ID:	3-0026055
Source Type:	DRUMS
Release Town:	WILMINGTON
Notification Date:	05/26/2006
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	10/31/2006
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Oil

Release:

Name:	NO LOCATION AID
Address:	19 DRAPER DR
City,State,Zip:	WILMINGTON, MA 018870000
Release Tracking Number/Current Status:	3-0026055 / RAO
Primary ID:	Not reported
Official City:	WILMINGTON
Notification:	05/26/2006
Category:	TWO HR
Status Date:	10/31/2006
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S108117433**

Action Date: 10/16/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/31/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/16/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/16/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/22/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/9/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

NO LOCATION AID (Continued) **S108117433**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/9/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/5/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: GASOLINE
Quantity: Not reported
Chemical: WASTE OIL
Quantity: 385 gallons
Chemical: LUBRICATING OIL
Quantity: Not reported
Location Type: ROADWAY
Location Type: RESIDNTIAL
Source: DRUMS

Count: 8 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
NORTH READING	S131447530	ROADWAY NEAR 43 SHADY HILL DRIVE	SHADY HILL DRIVE	01864	MA SHWS, MA RELEASE
WILMINGTON	S118337276	AT WOBURN STREET	ROUTE 93 NORTH	01887	MA SHWS, MA RELEASE
WILMINGTON	S109948762	NO LOCATION AID	ANDOVER ST ACROSS FROM 228	01887	MA SHWS, MA RELEASE
WILMINGTON	S128182828	IN FRONT OF 201 BALLARDVALE STREET	BALLARDVALE STREET	01887	MA SHWS, MA RELEASE
WILMINGTON	S120630338	DRAINAGE CULVERT	COOLIDGE ROAD	01887	MA SHWS, MA RELEASE
WILMINGTON	S111460183	DRUM DISPOSAL SITE	LOT 15 MAP R-2 BALLARDVALE ST	01887	MA SHWS, MA RELEASE, MA ENF
WILMINGTON	S117692214	NO LOCATION AID	I-93 NB @ EXIT 38		MA SHWS, MA RELEASE
WILMINGTON	S127336063	INTERSTATE 93 NORTHBOUND AFTER EXI	I-93 NORTHBOUND	01887	MA SHWS, MA RELEASE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 06/20/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 03/11/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 10/28/2025
Next Scheduled EDR Contact: 02/16/2026
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/10/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: Site Transition List

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 10/03/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

LF PROFILES: Landfill Profiles Listing

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 12/14/2015
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5868
Last EDR Contact: 09/25/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

SWF/LF: Solid Waste Facility Database/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 07/31/2025
Date Data Arrived at EDR: 08/05/2025
Date Made Active in Reports: 10/27/2025
Number of Days to Update: 83

Source: Department of Environmental Protection
Telephone: 617-292-5989
Last EDR Contact: 09/25/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Annually

Lists of state and tribal leaking storage tanks

LAST: Leaking Aboveground Storage Tank Sites

Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 10/03/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

LUST: Leaking Underground Storage Tank Listing
Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23
Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 10/03/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/27/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 04/23/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 1

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/16/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 10/07/2025
Date Data Arrived at EDR: 10/08/2025
Date Made Active in Reports: 10/22/2025
Number of Days to Update: 14

Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Quarterly

AST 2: Aboveground Storage Tanks
Aboveground storage tanks

Date of Government Version: 07/03/2025
Date Data Arrived at EDR: 07/08/2025
Date Made Active in Reports: 09/26/2025
Number of Days to Update: 80

Source: Department of Fire Services
Telephone: 978-567-3181
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

AST: Aboveground Storage Tank Database
Registered Aboveground Storage Tanks.

Date of Government Version: 05/31/2025
Date Data Arrived at EDR: 07/03/2025
Date Made Active in Reports: 09/25/2025
Number of Days to Update: 84

Source: Department of Public Safety
Telephone: 617-556-1035
Last EDR Contact: 10/07/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: No Update Planned

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/27/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites With Activity and Use Limitation

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 10/03/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Completed Brownfields Covenants Listing

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 01/22/2025
Date Made Active in Reports: 04/07/2025
Number of Days to Update: 75

Source: Office of the Attorney General
Telephone: 617-963-2423
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Annually

BROWNFIELDS 2: Potential Brownfields Listing
A listing of potential brownfields site locations in the state.

Date of Government Version: 07/11/2023
Date Data Arrived at EDR: 07/27/2023
Date Made Active in Reports: 10/16/2023
Number of Days to Update: 81
Source: Department of Environmental Protection
Telephone: 617-556-1007
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/09/2024
Date Data Arrived at EDR: 09/11/2024
Date Made Active in Reports: 12/06/2024
Number of Days to Update: 86
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/07/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 11/13/2024
Date Made Active in Reports: 11/19/2024
Number of Days to Update: 6

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

Local Land Records

LIENS: Liens Information Listing

A listing of environmental liens.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/09/2018
Date Made Active in Reports: 06/21/2018
Number of Days to Update: 104

Source: Department of Environmental Protection
Telephone: 617-292-5628
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/11/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RELEASE: Reportable Releases

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 23

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 10/03/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

MA SPILLS: Historical Spill List

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Date Data Arrived at EDR: 12/03/2003
Date Made Active in Reports: 12/31/2003
Number of Days to Update: 28

Source: Department of Environmental Protection
Telephone: 617-292-5720
Last EDR Contact: 12/03/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 03/10/1998
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/05/2013
Number of Days to Update: 61

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 07/23/2025
Date Data Arrived at EDR: 07/23/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 6

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/23/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/07/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/02/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/22/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/11/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/11/2025
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 7

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/14/2025
Date Data Arrived at EDR: 07/14/2025
Date Made Active in Reports: 10/13/2025
Number of Days to Update: 91

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/14/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2025
Date Data Arrived at EDR: 08/04/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 8

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 07/01/2025
Date Data Arrived at EDR: 07/29/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/08/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 28

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 10/02/2024
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 100

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 09/30/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/07/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 27

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 10/16/2024
Date Made Active in Reports: 01/14/2025
Number of Days to Update: 90

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 08/28/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/10/2025
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/17/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/17/2025
Date Made Active in Reports: 10/13/2025
Number of Days to Update: 88
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/20/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/29/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 91

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/13/2026
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/07/2025
Number of Days to Update: 16

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 09/29/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/22/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 05/15/2025
Date Data Arrived at EDR: 05/15/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 75

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/18/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 07/01/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 09/24/2025
Number of Days to Update: 85

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 05/28/2025
Date Data Arrived at EDR: 05/28/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 6

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 06/04/2024
Date Data Arrived at EDR: 11/22/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 88

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/22/2025
Date Data Arrived at EDR: 05/05/2025
Date Made Active in Reports: 05/21/2025
Number of Days to Update: 16

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 02/14/2025
Date Data Arrived at EDR: 03/11/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 84

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/29/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/22/2025
Date Data Arrived at EDR: 06/25/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 63
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/07/2025
Date Data Arrived at EDR: 05/13/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 77
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62
Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62
Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62
Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 09/24/2025
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 11/12/2024
Date Data Arrived at EDR: 07/21/2025
Date Made Active in Reports: 10/13/2025
Number of Days to Update: 84

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/15/2024
Date Data Arrived at EDR: 03/06/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 89

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/24/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/24/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 07/06/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Semi-Annually

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 08/13/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

E MANIFEST: Hazardous Waste Electronic Manifest System

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 08/13/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

PFAS: PFAS Contaminated Sites Listing

Detection of Per- and Polyfluoroalkyl Substances (PFAS) in drinking water.

Date of Government Version: 08/29/2025
Date Data Arrived at EDR: 09/24/2025
Date Made Active in Reports: 09/30/2025
Number of Days to Update: 6

Source: Department of Environmental Protection
Telephone: 617-292-6770
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

AIRS: Permitted Facilities Listing

A listing of Air Quality permit applications.

Date of Government Version: 07/07/2025
Date Data Arrived at EDR: 07/07/2025
Date Made Active in Reports: 09/26/2025
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 617-292-5789
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 05/21/2025
Date Data Arrived at EDR: 05/21/2025
Date Made Active in Reports: 08/20/2025
Number of Days to Update: 91

Source: Department of Environmental Protection
Telephone: 617-292-5982
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

DRYCLEANERS: Regulated Drycleaning Facilities

A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 04/25/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/25/2025
Number of Days to Update: 85

Source: Department of Environmental Protection
Telephone: 617-292-5633
Last EDR Contact: 10/07/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Action Cases

A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 10/01/2025
Date Data Arrived at EDR: 10/02/2025
Date Made Active in Reports: 10/07/2025
Number of Days to Update: 5

Source: Department of Environmental Quality
Telephone: 617-292-5979
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

FIN ASSURANCE 1: Financial Assurance Information Listing

Information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/03/2011
Number of Days to Update: 42

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 08/26/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

FIN ASSURANCE 2: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tanks. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/26/2025
Date Data Arrived at EDR: 05/01/2025
Date Made Active in Reports: 07/24/2025
Number of Days to Update: 84

Source: Office of State Fire Marshal
Telephone: 978-567-3100
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

FIN ASSURANCE 3: Financial Assurance Information listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 09/16/2025
Date Data Arrived at EDR: 09/24/2025
Date Made Active in Reports: 10/03/2025
Number of Days to Update: 9

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

GWDP: Ground Water Discharge Permits

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 05/20/2025
Date Data Arrived at EDR: 07/17/2025
Date Made Active in Reports: 10/09/2025
Number of Days to Update: 84

Source: MassGIS
Telephone: 617-556-1150
Last EDR Contact: 10/21/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

HW GEN: List of Massachusetts Hazardous Waste Generators

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Semi-Annually

MERCURY: Mercury Product Recyling Drop-Off Locations Listing

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 08/07/2025
Date Data Arrived at EDR: 08/07/2025
Date Made Active in Reports: 10/27/2025
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 617-292-5632
Last EDR Contact: 08/07/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

NPDES: NPDES Permit Listing
Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 08/04/2025
Date Data Arrived at EDR: 08/05/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 84
Source: Department of Environmental Protection
Telephone: 508-767-2781
Last EDR Contact: 08/05/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 08/05/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 84
Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Annually

TSD: TSD Facility
List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 06/04/2025
Date Data Arrived at EDR: 06/16/2025
Date Made Active in Reports: 09/11/2025
Number of Days to Update: 87
Source: Department of Environmental Protection
Telephone: 617-292-5580
Last EDR Contact: 09/16/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

UIC: Underground Injection Control Listing
A list of UIC registration data and their locations

Date of Government Version: 08/04/2025
Date Data Arrived at EDR: 08/05/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 84
Source: Department of Environmental Protection
Telephone: 617-566-1172
Last EDR Contact: 10/28/2025
Next Scheduled EDR Contact: 02/16/2026
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A
Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2025
Date Data Arrived at EDR: 07/31/2025
Date Made Active in Reports: 10/16/2025
Number of Days to Update: 77

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 07/31/2025
Next Scheduled EDR Contact: 11/17/2025
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 09/24/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/06/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 08/27/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WILDWOOD SCHOOL @ NORTH INTERMEDIATE SCHOOL
320 SALEM STREET
WILMINGTON, MA 01887

TARGET PROPERTY COORDINATES

Latitude (North):	42.578683 - 42° 34' 43.26''
Longitude (West):	71.158084 - 71° 9' 29.10''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	322892.5
UTM Y (Meters):	4716073.0
Elevation:	93 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	19020359 WILMINGTON, MA
Version Date:	2021

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

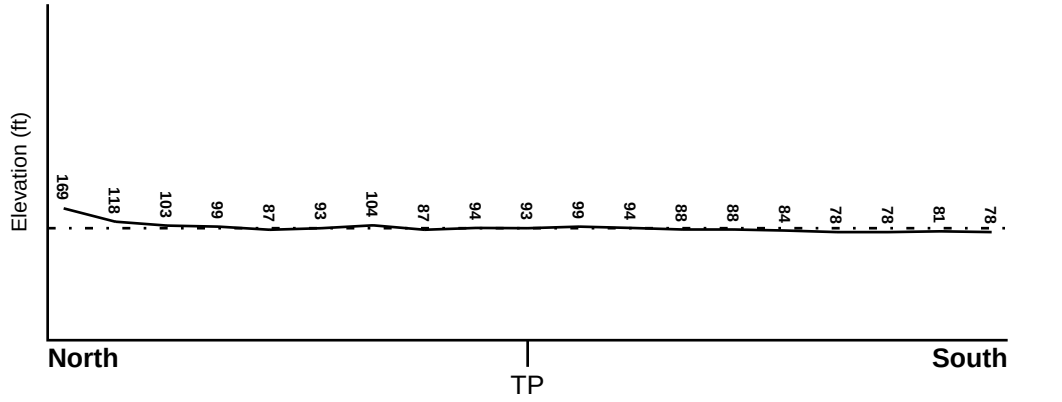
TOPOGRAPHIC INFORMATION

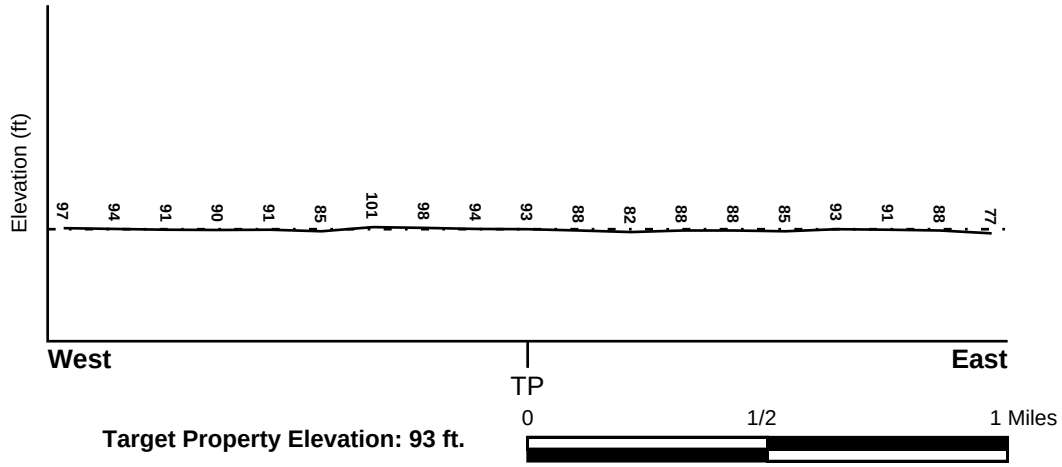
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ENE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 93 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
25017C0283E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
25017C0284E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
WILMINGTON	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Ordovian
Series:	Lower Paleozoic granitic rocks
Code:	Pzg1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	WINDSOR
Soil Surface Texture:	loamy sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Excessively. Soils have very high and high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	LOW
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	2 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 6.00 Min: 4.50
2	2 inches	20 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 6.00 Min: 4.50
3	20 inches	65 inches	sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 6.50 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam
muck
gravelly - sandy loam
loamy fine sand
extremely gravelly - sand
silt loam
mucky - loamy sand

Surficial Soil Types: fine sandy loam
muck
gravelly - sandy loam
loamy fine sand
extremely gravelly - sand
silt loam
mucky - loamy sand

Shallow Soil Types: loamy coarse sand
loamy sand
silt loam

Deeper Soil Types: stratified
sapric material

extremely gravelly - sand
silt loam
coarse sand

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS40000477947	1/2 - 1 Mile ENE
A3	USGS40000477948	1/2 - 1 Mile ENE
5	USGS40000477628	1/2 - 1 Mile South
B7	USGS40000477768	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

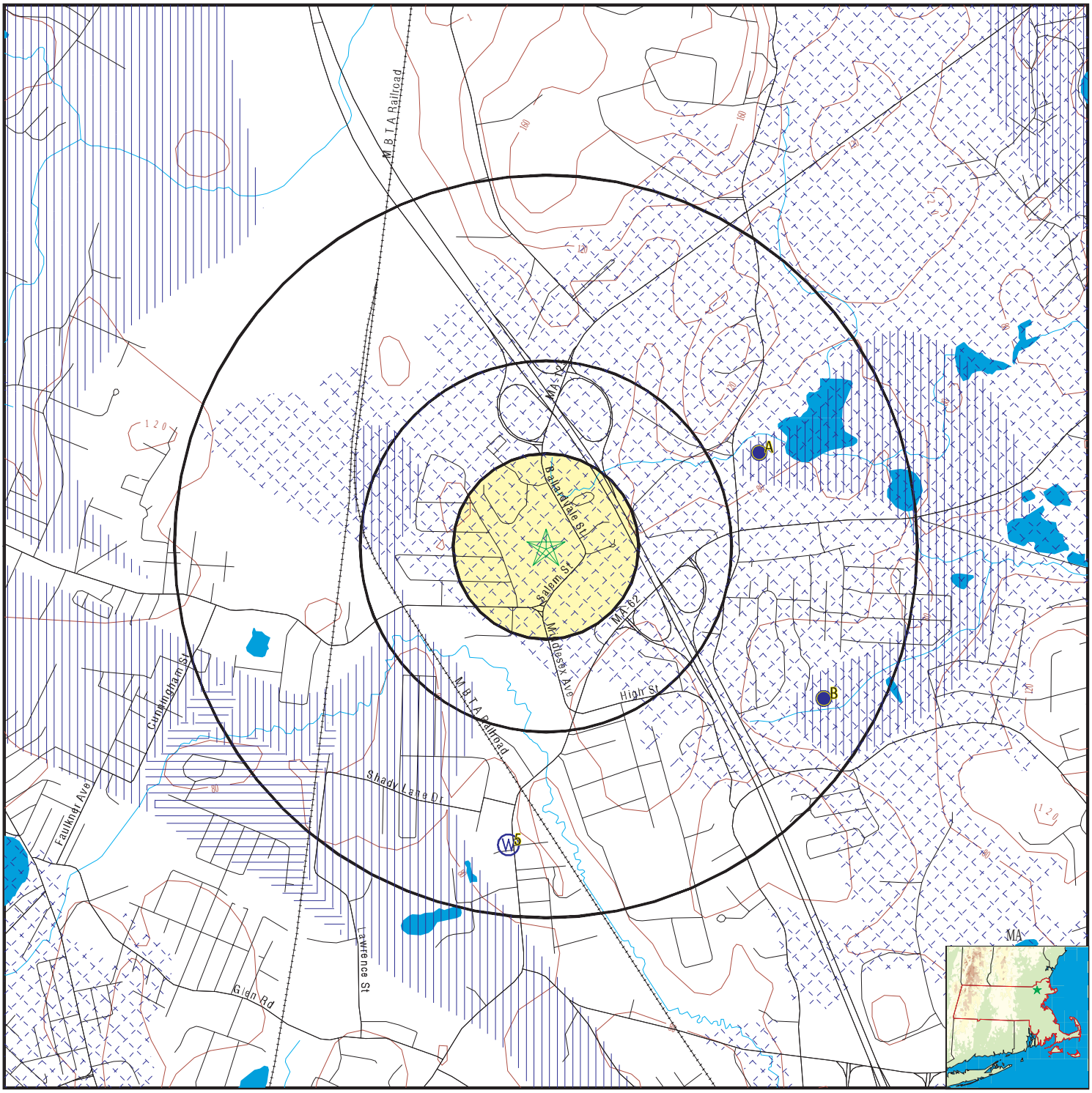
MAP ID	WELL ID	LOCATION FROM TP
A1	MA3342000	1/2 - 1 Mile ENE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A4	MA1100000002565	1/2 - 1 Mile ENE
B6	MA1100000003167	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 08157807.2r



County Boundary
Major Roads
Contour Lines
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

Potentially Productive Aquifers
Not Potentially Productive Aquifers
DEP Approved Zone IIs
EPA Designated Sole Src. Aq.

SITE NAME:	Wildwood School @ North Intermediate School	CLIENT:	PEER Consultants
ADDRESS:	320 Salem Street Wilmington MA 01887	CONTACT:	Dave Gorden
		INQUIRY #:	08157807.2r
LAT/LONG:	42.578683 / 71.158084	DATE:	October 30, 2025 3:03 pm

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Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
ENE
1/2 - 1 Mile
Lower

FRDS PWS **MA3342000**

Epa region:	01	State:	MA
Pwsid:	MA3342000	Pwsname:	WILMINGTON WATER DEPT
Cityserved:	Not Reported	Stateserved:	MA
Zipserved:	Not Reported	Fipscounty:	25017
Status:	Active	Retpopsrvd:	22250
Pwssvcconn:	7516	Psource longname:	Purch_surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	MICHAEL J WOODS	Contactorgname:	WILMINGTON WATER DEPT
Contactphone:	9786584711	Contactaddress1:	121 GLEN ROAD
Contactaddress2:	Not Reported	Contactcity:	WILMINGTON
Contactstate:	MA	Contactzip:	01887
Pwsactivitycode:	A		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	corrosion control	Trtprocess:	ph adjustment
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	filtration, rapid sand
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	taste / odor control	Trtprocess:	activated carbon, granular
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	gaseous chlorination, post
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	iron removal	Trtprocess:	permanganate
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection by-products control		
Trtprocess:	chloramines	Factypecode:	TP

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	iron removal	Trtprocess:	sedimentation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	organics removal	Trtprocess:	aeration, diffused
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	organics removal	Trtprocess:	activated carbon, granular
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	coagulation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	flocculation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	11
Facname:	BUTTERS ROW WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	sedimentation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	corrosion control	Trtprocess:	ph adjustment
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	gaseous chlorination, post
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	iron removal	Trtprocess:	permanganate
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	iron removal	Trtprocess:	sedimentation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		

Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	organics removal	Trtprocess:	aeration, diffused
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	organics removal	Trtprocess:	activated carbon, granular
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	coagulation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	sedimentation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	flocculation
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	filtration, rapid sand
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	taste / odor control	Trtprocess:	activated carbon, granular
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection by-products control		
Trtprocess:	chloramines	Factypecode:	TP

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		

Pwsid:	MA3342000	Facid:	12
Facname:	E H SARGENT WATER TREATMENT PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	not reported
Factypecode:	TP		

PWS ID:	MA3342000	PWS name:	WILMINGTON WATER DEPT
Address:	Not Reported	Care of:	115 ANDOVER ST - BROWN'S CROSS
City:	WILMINGTON	State:	MA
Zip:	018870000	Owner:	WILMINGTON WATER DEPT

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Source code:	Ground water	Population:	20886
PWS ID:	MA3342000	PWS type:	Mailing
PWS name:	WILMINGTON WATER DEPT	PWS address:	121 GLEN ROAD
PWS city:	WILMINGTON	PWS state:	MA
PWS zip:	018870000	PWS name:	WILMINGTON WATER DEPT
PWS type code:	C	Retail population served:	22666
Contact:	MICHAEL J WOODS	Contact address:	121 GLEN ROAD
Contact address:	WILMINGTON	Contact city:	MA
Contact state:	01	Contact zip:	9786584711
Contact telephone:	Not Reported		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	CORROSION CONTROL	Process:	PH ADJUSTMENT, POST
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	DISINFECTION	Process:	GASEOUS CHLORINATION, POST
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	DISINFECTION	Process:	GASEOUS CHLORINATION, PRE
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	IRON REMOVAL	Process:	PERMANGANATE
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	IRON REMOVAL	Process:	SEDIMENTATION
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	ORGANICS REMOVAL	Process:	ACTIVATED CARBON, GRANULAR
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	ORGANICS REMOVAL	Process:	AERATION, DIFFUSED
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	PARTICULATE REMOVAL	Process:	COAGULATION
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	PARTICULATE REMOVAL	Process:	FILTRATION, RAPID SAND
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	PARTICULATE REMOVAL	Process:	FLOCCULATION
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	PARTICULATE REMOVAL	Process:	SEDIMENTATION
Population:	20886		
County:	MIDDLESEX	Source:	Ground water
Treatment Objective:	TASTE / ODOR CONTROL	Process:	ACTIVATED CARBON, GRANULAR
Population:	20886		
PWS ID:	MA3342000	Activity status:	Active
Date system activated:	9003	Date system deactivated:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Retail population:	00018000	System name:	WILMINGTON WATER DEPT
System address:	BROWN'S CROSSING PUMP STATION		
System city:	WILMINGTON	System state:	MA
System zip:	018870000		
Population served:	10,001 - 50,000 Persons	Treatment:	Mixed (treated and untreated)
Latitude:	423149	Longitude:	0711008
Latitude:	423200	Longitude:	0710955
Latitude:	423442	Longitude:	0710801
Latitude:	423104	Longitude:	0710959
Latitude:	423302	Longitude:	0711228
Latitude:	423330	Longitude:	0711128
Latitude:	423304	Longitude:	0710941
Latitude:	423158	Longitude:	0710957
Latitude:	423420	Longitude:	0710839
Latitude:	423456	Longitude:	0710843
State:	MA	Latitude degrees:	42
Latitude minutes:	31	Latitude seconds:	49.0000
Longitude degrees:	71	Longitude minutes:	10
Longitude seconds:	8.0000		
State:	MA	Latitude degrees:	42
Latitude minutes:	31	Latitude seconds:	49.0000
Longitude degrees:	71	Longitude minutes:	10
Longitude seconds:	11.0000		
State:	MA	Latitude degrees:	42
Latitude minutes:	31	Latitude seconds:	58.0000
Longitude degrees:	71	Longitude minutes:	10
Longitude seconds:	2.0000		
State:	MA	Latitude degrees:	42
Latitude minutes:	32	Latitude seconds:	1.0000
Longitude degrees:	71	Longitude minutes:	9
Longitude seconds:	54.0000		
State:	MA	Latitude degrees:	42
Latitude minutes:	32	Latitude seconds:	5.0000
Longitude degrees:	71	Longitude minutes:	9
Longitude seconds:	44.0000		
State:	MA	Latitude degrees:	42
Latitude minutes:	33	Latitude seconds:	2.0000
Longitude degrees:	71	Longitude minutes:	12
Longitude seconds:	28.0000		
State:	MA	Latitude degrees:	42
Latitude minutes:	33	Latitude seconds:	31.0000
Longitude degrees:	71	Longitude minutes:	11
Longitude seconds:	29.0000		

State:	MA	Latitude degrees:	42
Latitude minutes:	34	Latitude seconds:	25.0000
Longitude degrees:	71	Longitude minutes:	8
Longitude seconds:	41.0000		

State:	MA	Latitude degrees:	42
Latitude minutes:	34	Latitude seconds:	42.0000
Longitude degrees:	71	Longitude minutes:	8
Longitude seconds:	2.0000		

State:	MA	Latitude degrees:	42
Latitude minutes:	34	Latitude seconds:	56.0000
Longitude degrees:	71	Longitude minutes:	8
Longitude seconds:	52.0000		

Violation id:	03V0001	Orig code:	S
State:	MA	Violation Year:	2002
Contamination code:	1041	Contamination Name:	Nitrite
Violation code:	02	Violation name:	MCL, Average
Rule code:	331	Rule name:	Nitrates
Violation measur:	1.2	Unit of measure:	MG/L
State mcl:	1	Cmp bdt:	10/01/2002
Cmp edt:	12/31/2002		

Violation id:	10	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2976	Contamination Name:	Vinyl chloride
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	11	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2989	Contamination Name:	CHLOROBENZENE
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	12	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2968	Contamination Name:	o-Dichlorobenzene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	13	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2979	Contamination Name:	trans-1,2-Dichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	14	Orig code:	S
State:	MA	Violation Year:	2010

Contamination code:	2380	Contamination Name:	cis-1,2-Dichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	15	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2983	Contamination Name:	1,2-Dichloropropane
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	16	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2992	Contamination Name:	Ethylbenzene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	17	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2996	Contamination Name:	Styrene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	18	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2987	Contamination Name:	Tetrachloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	19	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2991	Contamination Name:	Toluene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	2	Orig code:	S
State:	MA	Violation Year:	2007
Contamination code:	1041	Contamination Name:	Nitrite
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2007
Cmp edt:	09/30/2007		

Violation id:	20	Orig code:	S

State: MA
Contamination code: 2969
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 09/30/2010
Violation Year: 2010
Contamination Name: p-Dichlorobenzene
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 06/01/2010

Violation id: 21
State: MA
Contamination code: 2955
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 09/30/2010
Orig code: S
Violation Year: 2010
Contamination Name: Xylenes, Total
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 06/01/2010

Violation id: 22
State: MA
Contamination code: 2964
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 09/30/2010
Orig code: S
Violation Year: 2010
Contamination Name: DICHLOROMETHANE
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 06/01/2010

Violation id: 23
State: MA
Contamination code: 2962
Violation code: 03
Rule code: 500
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 09/30/2010
Orig code: S
Violation Year: 2010
Contamination Name: p-Xylene
Violation name: Monitoring, Regular
Rule name: Not Regulated
Unit of measure: Not Reported
Cmp bdt: 06/01/2010

Violation id: 24
State: MA
Contamination code: 2985
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 09/30/2010
Orig code: S
Violation Year: 2010
Contamination Name: 1,1,2-Trichloroethane
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 06/01/2010

Violation id: 25
State: MA
Contamination code: 2251
Violation code: 03
Rule code: 500
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 09/30/2010
Orig code: S
Violation Year: 2010
Contamination Name: METHYL TERT-BUTYL ETHER
Violation name: Monitoring, Regular
Rule name: Not Regulated
Unit of measure: Not Reported
Cmp bdt: 06/01/2010

Violation id: 26
State: MA
Contamination code: 2378
Violation code: 03
Rule code: 310
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 09/30/2010
Orig code: S
Violation Year: 2010
Contamination Name: 1,2,4-Trichlorobenzene
Violation name: Monitoring, Regular
Rule name: VOC
Unit of measure: Not Reported
Cmp bdt: 06/01/2010

Violation id:	27	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	1039	Contamination Name:	Perchlorate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	500	Rule name:	Not Regulated
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	28	Orig code:	S
State:	MA	Violation Year:	2013
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/2013
Cmp edt:	Not Reported		

Violation id:	3	Orig code:	S
State:	MA	Violation Year:	2008
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2008
Cmp edt:	10/31/2008		

Violation id:	4	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2990	Contamination Name:	Benzene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	5	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2982	Contamination Name:	Carbon tetrachloride
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	6	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2977	Contamination Name:	1,1-Dichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	7	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2980	Contamination Name:	1,2-Dichloroethane
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	8	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2984	Contamination Name:	Trichloroethylene
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation id:	9	Orig code:	S
State:	MA	Violation Year:	2010
Contamination code:	2981	Contamination Name:	1,1,1-Trichloroethane
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	310	Rule name:	VOC
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2010
Cmp edt:	09/30/2010		

Violation ID:	03V0001	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	10/24/2002
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	10	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	11	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	12	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	13	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	14	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	15	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	16	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	17	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		

Violation ID:	18	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	19	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	2	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/23/2007
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	20	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	21	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	22	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	23	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	24	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	25	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	26	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	27	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	3	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	12/05/2008
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	4	Orig Code:	S
Enforcemnt FY:	2011	Enforcement Action:	11/09/2010

Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 5 Orig Code: S
Enforcemnt FY: 2011 Enforcement Action: 11/09/2010
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 6 Orig Code: S
Enforcemnt FY: 2011 Enforcement Action: 11/09/2010
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 7 Orig Code: S
Enforcemnt FY: 2011 Enforcement Action: 11/09/2010
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 8 Orig Code: S
Enforcemnt FY: 2011 Enforcement Action: 11/09/2010
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 9 Orig Code: S
Enforcemnt FY: 2011 Enforcement Action: 11/09/2010
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: Not Reported Orig Code: S
Enforcemnt FY: 2009 Enforcement Action: 07/28/2009
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Not Reported

Violation ID: Not Reported Orig Code: S
Enforcemnt FY: 2008 Enforcement Action: 05/06/2008
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Not Reported

Violation ID: Not Reported Orig Code: S
Enforcemnt FY: 2002 Enforcement Action: 09/25/2002
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Not Reported

Violation ID: Not Reported Orig Code: S
Enforcemnt FY: 2004 Enforcement Action: 08/16/2004
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Not Reported

Violation ID: Not Reported Orig Code: S
Enforcemnt FY: 2007 Enforcement Action: 05/02/2007
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Not Reported

PWS name: WILMINGTON WATER DEPT Population served: 22666
PWS type code: C Violation ID: 03V0001
Contaminant: Nitrite Violation type: 2
Compliance start date: 10/1/2002 0:00:00 Compliance end date: 12/31/2002 0:00:00
Enforcement date: 10/24/2002 0:00:00 Enforcement action: State BCA Signed
Violation measurement: 1.2

PWS name: WILMINGTON WATER DEPT Population served: 22666
PWS type code: C Violation ID: 2

Contaminant:	Nitrite	Violation type:	3
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	9/30/2007 0:00:00
Enforcement date:	10/23/2007 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		

PWS name:	WILMINGTON WATER DEPT	Population served:	22666
PWS type code:	C	Violation ID:	3
Contaminant:	Coliform (Tcr)	Violation type:	Monitoring, Routine Major (TCR)
Compliance start date:	10/1/2008 0:00:00	Compliance end date:	10/31/2008 0:00:00
Enforcement date:	12/5/2008 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		

PWS name:	WILMINGTON WATER DEPT	Population served:	22666
PWS type code:	C	Violation ID:	94V0002
Contaminant:	Lead & Copper Rule	Violation type:	OCCT Study Recommendation
Compliance start date:	7/1/1993 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	No Enf Action as of	Enforcement action:	7/8/2009 0:00:00
Violation measurement:	0		

A2
ENE **FED USGS** **USGS40000477947**
1/2 - 1 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-XMW 131	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Sand and gravel aquifers (glaciated regions)		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	192507	Well Depth:	54
Well Depth Units:	ft	Well Hole Depth:	54
Well Hole Depth Units:	ft		

A3
ENE **FED USGS** **USGS40000477948**
1/2 - 1 Mile
Lower

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-XMW 113	Type:	Well
Description:	Not Reported	HUC:	01070002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	61	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A4
ENE
1/2 - 1 Mile
Lower

MA WELLS **MA1100000002565**

WELLS:

PWS Source ID:	3342000-11G
Site Name:	BROWNS CROSSING REPLACEMENT WELLFIELD
PWS Type:	Community Groundwater Well
DEP Region:	3
Zone II #:	150

DWP Water Quality Testing System (WQTS) Information:

Water Supplier Name:	WILMINGTON WATER DEPT
Source Name:	BROWNS CROSSING REPLACEMENT WELLFIELD
Water Supplier Status:	Active
Source Status:	Active
Source Classification:	Community surface and groundwater sources
Source Availability:	ACTIVE

DWP Zone II Information:

Well Name:	BROWNS CROSSING REPLACEMENT WELLFIELD
Major Drainage Basin:	IPSWICH
Aquifer Type:	UNCNF
Zone II Approved By:	NSA
Zone II Submitted:	Not Reported
Zone II Approved:	Not Reported
Zone II Status:	Current
Source Pumping Rate (gpm):	1076

5
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000477628**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-XMW 78 WILMINGTON, MA		
Type:	Well		
Description:	CONVERTED TO REAL-TIME, FEBRUARY 2001		
HUC:	01090001	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported		
Aquifer:	Sand and gravel aquifers (glaciated regions)		
Formation Type:	Ice-Contact Deposits, Including Eskers and Kames		
Aquifer Type:	Unconfined single aquifer	Construction Date:	1951
Well Depth:	12	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B6
ESE
1/2 - 1 Mile
Lower

MA WELLS **MA1100000003167**

WELLS:

PWS Source ID:	3342000-12G
Site Name:	BARROWS REPLACEMENT WELLFIELD
PWS Type:	Community Groundwater Well
DEP Region:	3
Zone II #:	150

DWP Water Quality Testing System (WQTS) Information:

Water Supplier Name:	WILMINGTON WATER DEPT
Source Name:	BARROWS REPLACEMENT WELLFIELD
Water Supplier Status:	Active
Source Status:	Active
Source Classification:	Community surface and groundwater sources
Source Availability:	ACTIVE

DWP Zone II Information:

Well Name:	BARROWS REPLACEMENT WELLFIELD
Major Drainage Basin:	IPSWICH
Aquifer Type:	UNCNF
Zone II Approved By:	TA
Zone II Submitted:	01-MAR-93
Zone II Approved:	11-MAR-93
Zone II Status:	Current
Source Pumping Rate (gpm):	650

B7
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS40000477768**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-XMW 417	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	Not Reported	Well Depth Units:	Not Reported
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
MIDDLESEX	26	2.2

Federal EPA Radon Zone for MIDDLESEX County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 01887

Number of sites tested: 4

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.475 pCi/L	75%	25%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs
Telephone:

Public Water Supply Database

Telephone:
The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

Areas of Critical Environmental Concern

Telephone:
The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers

Telephone:
The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by an EPA hydrogeologist.

Aquifers

Telephone:
MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas

Telephone:
Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

DEP Approved Zone IIs

Telephone:
The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is 'that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).' These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.\n - Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line. \n- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.\n - Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

OTHER STATE DATABASE INFORMATION

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX E

PHOTOGRAPHS

PEER Consultants Project No. 8593
Site Name: (Wildwood School) at North Intermediate School, Wilmington, MA
Date Photos Taken: 10/29/2025



Photo 1: View of hazardous substances / petroleum products in connection with identified uses in Building.



Photo 2: View of hazardous substances / petroleum products in connection with identified uses in Building.



Photo 3: General view of CAMUS boilers in Boiler Room within Building.



Photo 4: General view of orange-brown stains at floor drain in Boiler Room within Building.



Photo 5: General view of materials within flammable materials cabinet in Boiler Room within Building.



Photo 6: General view of soil floor and suspect asbestos wrapped pipes at entrance to crawl space at Boiler Room, under Building.



Photo 7: General view of first floor library within Building.



Photo 8: General view of first floor hallway within Building.



Photo 9: General view of first floor classroom within Building.



Photo 10: General view of first floor classroom within Building.



Photo 11: General view of wall heater at first floor classroom within Building.



Photo 12: General view of stairwell from first floor to second floor within Building.



Photo 13: General view of second floor hallway within Building.



Photo 14: General view of second floor classroom within Building.



Photo 15: General view of second floor bathroom within Building.



Photo 16: General view of second floor classroom within Building.



Photo 17: General view of north-northwestern fence line at tennis courts.



Photo 18: General view of brown and green grass along suspected wet area along western edge of Subject Property at Arlene Avenue.



Photo 19: General view of Kitchen area within Building.



Photo 20: General view of Kitchen area within Building.



Photo 21: General view of Kitchen area within Building.



Photo 22: General view of floor drain at Kitchen area within Building.



Photo 23: General view of cleaning / wash area adjoining Kitchen area within Building.



Photo 24: General view of storage room adjoining Kitchen area within Building.



Photo 25: General view of stains on bituminous asphalt associated with Casella waste container east of Building.



Photo 26: General view of interior of catch basin within bituminous asphalt parking area northeast of Building.



Photo 27: General view of the interior of the irrigation well pump house.



Photo 28: General view metal cover manholes (abandoned leaching field) along southwestern edge of Subject



Photo 29: General view of Door 1 at the Salem Street entrance to the Building.



Photo 30: General view of three pole-mounted transformers within grassed area northeast of Building.



Photo 31: General view of stressed vegetation above leaching field west of Building.



Photo 32: General view of tennis courts, basketball court, baseball diamond north-northwest of Building.



Photo 33: General roof top view of the western portion of the Building.



Photo 34: General roof top view of the roof area associated with the eastern portion of the Building.



Photo 35: General roof top view of the employee parking area at Ballardvale Street and grassed area with three pole-mounted transformers.



Photo 36: General roof top view of underground storage tank area (suspect former) to the southwest of the Door 1 entrance to the Building.

APPENDIX F

CREDENTIALS of ENVIRONMENTAL PROFESSIONAL

PEER CONSULTANTS, P.C.

David Gorden, BCES, CWS, CPSS
Board Certified Environmental Scientist

EDUCATION
M.S. Plant & Soil Science, UMass, Amherst. 1994
B.S. Environmental Science and Management, Univ. RI. 1991

LICENSES / CERTIFICATIONS
2022 Board Certified Environmental Scientist (22-ES007)
2018 Asbestos Project Monitor, Massachusetts (AM900674)
2017 Lead Safe Renovation Supervisor (22-4561-374-251190)
2017 Asbestos Management Planner, Massachusetts (AP900468)
2016 Asbestos Designer, Massachusetts (AD900373)
2012 Asbestos Inspector, Massachusetts (AI900459)
2003 Certified Wetland Scientist #226
1997 Certified Professional Soil Scientist #4322

YEARS OF EXPERIENCE
Total: 31 Years. PEER Consultants: 12 Years

Mr. Gorden is a dependable, efficient, and focused Senior Environmental Professional, Hazardous Building Materials Professional, and Natural Resource Professional with a Master of Science degree, and numerous environmental industry professional licenses and certifications, as well as 31 years of strategic experience with industry leading firms in the environmental, engineering, industrial hygiene, and natural resource fields.

In the Environmental Profession, Mr. Gorden has been a contributor to several natural resource industry guidance documents, and has served as an expert witness. Mr. Gorden additionally completes inspections, prepares reports and specifications, and provides contract administration, management, and oversight for projects which involve asbestos, lead (RCRA8 Metals) in paint, polychlorinated biphenyls, radon, and microbial growth. Mr. Gorden conducts preliminary wetland evaluations; natural resource site reviews; wetland boundary delineations; hydrology, soils, and vegetation analyses; wetland inventory, wetland classification and mapping; wetlands function and value assessment; threatened and endangered species reviews; wildlife habitat evaluations; preparation of permit applications; including permitting strategies; interactions with local, State, and Federal regulatory officials; impact avoidance and alternatives analyses; erosion and sediment control reviews; Conservation Commission peer reviews; and natural resource restoration, creation, or enhancement. Mr. Gorden has worked on ASTM 1527-21 Phase I Environmental Site Assessments, Complex Environmental Field Investigations (air, biota, groundwater, sediment, soil, storm water, surface water, vapor), Compliance Audits, Hazard Ranking System/National Priority List Packages, Hazardous Material Response, Remediation, Removal Activities, Limited Site Investigations, Operation and Maintenance of Remedial Treatment Systems, Subsurface Geotechnical Exploration and Testing, Design/Build Transportation Projects, and QA/QC Plan Reviews.

SELECTED EXPERIENCE

Tyngsborough Middle School, Tyngsborough, MA
Mr. Gorden completed environmental science consulting services, consisting of a hazardous building materials inspection for suspect asbestos and suspect lead in paint, prepared a hazardous building materials inspection report, prepared specification, and conducted contract adminstration and closeout activities. Mr. Gorden also completed an initial limited surface and subsurface soil investigation for oil and hazardous materials with consideration of 310 CMR 40.00, COMM-97-001, and RCRA Characteristic Waste, and prepared a limited surface and subsurface soil investigation memorandum, as part of this proposed middle school demolition and redevelopment project.

Union Square Utility & Roadway Improvements, Somerville, MA
Project Manager who was responsible for completing a Limited Environmental Site Analysis corridor study for the Project, and for completing a combined geo-environmental investigation along the corridor, which included a Limited Environmental Soil and Groundwater Sampling Investigation. The activities were completed by Mr. Gorden to pre-characterize the soil and groundwater within the Union Square area as part of the proposed utility improvements, who then also completed environmental monitoring oversight of the Contractor's Work during the construction project.

UEC universal environmental consultants

January 22, 2026

Ms. Rani Philip
Dore & Whittier Architects
260 Merrimac Street
Newburyport, MA 01950

Reference: **Hazardous Material Inspection Services**
North Intermediate School, Wilmington, MA

Dear Ms. Philip:

Thank you for the opportunity for Universal Environmental Consultants (UEC) to provide professional services.

Exterior destructive and roofing testing was performed On November 11, 2025, during Design Development at the North Intermediate School, Wilmington, MA.

No significant changes to the original report are found.

Please do not hesitate to call should you have any questions.

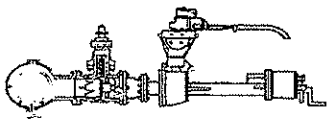
Very truly yours,

Universal Environmental Consultants

_____

Ammar M. Dieb
President

UEC:\225 918.00\Inspection Letter.DOC



John Hoadley and Sons, Inc.

- Water Works Specialist-

672 Union Street
Rockland, MA. 02370
T: (781) 878-8098
F: (781) 878-5298

FLOW TEST REPORT

Town of: Wilmington

Name of Applicant: Akal Engineering Phone Number: 603-930-8895

Address: 44 Central St. Unit 4 City: Berlin State: MA

Date: 10/20/2025 Time of Test: 11:00 AM

Location of Test: 320 Salem Street, Wilmington, MA

Distance between Hydrant # 1 and Hydrant # 2 is 890 feet.

Elevation of Hydrant # 1 N/A Elevation of Hydrant # 2 N/A

Coefficient: N/A Size of Main : 10"

Hydrant # 1 Static: 82 PSI Residual: 78 PSI

Location: 453 Middlesex Avenue

Manufacture/ Type of Hydrant : Darling Size: 5 1/4 Year: 1989

Flow Hydrant # 2 Static: 84 PSI Residual: 42 PSI

Location: Glenwood Road behind school/next to field

Manufacture/ Type of Hydrant : U.S. Pipe Size: 5 1/4 Year: 2005

Pitot Tube Flow 1,070 GPM Time Flow: 3 Min.

Test Conducted by: Carl / Phil

Inspector or Witness of Flow Test : Signature on File

- Mailed 10/21/25
- This is our copy
- PAID!

LEC WETLANDS WILDLIFE WATERWAYS

December 1, 2025

Email [rphilip@DoreandWhittier.com]

Ms. Rani Philip
Dore + Whittier
212 Battery Street
Burlington, VT 05401

Re: Wetland Resource Area Analysis Report [LEC File #: DWA\24-488.04]
North Intermediate School
320 Salem Street
Wilmington, Massachusetts

Dear Ms. Philip:

LEC Environmental Consultants, Inc., (LEC) has prepared this *Wetland Resource Area Analysis* documenting our site evaluation of the North Intermediate School in Wilmington, Massachusetts. The site evaluation was conducted in accordance with the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40; the *Act*) and its implementing *Regulations* (310 CMR 10.00; *Act Regulations*). The Town of Wilmington does not have a wetlands protection bylaw.

Two non-jurisdictional Isolated Vegetated Wetlands (IVW) were originally delineated and depicted on the *Existing Conditions Plans,* prepared by Nitsch Engineering, dated March 28, 2025. However, following the receipt of information from the Town of Wilmington regarding subsurface drainage connections and prior permitting with the Conservation Commission of an abutting property to the southwest, LEC determined that one of the delineated wetlands (the "A-series") was a jurisdictional Bordering Vegetated Wetland (BVW), which has an associated 100-foot Buffer Zone. The following report provides a general site description, wetland delineation methodology, a description of the delineated areas, and potential regulatory implications.

General Site Conditions

The project area is located west of Interstate 93 and northwest of State Route 62 (MA-62) in the northern-central portion of Wilmington (Attachment A, Figures 1 and 2). The property contains the North Intermediate School building and associated parking in the southeastern portions and athletic fields and recreational facilities to the west and north of the school.

Residential development immediately surrounds the project area, including single-family homes on all sides, as well as apartment buildings located to the north on Avalon Drive. Limited commercial development is located south of the project area along Middlesex Avenue and Route 62. An active railroad line is located west of the site beyond the abutting residential development. Undeveloped forested upland areas are located within and adjacent to the site primarily to the north, east, and south associated with Avalon Drive, Ballardvale Street, and Salem Street, respectively. A stormwater basin abuts the northeast corner of the site just beyond the property fence between Arlene Avenue to the west and Avalon Drive to the northeast.

Topography is generally very flat with gentle down-gradient slopes extending west and south at the edge of the school's baseball field. Forested upland areas are located on the northwestern and southern edges of the property. Vegetation in the uplands includes a moderately dense canopy of eastern white pine (*Pinus strobus)*, red oak (*Quercus rubra)*, white oak (*Quercus alba*), Norway maple (*Acer platanoides*), and red maple (*Acer rubrum)*. The sparse understory is populated with saplings from the canopy and scattered multiflora rose (*Rosa multiflora*). Ground cover is generally sparse in the forested uplands.

According to the Natural Resource Conservation Service (NRCS) Soil Survey (Web Soil Survey), Middlesex County, Massachusetts, Version 24, August 27, 2024, much of the northern portion of the site contains Deerfield loamy fine sand (0-3% slopes) and the southern portion is comprised of Udorthents, sandy.

Natural Heritage and Endangered Species Program Designation

According to the 15th Edition (August 1, 2021) of the Natural Heritage & Endangered Species Program (NHESP) Massachusetts Natural Heritage Atlas, the project area is not located within *Estimated Habitat of Rare Wildlife* or *Priority Habitats of Rare Species*. There are no Certified Vernal Pools (CVP) or Potential Vernal Pools (PVP) on or in the vicinity of the project area (Attachment A, Figures 1 and 2).

FEMA Flood Insurance Rate Map

According to the July 8, 2025 Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Town of Wilmington (25017C0283G), the site is contained within Zone X (unshaded): *Areas outside the 0.2% annual chance floodplain*. As a result, no portion of the project area is located within the 100-year floodplain and Bordering Land Subject to Flooding (BLSF) is not present in the project area (Attachment A, Figure 3).

Wetland Boundary Determination Methodology

On November 5, 2024 and November 12, 2025, LEC conducted site evaluations to identify and characterize existing protectable Wetland Resource Areas located on or adjacent to the project area. The evaluation was performed in accordance with Massachusetts Department of Environmental Protection (MassDEP) handbook, *Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands*

Protection Act (September 2022), the *Field Indicators for Identifying Hydric Soils in New England* (Version 4, June 2020, the Field Indicators Guide), and the criteria set forth in 310 CMR 10.55.

The boundary of BVW was demarcated in the field with blaze orange surveyor's flagging tape, embossed with the words "LEC Resource Area Boundary" in bold, black print. The BVW flags are numbered A-1 through A-11 (A-series). MassDEP Field Data Forms are included with this report (Attachment B).

Although the identified IVW was determined to be non-jurisdictional under the *Act*, LEC delineated the boundaries with blaze orange surveyor flagging labeled B1 through B11 (B-series).

Wetland Resource Areas

The jurisdictional Wetland Resource Areas associated with the site include Bordering Vegetated Wetlands (BVW). A brief description of the Wetland Resource Areas is provided below.

Bordering Vegetated Wetland (BVW)

BVW is defined at 310 CMR 10.55(2) as *freshwater wetlands which border on creeks, rivers, streams, ponds, and lakes. In these areas soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The boundary of BVW is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.*

The A-series BVW is located in the southwestern corner of the property. It consists of a drainage ditch running parallel to the adjacent athletic field, and is fed by overland runoff from the fields to the north and east, and overflow from a ponded area offsite to the south (less than 10,000 square feet in extent) which discharges water during periods of extreme high water into a corrugated metal pipe (invert elevation 88.4 feet) drainage outfall with a concrete headwall located between BVW flags A4 and A5. According to engineering documents obtained from the Town of Wilmington, the pipe conveys water northward through an underground drainage system to a catch basin, that then flows west to Dorothy Avenue, south under Arlene Avenue, west under Catherine Avenue, south under Anthony Avenue, then southward under Salem Street where it joins a large wetland, thus rendering the A-series wetland hydrologically connected to and thus "bordering" a jurisdictional resource area. Vegetation within the onsite portions of the BVW include red maple (*Acer rubrum*) trees, glossy buckthorn (*Frangula alnus*), and silky dogwood (*Swida amomum*) shrubs, and herbaceous species including jewelweed (*Impatiens capensis*) and sensitive fern (*Onoclea sensibilis*).

LEC inspected soil conditions using a hand-held, Dutch-style soil auger within the BVW and observed a 6-inch-thick, sandy loam topsoil (A-Horizon) with a soil matrix color of 10YR 2/2. The topsoil is underlain by a 16+-inch thick, loamy sand depleted subsoil (B_g horizon) with a soil matrix color of 10YR 5/1. Redoximorphic concentrations of 10YR 3/6 were observed through the subsoil horizon. This soil profile is considered hydric according to the *Field Indicators Guide*, as it meets the indicator A11: Depleted Below Dark Surface.

The non-jurisdictional B-series IVW is located along the west-central property boundary, and is characterized as a wet meadow habitat type with a shrub-scrub border. The IVW occurs within a slight topographic depression between the athletic field and a six-foot-high chain-link fence. Vegetation is dominated by elderberry (*Sambucus racemosa*) shrubs, and herbaceous species including purple loosestrife (*Lythrum salicaria*), wrinkle leaf goldenrod (*Solidago rugosa*), American burnweed (*Erechtites hieraciifolia*), and purple-leaved willow-herb (*Epilobium coloratum*). The IVW was separated from a nearby catch basin 23 +/- feet to the southeast by maintained turf grass underlain by upland soils, and no indicators of a surface hydrological connection.

Summary

LEC identified and delineated the boundaries of BVW and a non-jurisdictional IVW. IVWs are not jurisdictional under the *Act* or *Act Regulations* as a Resource Area subject to protection, and accordingly do not have an associated buffer zone or performance standards for alteration.

If any proposed work activities occur within the BVW or its 100-foot Buffer Zone, a filing with the Wilmington Conservation Commission and the Massachusetts Department of Environmental Protection (MassDEP) will be required.

We appreciate the opportunity to provide you with this report. If you have any questions or require additional information, please do not hesitate to contact us at 781-245-2500.

Sincerely,

LEC Environmental Consultants, Inc.

Dan Wells
Senior Wildlife/Wetland Scientist

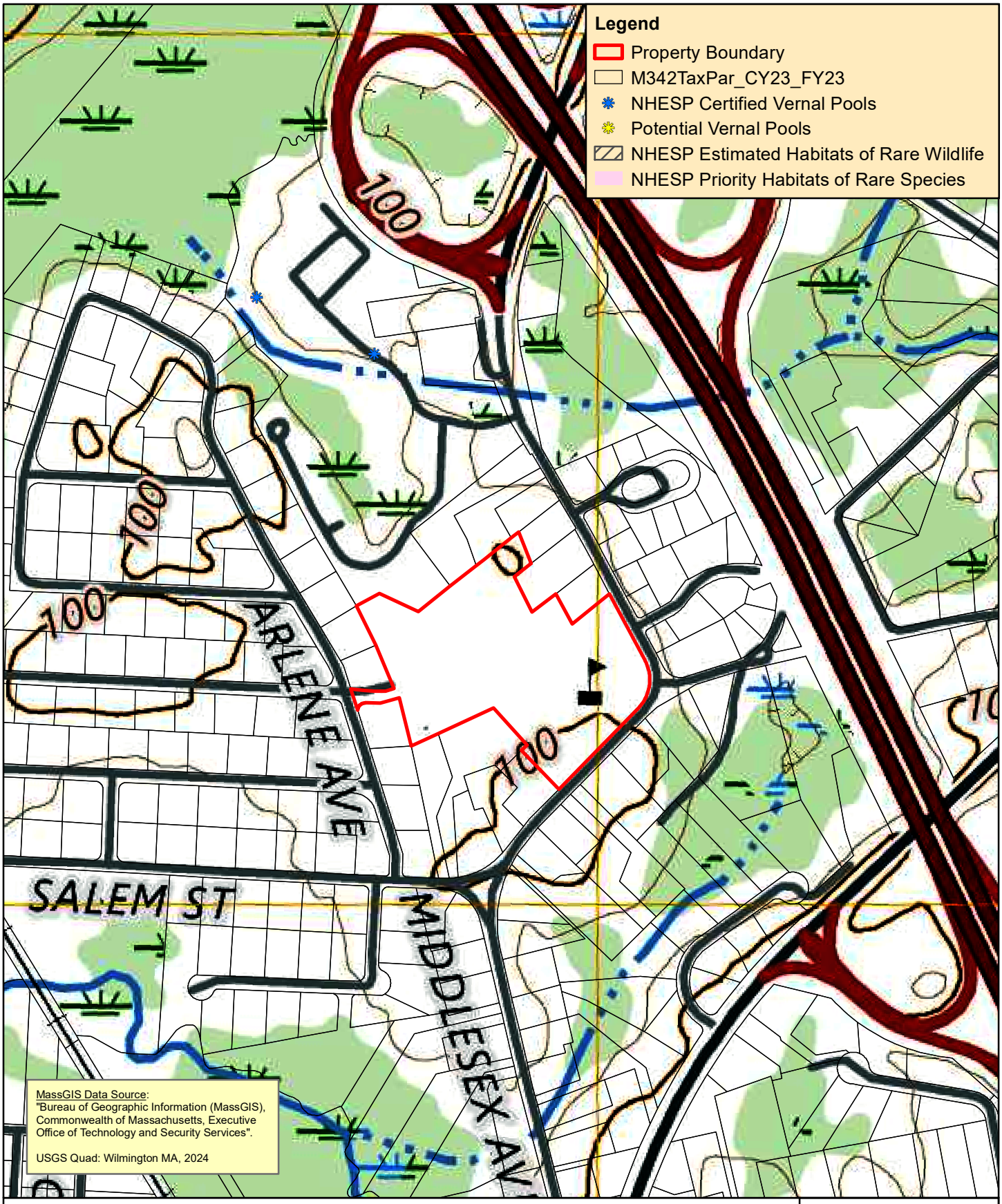
Trevor Nassar
Environmental Specialist

Attachment A

Figure 1: USGS Topographic Map

Figure 2: Orthophoto Map

Figure 3: FEMA FIRMette



LEC

LEC Environmental Consultants, Inc.
Wakefield, MA 781.245.2500
www.lecenvironmental.com

Figure 1
USGS Topographic Map

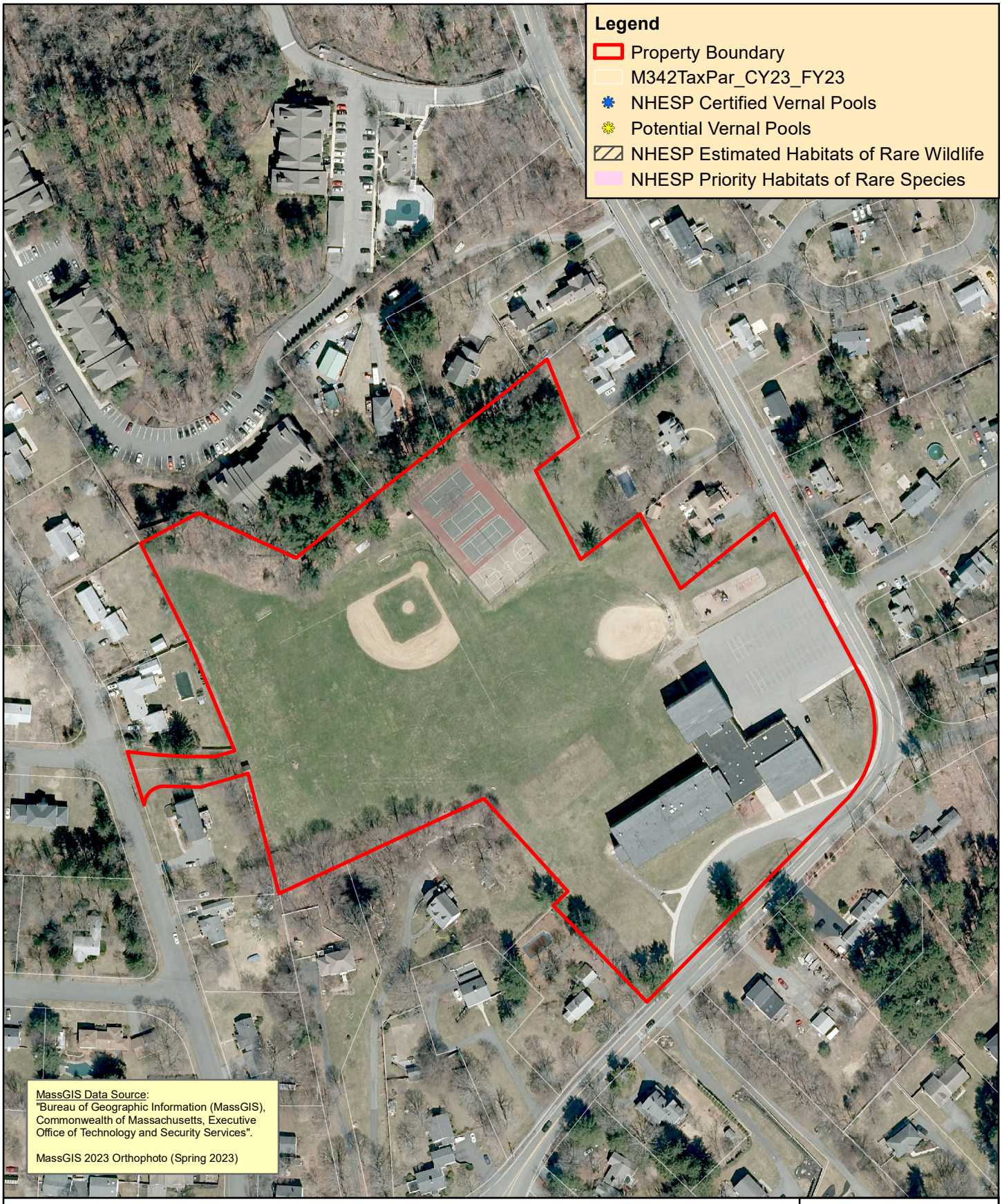
North Intermediate School
Wilmington, MA

Date: 1/10/2025

N

1 inch = 500 feet

0 125 250 500 Feet



LEC Environmental Consultants, Inc.
Wakefield, MA 781.245.2500
www.lecenvironmental.com

Figure 2
Orthophoto Map

North Intermediate School
Wilmington, MA

Date: 1/10/2025

N

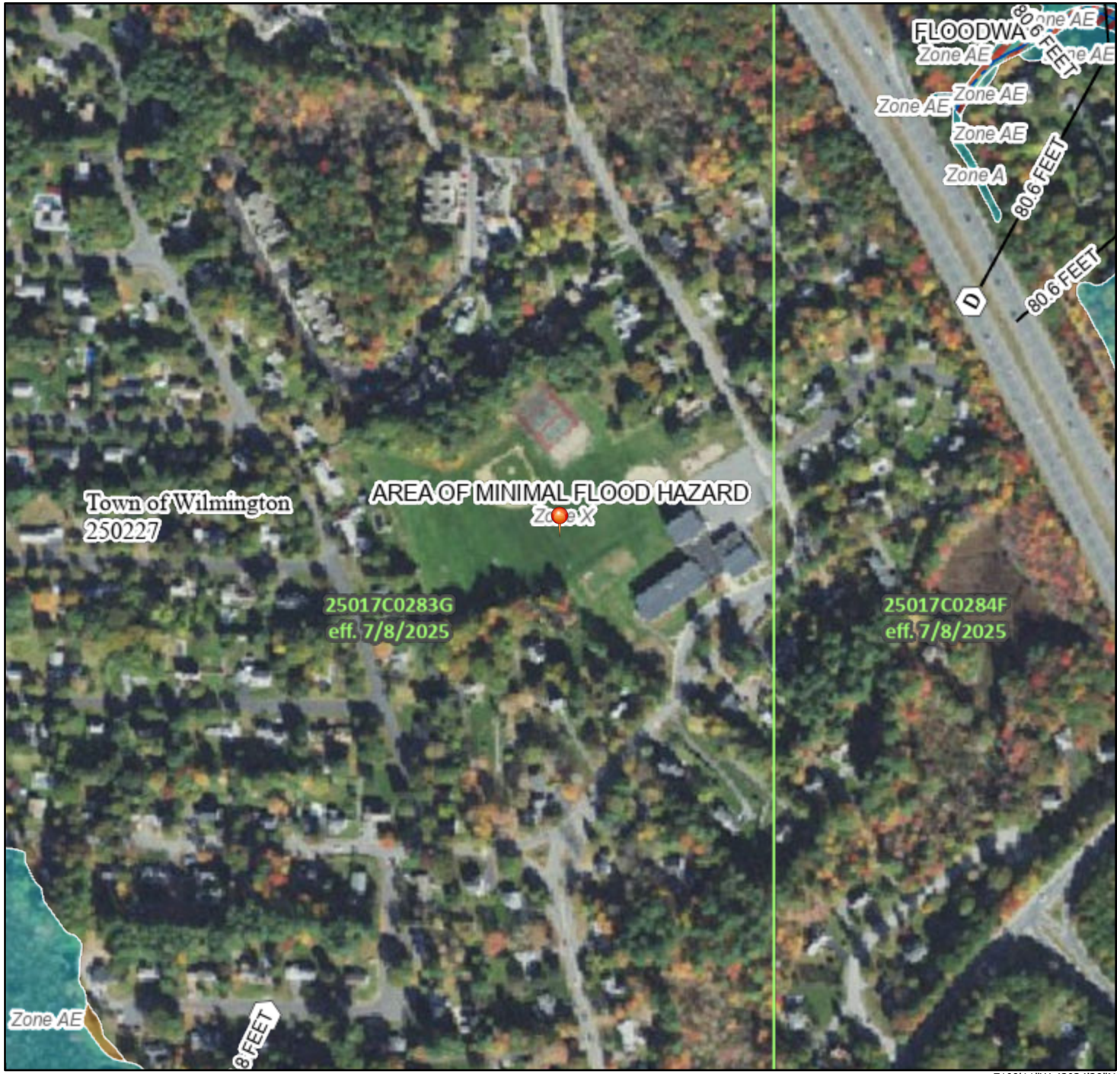
1 inch = 200 feet

0 50 100 200 Feet

National Flood Hazard Layer FIRMette

FEMA

71°9'48"W 42°34'56"N



71°9'11"W 42°34'29"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/1/2025 at 1:20 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment B

MassDEP BVW Field Data Forms

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: North Intermediate School City/Town: Wilmington Sampling Date: 11/12/2025

Applicant/Owner: Town of Wilmington Sampling Point or Zone: 25' Upgradient of WF A-1

Investigator(s): Dan Wells Latitude / Longitude: not recorded

Soil Map Unit Name: Udorthents, sandy NWI or DEP Classification: n/a

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [ ] No [✓]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soils criterion met?	Yes [ ] No [✓]	
Wetlands hydrology present?	Yes [ ] No [✓]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)_____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[ ] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[ ] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30 ft.

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Norway maple	Acer platanoides	UPL	10.5	Yes	No
2. Red oak	Quercus rubra	FACU	3.0	Yes	No
3.					
4.					
5.					
6.					
7.					
8.					
9.					

13.5 = Total Cover

Shrub/Sapling Stratum Plot size 15 feet

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. American basswood	Tilia americana	FACU	3.0	Yes	No
2. Multiflora roase	Rosa multiflora	FACU	3.0	Yes	No
3. Silky dogwood	Swida amomum	FACW	3.0	Yes	Yes
4.					
5.					
6.					
7.					
8.					
9.					

9.0 = Total Cover

Herb Stratum Plot size _____

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Canada goldenrod	Solidago canadensis	FACU	3.0	Yes	No
2. White-panicle aster	Symphotrichum lanceolatum	FACW	3.0	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

6.0 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size absent				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species?
	7	2		Yes ☐ No ☑
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
Prevalence Index		B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐
Wetland vegetation criterion met?		**Yes** ☐	**No** ☑	

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point 25' Upgradient of WF A-1

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-13	10YR 2/2	100.00					sandy loam	
13-18	10YR 4/6	100.00					sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks:

Hydric Soils criterion met? **Yes** ☐ **No** ☑

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: North Intermediate School City/Town: Wilmington Sampling Date: 11/12/2025

Applicant/Owner: Town of Wilmington Sampling Point or Zone: 30' Downgradient of WF A-1

Investigator(s): Dan Wells Latitude / Longitude: not recorded

Soil Map Unit Name: Udorthents, sandy NWI or DEP Classification: Wooded Swamp Deciduous

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** **Yes [✓] No [ ]**
Hydric Soils criterion met?	Yes [✓] No [ ]	
Wetlands hydrology present?	Yes [✓] No [ ]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)_____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[✓] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[✓] Drainage patterns
[ ] Iron deposits	[ ] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[✓] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30 ft.

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red maple	Acer rubrum	FAC	63.0	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

63.0 = Total Cover

Shrub/Sapling Stratum Plot size 15 feet

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Glossy false buckthorn	Frangula alnus	FAC	3.0	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

3.0 = Total Cover

Herb Stratum Plot size

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Jewelweed	Impatiens capensis	FACW	20.5	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

20.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size absent				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☑ No ☐
	3	3		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
Prevalence Index		B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐
Wetland vegetation criterion met?		**Yes** ☑	**No** ☐	

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point 30' Downgradient of WF A-1

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-6	10YR 2/2	100.00					sandy loam	
6-12	10YR 5/1	100.00	10 YR 3/6	15.00	C	M	loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☑ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks:

Hydric Soils criterion met? **Yes** ☑ **No** ☐

Wilmington - Early Release Package (ERP) Definition and Schedule Matrix

Early Release Package	Drawing Package Issued To Estimators	Drawing Package Issued to MSBA	MSBA review Comments Received	Anticipated Trade Bidding	Package/ Scope Awards	Comments/ Clarifications	Package Clarification/Amendment Inclusions
MSBA DD Submission No scope is planned to be awarded on this drawing set	2/6/2026	21 calendar days 3/20/2026	4/10/2026	N/A	N/A		
ERP 1 - (MSBA 60% Submission) Enabling, full sitework	5/15/2026	21 calendar days 6/25/2026	7/16/2026	Non-trade bidding 5/19/26 - 6/8/26	Late June	Please note, award of ERP-1 (sitework) is currently targeted to take place prior to the receipt of MSBA comments. However, MSBA DD submission comments will have been received.	BP 31-1: Full site package
ERP 2 - (MSBA 90% Submission) Concrete foundations and flatwork, structural steel, foundation waterproofing, and elevator	8/14/2026	21 calendar days 9/28/2026	10/19/2026	Trade and non-trade bidding 8/18/26 - 9/7/26	Late Sept	Please note, award of ERP-2 (superstructure) is currently targeted to take place prior to the receipt of MSBA comments. However, MSBA DD and 60% submission comments will have been received.	BP 3-1: Concrete BP 5-2: Structural Steel BP 7-1: Foundation Waterproofing BP 14-1: Elevator
ERP 2A - Switchgear/ Other TBD	8/14/2026	N/A	N/A	Trade and non-trade bidding 8/18/26 - 9/7/26	Late Sept	The project team will continuously monitor lead times for switchgear as well as other long lead-time equipment.	Scope TBD
ERP 3 - (MSBA 100% CD Submission) All remaining scope	N/A	10/30/2026	N/A	Trade and non-trade bidding 11/3/26 - 11/30/26	December 2026 through January 2027	Please note that bidding/trade package awards associated with this package will be awarded after receipt of MSBA review comments from the DD, 60, and 90 CD submissions	Bid package numbers to be assigned at a later date. All MEP & FP All major interior trades

Wildwood Elementary School
OPM Review Comment Tracking Form
Review Date: 2/6/26-2/27/26
Reviewed By: Brendan Walsh, Jay Faxon, T Connolly, Craig DiCarlo

Ctrl. No.	Drawing/Spec Ref.#	Drawing Revision	Room/ Detail #	Reviewer's Comments	Architect's / Engineer's Response	Follow-Up Action	Open or Closed
1	Project Manual Volume 1	DD 2/6/26	00 01 10	In a future version of the TOC, consider indicating the classes of work that will be by trade contractors with an asterisk or footnote [CAD]			
2	Project Manual Volume 1	DD 2/6/26	00 21 16	LeftField awaits a response from the SDO regarding project specific participation goals - we will share that once it is available, for inclusion in the documents. [CAD]			
3	Project Manual Volume 1	DD 2/6/26	00 31 00	Item 9 indicates the letter from UEC in section 00 31 09 is followed by the haz mat inspection report in that section, however the original report was unchanged and lives in section 00 31 01. [CAD]			
4	Project Manual Volume 1	DD 2/6/26	00 43 09	The heading of this section indicates Addendum No. 3 which seems to be a left-over from a previous project. [CAD]			
5	Project Manual Volume 1	DD 2/6/26	01 20 00	Paragraph 1.02-D, to prevent frontloading, recommend for each SOV line item for mobilization there also be a separate line item for demobilization in an amount that is at least 50% of the mobilization cost. [CAD]			
6	Supplemental	DD 2/6/26	31 60 00	Paragraph 1.07-B, recommend explicitly stating "delegated design". [CAD]			
7	Project Manual Volume 2	DD 2/6/26	14 24 00	Consider traction elevators i.l.o. hydraulic - less energy use, reduced noise, smaller machine room. [CAD]			
8	Project Manual Volume 2	DD 2/6/26	10 22 13	Pragraph 2.03-B-1, replace "by others" with the division responsible to install the cylinder lock. [CAD]			
9	Project Manual Volume 3	DD 2/6/26	27 50 00	Consider including a Distributed Antenna System (DAS) to boost cell phone coverage within the building - both for conveneince and emergency situations. [CAD]			
10	Project Manual Volume 3	DD 2/6/26	31 21 13	Can the radon mitigation system be installed by the sitework sub or is it required to be installed by the plumbing or HVAC trade contractor?			
11	Volume 1 Cover	DD 2/6/26	Location Map	Provide attribution to GoogleMaps for the image. [CAD]			
12	Volume 1 Cover	DD 2/6/26	Page Layout	On a recent LeftField project, the MSBA DD dedsign review comments returned with a request that the cover sheet layout include the project name and submission info displayed vertically along the right edge of the drawing, so that a printed set could be easily identified when rolled up. This is certainly not a requirement, but doing so could avoid a repeat of that comment. [CAD]			
13	EX-1.1	DD 2/6/26	Inset plan of #34 Ballardvale St	Note indicates possible encroachment of abutter's chicken coop and patio on the school property. [CAD]			
14	C-series	DD 2/6/26		Outside the northwest corner of the proposed building, there appears to be some missing or hidden graphics that would show the curbline as the drive aisle turns west. [CAD]			
15	C-series	DD 2/6/26		In later versions, show the Limit of Work line. [CAD]			
16	C2.01	DD 2/6/26		In later versions, show control points to position the structure on the site. [CAD]			
17	C3.01	DD 2/6/26		In later versions, show spot elevations at the exterior doors. [CAD]			
18	C5.00	DD 2/6/26	7 & 8	Tree protection details are duplicative with drawing L0.01. [CAD]			

Ctrl. No.	Drawing/Spec Ref.#	Drawing Revision	Room/ Detail #	Reviewer's Comments	Architect's / Engineer's Response	Follow-Up Action	Open or Closed
19	C5.03	DD 2/6/26	6	Does the Town require locking covers for the gate valves? [CAD]			
20	L-series	DD 2/6/26		Drawing orientation does not match civil drawings. [CAD]			
21	L4.05	DD 2/6/26	4	Some notes are cut off on the right side. [CAD]			
22	IR-series	DD 2/6/26		Drawing orientation does not match civil drawings or the landscape drawings. [CAD]			
23	S0.01	DD 2/6/26		Notes missing for glulam beams and DLT decking. [CAD]			
24	S1.33	DD 2/6/26		The layout of the splayed glulam beams in the cafeteria do not match the layout on architectural reflected ceiling plan - 21 beams shown on the structural drawing, 18 shown on the architectural drawing. [CAD]			
25	A-series	DD 2/6/26		Project North being more than 90-degrees from True North may cause confusion. Recommend Project North be at 3 o'clock / page right. [CAD]			
26	AG0.01	DD 2/6/26	Abbreviations	Graphic conflict between V and W. [CAD]			
27	A1.70	DD 2/6/26	Accessory Sched.	Toilet paper dispensers, Paper towel dispensers, Soap dispensers, and Hand Sanitizer Dispensers are listed at Contractor furnished; designer to confirm the Town does not have a vendor that will furnish these items. [CAD]			
28	A2.22	DD 2/6/26	RCP Legend	Several light fixtures appear to be missing from the legend. [CAD]			
29	A3.10	DD 2/6/26		In later versions, note the approximate area of each solar ready zone. [CAD]			
30	A3.10	DD 2/6/26		Several low roof areas appear difficult to access for maintenace of roof drains, etc. [CAD]			
31	A4.10	DD 2/6/26		In later versions, include the ground line on exterior elevations. [CAD]			
32	A4-series	DD 2/6/26		In later versions, consider an enlarged exterior elevation at the main entrance and other areas to provide dimenstions to the locations of push paddles, card readers, security intercoms, fire department beacons, Knox boxes, etc. [CAD]			
33		DD 2/6/26	A7.10	Does the school wanted an oversized cab - this appears to be a standard size cab. [CAD]			
34	A8.20	DD 2/6/26		Glazing legend appears to be missing. [CAD]			
35	A9.11	DD 2/6/26	General Notes	Note 2 refers to sheet A9/01 which does not appear to be included in the set. [CAD]			
36	A9.11	DD 2/6/26	Gymnasium	Will the athletic striping design include any school logos. [CAD]			
37	A10-series	DD 2/6/26		Show NIC FF&E dashed or greyed out. [CAD]			
38	FP2.12	DD 2/6/26	Gymnasium	Some sprinkler heads appear to be blocked by basketball backboards in the stored / UP position. [CAD]			
39	E2.12	DD 2/6/26		Coordinate electrical requirements for telescoping bleachers. [CAD]			
40	P1-22	DD 2/6/26	mech room	pleas insure floor drains are near equipment ,WH, pumps,Ect. [JF]			
41	P1-41	DD 2/6/26	roof	pleas add Hose bibs or roof hydrant for equipment service. [JF]			
42	M0-14	DD 2/6/26		Ductless split refrigeration detail out dated. [JF]			
43	M0-18	DD 2/6/26		MAU-1 20% glycol, low supply air temp concerns, will the ASHP be able to supply 130 degree glycol and maintain 68 DA during defrost or very cold weather. See unit specs in schedual. [JF]			

Ctrl. No.	Drawing/Spec Ref.#	Drawing Revision	Room/ Detail #	Reviewer's Comments	Architect's / Engineer's Response	Follow-Up Action	Open or Closed
44	M4-18	DD 2/6/26	RTU sequence	can we clairafy mixed air temp sequence and freeze stat after heating coil, no protection for chilled water coil? [JF]			
45	Schedule	DD 2/6/26	RTU's	Are the heating coils sized for heat wheel failure? [JF]			
46	RTU sequence	DD 2/6/26		Exstream weather Mode? [JF]			
47	specs 23000	DD 2/6/26		Can we require before the job starts contractor must show proof of manufactures certification to install equipment and or RLS/Zoom. [JF]			
48	General	DD 2/6/26	ALL: MEP	Drawings are well developed for this stage of design and estimating- noting that the design team has done a nice job at this stage to incorporate major elements and a fair amount of detail in comparison to other projects at DD. Likewise, spec is well developed and training for MEPs has been detailed to a fair degree at this stage. BW/ LF			
49	General	DD 2/6/26	Exterior/ Courtyard	Please review Security and egress scheme at Courtyard/ Outdoor Learning area. There seems to be a single entry/ exit to the building at Vestibule 124 inside of the courtyard. Anyone facing a threat from the open side of the courtyard has little means of cover, building re-entry or escape at this area in its current configuration/ where open to the driveway side. BW/ LF			
50	L Series	DD 2/6/26	Isolated Vegetative Wetland	Is Isolated Vegetative Wetland an existing feature, or something to be constructed similar to a "biodiversity" area for the site? Please review- many of these types of features tend to hold water when water table levels are elevated and may pose a hazard to young students playing around this area or using the playground during school, or afterhours. Other projects have installed barrier fencing to these features as a result. BW/ LF			
51	L1.01	DD 2/6/26	Bus Drop Off/ Overhangs and Columns Sight-lines	Select carryover from SD comments: Overhang support columns adjacent bus drop-off loop at main drop-off/ entry (shown Column Line A.10) are at the curb line and may present a visual obstruction for oncoming drivers to see pedestrians or students passing the curb line/ please review for possible buffer/ barrier or curb offset/ or shifting of loop. BW/ LF			
52	FP Series	DD 2/6/26	Fire Service	No Fire Pump is included in this design- have flows been confirmed?			
53	FS2.01	DD 2/6/26	Kitchen	Please coordinate Floor Pan & Grate and Walk-In locations with slab and P Series drawings- commonly missed coordination's. BW/ LF			
54	P1.21/ P Series	DD 2/6/26	Toilet Rooms	Floor drains missing from some areas and toilet rooms. Please review and indicate locations in next submission. BW/ LF			
55	P Series	DD 2/6/26	General	Please develop major riser and branch isolation valve locations into next sets for all DWH and DCW piping. All major/ floor level riser take offs and major branches should be served by isolation valves and general areas of location noted. BW/ LF			
56	P Series	DD 2/6/26	General	No sheet General Notes are shown at this stage. Will review in future sets. BW/ LF			
57	P Series	DD 2/6/26	General/ Mop Sinks	Please review Mop Sink locations shown as P-7 fixture and provide backflow prevention where detergent dispensers are to be installed. BW/ LF			
58	P Series	DD 2/6/26	EWH	EWH locations are scheduled at Custodial, thought they are shown at Mechanical Pump Room- please review.			

Ctrl. No.	Drawing/Spec Ref.#	Drawing Revision	Room/ Detail #	Reviewer's Comments	Architect's / Engineer's Response	Follow-Up Action	Open or Closed
59	P1.11	DD 2/6/26	Courtyard	Please review number of hose bibb shown at Courtyard. Single shown at end of courtyard- would be beneficial to have additional at interior of Courtyard as well. BW/ LF			
60	P1.11	DD 2/6/26	Kindergarten, 1 & 2 Toilets	Coordination of handicap grab bars and paper toilet paper dispensers will be required: The lower height of grab bars at K and 1st & 2nd grade classrooms typically impedes installation of a standard toilet paper dispenser. Please advise- can the grab bar be segmented around dispenser locations or otherwise coordinated? Please also coordinate lower blocking for all walls with Arch at toilet rooms to accommodate lower fixture and accessory heights. BW/ LF			
61	P1.12	DD 2/6/26	Girls Toilet 158 and Kitchen	Floor drains shown in conflict with toilet partition supports and walk ins. Please review. Also- provide floor drains at kitchen for floor washing/ as necessary. BW/ LF			
62	P1.22	DD 2/6/26	Mechanical Pump Room 247	Please provide hose bibb at mechanical room for servicing. Also please review if utility sink is required by Facilities for personnel in this room/ for hand washing and cleanup. BW/ LF			
63	P1.22	DD 2/6/26	Mechanical Pump Room 247	Mechanical drawings and Plumbing drawings are not coordinated at Mech Room. EWH 1/2/3 (Plum) are located in the same location as EB 1/ 2 (Mech) and their pad at the floor plans. Please coordinate and review room size and layout with owner/ for servicing needs. BW/ LF			
64	P1.41	DD 2/6/26	Plumbing Roof Plan	Plumbing Roof plan does not show Hose Bibbs for servicing. Please provide adequate number and spacing to service the ASHPs, condensers and AHUs in the future. BW/ LF			
65	M0.13	DD 2/6/26	Radiant Panel Details	Radiant panel connections from hard to soft copper should be fashioned with flex connections at S/R piping and unions for servicing radiant panels to allow movement (especially important in hard ceilings). We also do not like to see ProPress/ press type connections on soft copper- other projects have had issues with this detail. Please specify shop brazed hard copper stubs to panel soft copper or other suitable method to provide a robust connection at supply and return to each panel. BW/ LF			
66	M0.13	DD 2/6/26	Radiant Panel Ceiling Details	Please review angle details and add note to "provide proper bearing at wall angle- coordinate with others" (need a wider 15/16 angle at a minimum as typical). Other projects have had issues with slim angles and panels becoming dislodged/ dropping out of opening supports. BW/ LF			
67	M0.13	DD 2/6/26	Radiant Panel Ceiling Details	Hard ceiling opening constructability as drawn is in question. Detail shows an overhang of gyp board as the bearing surface wrapped in a J channel. Gyp board is not designed to support structure or equipment. This detail typically requires general trades to coordinate opening sizes with mechanical trades to frame a "rough opening, drywalled at the inside edges and with an "L" shaped/ wall angle picture framing the openings to drop into (and supported by aircraft cable above). BW/ LF			
68	M0.14	DD 2/6/26	CUH Detail	Please indicate DAT sensor and fan status at CUH details. Shows control valve, but no other devices are called out. BW/ LF			

Ctrl. No.	Drawing/Spec Ref.#	Drawing Revision	Room/ Detail #	Reviewer's Comments	Architect's / Engineer's Response	Follow-Up Action	Open or Closed
69	M0.15	DD 2/6/26	Duct Thru Exterior Wall Detail	Duct through exterior wall detail needs review. There is caulking shown to insulation passing through wall plane and metal angle that do not align with typical means and methods. Also, intumescent caulking is contraindicated at any duct that may have and SFD or OAD as the duct may deform in the event of a fire, impeding the operation of a damper. Can the duct be fire-foamed around the exterior opening for insulation and air sealing/ caulked with primary bead at exterior, with metal angle fastened to the duct, sealed with stripping and caulking/ and insulation over that? Is any let-in thru-wall metal required as a head flashing for this detail? Please develop into next drawing sets. BW/ LF			
70	M0.16	DD 2/6/26	Displacement Diffuser Details	DD Details require review with Arch/ and edits- there is a note on one detail that states "cut out necessary wall framing for duct connection & offset supply duct as required". Mechanical trades should not be cutting any framing members to fit duct to DD's. Instead, the note should read similar to "Provide inlet boot details and connections at displacement diffusers to allow offset and duct connection behind framing members- coordinate diffuser details and openings with General Trades". Arch details should presumably show stud framing on the "flat" at the header and any mid span framing at DD openings. Also- use of the term "MUD FRAME" is controversial, as this is a Price specific label that has been viewed on other projects as "proprietary spec". Please revise language to incorporate "factory supplied or custom fabricated mud frame, or finished trim for drywall assemblies to accommodate a flush, moldable finish" or something similar. BW/ LF			
71	M1.12	DD 2/6/26	Gymnasium	Supply ductwork at Gymnasium appears in conflict with support structure for Gym equipment/ basketball hoops. Please coordinate locations accordingly with Arch/ Structural. BW/ LF			
72	M Series	DD 2/6/26	General/ Piping	Please develop and identify general locations of major isolation valves into next design set- this should include riser take off locations and major branches to segment each floor as necessary for future service. BW/LF			
73	E Series	DD 2/6/26	Roof Plan/ Fire Alarm	No Fire Alarm drawings shown for roof areas- please review need for horn strobes and pull stations that may be required at roof level, and provide in future drawings. BW/ LF			
74	E3.04	DD 2/6/26	Detail 5	Rath Rescue phone may need to exploration of spam call blocker at areas of refuge/ repeater bases. Other projects have experienced spam calls being auto picked up by the Rath system and projecting calls over the speaker, when connected to building telephone system. Please explore options into future drawing design. BW/ LF			
75	E4.01	DD 2/6/26	Detail 2	Provide monitoring contact or end switch at elevator shaft smoke damper to indicate position- may need to add note to this sheet or coordinate with Mech/ control drawings for point coordination. BW/ LF			
76	E3.01	DD 2/6/26	One-Line Riser	Does drawing assume that NEDP is feeding all main distribution and branch panels on Emergency backup? NEDP does not cleary show downstream connections. Please clarify intent of systems on Emergency backup as fed by ATS/ Genset. BW/ LF			

Ctrl. No.	Drawing/Spec Ref.#	Drawing Revision	Room/ Detail #	Reviewer's Comments	Architect's / Engineer's Response	Follow-Up Action	Open or Closed
77	E3.07	DD 2/6/26	Detail 2 (E6.15)	If Ansul system requires remote pull, provide scope for EC to path conduit and provide note for Ansul corner pulleys/ ID location of pull for pathway at E drawings. Also detail number may need to be corrected on sheet. BW/ LF			
78	E4.21	DD 2/6/26	Courtyard	No FA/ Horns, Strobes or Pull Stations indicated at Courtyard- please review and develop into next drawing set. BW/ LF			
79	General	DD 2/6/26	ALL: Electrical/ Utility and Distributed Power	*NOTE: With the quantity of electrified infrastructure in the Wildwood ES building, along with the level of sophisticated digital equipment planned, the project should consider incorporation of voltage and harmonic conditioning equipment, or design space and pathways to incorporate future equipment following a formal Power Quality Study (following startup of equipment), when the building is under load. Major equipment failure risk should be discussed as it relates to poor power quality, or power distribution harmonics with the quantity of non-linear loads. EOR to advise. BW/ LF			
80	T Series	DD 2/6/26	ALL	Lockdown and any Mass Notification scheme is unclear, along with programming and interconnectivity of Security, Access Control, FA and other systems. Please develop approach into next drawing set in concert with district standards. BW/ LF			
81	C2.00	DD 2/6/26		The gates to isolate the drive behind the building show the gate posts in the dive. Consider enlarging the gate to place the posts out of the drive behind the curb to allow the plows to pass by the gate posts.			
82	C2.01	DD 2/6/26		I like how the gates at the dumpster pad align with the curb to clear the snow with the plow. Consider an exact detail for the setback of the gate in relation to the curb for clarity.			
83	C2.01	DD 2/6/26		On the East and West edges of the building there appears to be a graphic along the edge of the building that shows a stone mulch. Considering the age groups would a softer material be considered?			
84	C2.02	DD 2/6/26		The traffic patter may require both signage and line striping arrows.			
85	C3.00	DD 2/6/26		At the three underground chambers on site, coordinate the access / cleanout locations with the site elements.			
86	C3.01	DD 2/6/26		On the North side of the building at the roof drain to DMH-21, a cleanout should be located at the building.			
87	C3.01	DD 2/6/26		At DMH-21 - will a vac truck be able to get within the gate to service the manhole?			
88	C3.00 & C3.01	DD 2/6/26		What is the drainage strategy for the relatively level area at the main entrance?			
89	C3.01	DD 2/6/26		What is the drainage strategy for the courtyard area?			
90	C3.02	DD 2/6/26		The parking and drop off areas do not appear to have a snow shelf especially between the access road and the parking lot. What is the snow plowing strategy? Has this been reviewed with facilities?			
91	C4.01	DD 2/6/26		Is it possible to shift the fire hydrant on the West side of the site a little East out of the walkway?			
92	C5.02	DD 2/6/26		Consider a detail for the continuous detectable warning line at the drop off at the front of the school. Can the panels shown be placed butt jointed and maintain the 2.35" spacing.			
93	C5.02	DD 2/6/26	12	Detail 12 - Coordinate the drain tie-in with site drainage.			
94	L1.03	DD 2/6/26		The North side of the soccer field has a 4' chain link fence. Should a high fence be considered as a backstop for soccer balls? For example the sport courts have a 10' fence.			

Ctrl. No.	Drawing/Spec Ref.#	Drawing Revision	Room/ Detail #	Reviewer's Comments	Architect's / Engineer's Response	Follow-Up Action	Open or Closed
95	L1.03 / L1.05	DD 2/6/26		Please review the planning bed at the entrance to the school. Some facilities find maintenance of these beds difficult.			
96	L3.03	DD 2/6/26		Similar comment to above. The extensive planting beds require a lot of maintenance and should be reviewed with facilities.			
97	S0.01 / GC1.00	DD 2/6/26		Note on the Code Summary - Roof Construction and Secondary Members: States heavy Timer construction. Drawing S1.41 shows WF framing. Am I missing the heavy timber construction in an area?			
98	S1.33 / A0.32	DD 2/6/26		I think the 6-1/2" slab depression area needs to be coordinated with the structural drawings.			
99	A4.00	DD 2/6/26		Structural details are needed for the roof equipment enclosures.			
100	A4.10	DD 2/6/26		I don't see a joint pattern for some of the larger cast stone panels. The structural drawings need to include tieback points and details for the			
101	A6.70	DD 2/6/26	H7, A14	The attachment of the MCM Panels and Cast Stone look like they are structural connections. The loads and connections should be reviewed with the structural engineer.			
102	A1.13 / FS2.01	DD 2/6/26		The walk in freezer and cooler typically require a slab depression for the insulated floor. I do not see this indicated on the structural drawings. Is this required?			
103	T1.11	DD 2/6/26		I would have difficulty locating some of the devices on the walls. Please consider elevations coordinated with the architectural to locate backboxes for the devices on the walls.			

DESIGN REVIEW

100% DD SET REVIEW – MEP COMMISSIONING

WILMINGTON ELEMENTARY SCHOOL

320 SALEM STREET

WILMINGTON, MA

PREPARED FOR:

MASSACHUSETTS SCHOOL BUILDING AUTHORITY

10 POST OFFICE SQUARE, SUITE S400

BOSTON, MA 02109

FEBRUARY 26TH, 2026

ICO ENERGY AND ENGINEERING

Integrate. Conserve. Optimize.

Cover Letter

ICO Energy and Engineering is providing the Commissioning Services for the New Wilmington Elementary School. ICO is submitting the 100% Design Development (DD) Set review comments as part of the commissioning scope of work. The 100% DD set was issued on 02/06/2026. ICO has completed a detailed review of the drawings and specifications for the mechanical, electrical, and plumbing systems that fall within the commissioning requirements for this project.

Our review focused on how well the DD documents align with the Owner's Project Requirements (OPR), Basis of Design (BOD), and all applicable codes, standards, and best practices.

Included with this letter are ICO's review comments. Comments are intended to assist the design team in confirming that the systems are properly coordinated, fully commissionable, and positioned to meet the project's performance and sustainability objectives.

Design Packages Reviewed			
Drawings Set	**Review Date**	**Reviewed By**	**Scope**
100% DD Set	02/26/2026	Matt Tobichuk & Kevin Spates (ICO)	Cx

Attached Items

1. ICO MEP Cx Design Review comments spreadsheet and PDF.

Sincerely,



Kevin Spates, P.E., CxA, CEM
ICO Energy and Engineering, Inc.
Direct: (774) 217-0176

Wilmington Elementary School 100% DD Review

ICO ENERGY AND ENGINEERING
Integrate. Conserve. Optimize.

Item #	Drawing Set	Drawing	Equipment/Location	Issue	Noted By	Note Date	Responsibility	Comment Response	Status
1	100% DD	N/A	Owner's Project Requirements	Has an Owner's Project Requirement document been developed per the LEED criteria for ICO Cx to review and comment. The DD Design Deliverable and Cost Estimate has some of the necessary information spread throughout but not consolidated in an OPR document. Please review and confirm where the information is provided to satisfy the OPR requirements of LEED.	ICO	02/27/26	CGG		Open
2	100% DD	Spec 230010 - 19	Emergency Eye / Shower	Eyewash station is called to have a flow switch tied into the BMS. This is not described on the drawings.	ICO	02/27/26	CGG		Open
3	100% DD	P0.01	Emergency Eye / Shower	Please confirm if an eyewash station will be located in the mechanical pump room. There is an eye wash station listed on P0.01, however there is not one on P1.22 nor is there tepid water piping.	ICO	02/27/26	CGG		Open
4	100% DD	Mech - General	Air Balance	A building air balance to be conducted once airflows are set in order to ensure between SA, RA, EA we are maintaining a positive building. Airflows appear to be in progress and will be reviewed at the next drawing set.	ICO	02/27/26	CGG		Open
5	100% DD	Mech - General	Condensate Lines	Condensate lines from the DCUs do not appear to be located yet. Is the intention for condensate to slope to drain or are the CPs that will be installed be used entirely?	ICO	02/27/26	CGG		Open
6	100% DD	Mech - General	Note 30 Emergency Restriction	There is a note stating "during emergency restriction or emergency power, supply fan to run; mechanical cooling shall be de-energized" Please confirm which SF this is referring to or if it for the AHUs.	ICO	02/27/26	CGG		Open
7	100% DD	Mech - General	Note 36 AHU Condensate Pump	Note 36 is specific to DCUs, but there is calls for AHUs to also have condensate pumps. These are not included on the points list for the AHUs	ICO	02/27/26	CGG		Open
8	100% DD	M1.11	Teach Wellness 125A	Please confirm if this is a teaching room and if this would require continuous ventilation. Currently there is no SA to the room.	ICO	02/27/26	CGG		Open
9	100% DD	M1.22	Learning Center 210	Please confirm that this room will require SA. There does not appear to be SA in this space.	ICO	02/27/26	CGG		Open
10	100% DD	M1.22	Read 209	Please confirm that this room will require SA. There does not appear to be SA in this space.	ICO	02/27/26	CGG		Open
11	100% DD	M4.15	Controls	Please ensure the controls provided reflect the equipment in the building. It appears that some of the controls are from a different building.	ICO	02/27/26	CGG		Open
12	100% DD	M4.16	Lighting Control	Lighting control is called to be integrated with BMS, however the occ sensors are not included in any sequencing. Please confirm how lighting control will be achieved through BMS and how it will be used in terminal unit sequencing.	ICO	02/27/26	CGG		Open
13	100% DD	E1.11, E1.12, E1.21, E1.22, E1.31, E1.32	Room Names and Emergency Lighting	Please include room names in all rooms throughout the lighting plans to confirm emergency lighting locations.	ICO	02/27/26	CGG		Open
14	100% DD	E4.11, E4.12, E4.21, E4.22, E4.31, E4.32 and all Electrical Drawings	Room Names	Please include room names in all rooms throughout the electrical and fire alarm plans for device verification	ICO	02/27/26	CGG		Open
15	100% DD	E4.11	Speaker / Visual "ADA" Compliant Signal and Mass Notification Signal Devices	Please confirm if fire alarm and mass notification devices should be present in Adjustment 104	ICO	02/27/26	CGG		Open
16	100% DD	E4.11, E4.21, E4.31	Smoke Detector for Elevator Recall	Please confirm if the smoke detector located near Elevator EL-1, EL-2, EL-3 and the smoke detector in the elevator machine room 328 should have an "E" to indicate elevator recall	ICO	02/27/26	CGG		Open
17	100% DD	E3.02, E3.05, E3.06, E3.07, M0.18, M0.19	Electrical & Mechanical Schedules	Please confirm if completed schedules for equipment verification and coordination will be provided	ICO	02/27/26	CGG		Open
18	100% DD	Mech - General	Schedules	Equipment schedules are incomplete at the DD level, understandably. Equipment sizing and calcs will need to be completed in the next set of plans when schedules are further developed.	ICO	02/27/26	CGG		Open
19	100% DD	Mech - General	Load Calcs	Have load calculations been provided?	ICO	02/27/26	CGG		Open
20	100% DD	Elec - General	Generator Load and Equipment	What is anticipated to be on the Emergency Generator for equipment? Has this all been confirmed to date?	ICO	02/27/26	CGG		Open
21	100% DD	Mech - General	Single Line/Riser Diagrams	Provide single line diagrams / risers of the airside and waterside system	ICO	02/27/26	CGG		Open
22	100% DD	Mech - General	Equipment and Diffuser tags	Equipment tags to be provided with the progression of the drawings and schedules in order to understand spaces served	ICO	02/27/26	CGG		Open
23	100% DD	Mech - General	Metering	Confirm the metering approach for the Mechanical system, no metering is indicated on mech	ICO	02/27/26	CGG		Open
24	100% DD	Plum - General	Metering	Confirm the metering approach for the Plumbing system, no metering is indicated on plum	ICO	02/27/26	CGG		Open
25	100% DD	M3.12	Roof space	Roof area B below column line B.26 shows a bunch of RTUs that do not seem to fit and work in this area on the roof.	ICO	02/27/26	CGG		Open
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FONTAINE BROS.				**Project Name:**	**Wilmington Elementary School**		
				Document Name:	**Constructability Review Log**		
				Project Phase:	**Design Development Docs Dated 2/6/2026**		
				Review Date:	**March 12, 2026**		
Number	**Spec Section**	**Sheet Number**	**Secondary Sheets**	**Discipline**	**Item Description**	**Author**	**A/E Response**
Civil/Landscape							
1		IR-100	328400, C4.02, IR-101	Civil	Irrigation water supply routing and trade responsibility are inconsistent between irrigation drawings, civil utilities plans, and specifications. - Primary location: C4.01/C4.02 Utilities Plans (with IR-100/IR-101 irrigation callouts). - Irrigation drawings depict a schematic water supply pipe route/POC and label portions “(BY CIVIL),” but the utilities plans do not show a 2" irrigation service routing/POC. - IR-100 legend labels “SCHEMATIC IRRIGATION WATER SUPPLY PIPE FROM BUILDING (BY CIVIL),” while Spec 32 84 00 assigns the 2-inch domestic water service for irrigation to Plumbing/Mechanical. - IR-100 notes indicate a building hand-off requiring trade coordination between “PLUMBING” and “CIVIL.” - IR-101 controller power conduit responsibility is labeled “(BY ELECTRICAL/CIVIL)” while IR-100 legend indicates “(BY ELECTRICAL).”	FBI	
2		C5.03	331000, C4.01, C4.02	Civil	Minimum cover requirements for site water lines are inconsistent between civil details and the project specifications. - Primary location: C5.03 water main installation details (Details 1-2 and 5). - Details 1-2 show “5' TYPICAL” cover while Detail 5 shows “5'-6" MIN.” - Spec 33 10 00 requires “not less than 5.5 feet of cover.” - Detail 4/C5.03 for typical water service shows “5’ COVER MINIMUM,” differing from the specification minimum.	FBI	
3		L0.01	015639, C5.00	Landscape	Tree protection fence requirements conflict between landscape/civil details. - Primary location: 1/L0.01 and 7/C5.00 (Tree protection fencing requirements). - 1/L0.01 calls for “standard plastic day-glo orange snow fence, 4'-0" ht” with steel supports @ 6'-0" O.C. max. - 7/C5.00 calls for “standard chain link fence, 6' HT” with posts driven 2'-0" min. - Spec 015639 allows either chain-link or plastic protection-zone fencing, without identifying a single governing requirement across drawings.	FBI	
4		L3.04	L3.05	Landscape	Seed mix type is inconsistent between L3.04 and L3.05 for the same Balland Rd/Ballardvale St frontage area near the faculty & staff parking. - L3.05 (Sheet 307929) labels the frontage area north of the matchline as “NON-IRRIGATED GENERAL LAWN SEED MIX; TYPICAL.” - L3.04 (Sheet 307928) designates the corresponding frontage area as “NON-IRRIGATED ERNMX-156 LOW-GROWING WILDFLOWER AND GRASS MIX” (pattern per L3.04 Legend). - L3.04 Plant Schedule includes 3,584 SF of ERNMX-156, so the sheet-to-sheet discrepancy changes the intended seed mix scope/quantity for that frontage area.	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
5	32 92 00	L3.07		Landscape	Planting soil mix requirement in L3.07 Planting Plan Notes is not aligned with 32 92 00 planting soil mix for grasses/wildflowers. - L3.07 Planting Plan Notes #1: “ALL PLANTING SOILS SHALL BE (1) PART TOPSOIL, (1) PART COMPOSTED ORGANIC MATTER, (1) PART NATIVE SOIL MIXED PRIOR TO PLANTING INSTALLATION.” - Spec 32 92 00 defines a different “Planting Soil for Grasses and Wildflowers” mixture ratio (50% sand, 25% topsoil, 25% leaf mulch/compost topsoil). - L3.07 legend includes grasses/wildflower seed mix types (ERNMX-156 and ERNMX-132-1), implying grasses/wildflower areas occur within the landscape scope covered by these notes.	FBI	
6	32 31 13	L4.02		Landscape	Chain link fabric gauge differs between L4.02 details and Spec 32 31 13. - Details 9/10/11 callout: “CHAIN LINK FABRIC; 9 GAUGE (CORE WIRE)”. - Spec 32 31 13 §2.01: “Steel Wire Fabric: Six-gauge Wire”.	FBI	
7		L1.06	321816.13, L4.04, L4.05	Landscape	Poured-in-place (PIP) playground surfacing plans do not indicate thickness and/or critical fall height zoning. - Primary location: 1/L1.09 (K–2 playground surfacing plan). - L1.06 (3rd–5th) and L1.08 (Pre-K) show color/pattern graphics without thickness callouts or critical-height zones. - L1.08 detail references state depth/thickness “as per manufacturer’s specifications,” while plans do not show project-specific thickness/CFH zones. - Spec 32 18 16.13 states overall thickness varies by equipment fall height and is to be “as indicated on Drawings.”	FBI	
8		C1.02 & C4.02		Civil	There's an existing sewer manhole right near proposed SMH-11. This existing manhole needs to remain in place during construction as sewer line from exsiting school runs to it. Propose keeping this existing manhole in place permanently, tie into existing manhole @ Ballardvale. Keeps sewer live for existing building during construction. Avoids potential conflicts with new utilites that need to go in (water, electric). Can tie new sewer infrastructure into this existing manhole.	FBI	
9		C3.01 & C3.02		Civil/Utilities	Landscape detail 12/L4.04 shows flat/panel drainage system underneath PIP, but do not see this shown on drainage plans. IR-100 shows undergrainage areas. Assume this will need to tie into drainage structure. Should shown on drainage utilities plans. Should be bought with site.	FBI	
10		C4.01 & C4.02		Civil/Utilities	Landscape shows a few exterior drinking fountains throughout the play areas. Assume this will need to be potable and no filtration system integral to units. This would put scope on plumber (water will need to run through filtration system in the building) but civil would be the one doing E&B. Should show on utilites plan. Also, looks like they require drain connection. Should show with drainage infrastructure.	FBI	
11		L0.01		Landscape	Verify tree removal. Seems like there are some trees near the existing tennis courts that will need to get removed but are not shown as being removed.	FBI	
12		C1.01		Civil/Utilities	Are there existing utlities going to the irrigation pump house that is called to be demolished? Is the irrigation system still active? If so, does it feed any part of lawn areas around esiting school that will remain until phase 2? Assuming no drawings or details on this and will need to chase it out once construction starts	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
13		C2.01 & C2.02		Civil	Confirm accessibible routes from accesible parking spots	FBI	
14		C4.00		Civil/Utilities	Multiple locations along parent drop off road where utilities cross creating potential conflict. Is it possible to push electrical duct bank to northern side of the road and move drain line and water line closer to sewer line?	FBI	
15		C4.01		Civil/Utilities	Confirm who owns fire protection service. Have seen scoped to FP and have also seen it scoped to site work. If by Site; will need to be witnessed by a licensed professional. FBI prefers to have this performed by site as we want to get all services in the ground ASAP to get bindered ASAP. Confirm dwg sets make it crystal clear trade bid MEPs 10' from building and everything after that into the building, through foundation wall, etc.	FBI	
16		C4.01 & C4.02		Civil/Utilities	Civil/site should own water line from building out to utility box that contains master valve for irrigation system. Landscape/irrigation sub would own the valve it's self and branch irrigation lines. Should show on utility drawings so site sub captures its.	FBI	
Structural							
17		S1.43	053100, A3.11, A3.12, M0.18, M3.12, S0.07, S1.41	Structural	Roof RTU/opening extents and deck opening requirements are not clearly defined on the structural roof framing plans. - Primary location: S1.43 Roof Framing Plan, Framing Note 14. - Framing Note 14 defers “exact number, size, and location of openings in steel decking” to M/P/A drawings. - RTU/opening footprints on S1.43 are shown but not dimensioned for deck cutting/layout. - M3.12 shows multiple rooftop units in Roof Area B, but S1.43 does not clearly designate supports/openings for all equipment footprints. - S0.08 notes “ALLOW FOR 10 ADDITIONAL LOCATIONS” for roof openings with “SIZE AND LOCATION TO BE DETERMINED DURING CONSTRUCTION.” - S1.41 shows RTU footprints and “OPEN” callouts without opening length/width dimensions in multiple roof areas.	FBI	
18		S1.11	S0.01, S0.02	Structural	Foundation elevations and stepped-footing layout are not shown for Area A; plan relies on minimum-depth “cost notes” without TOF/BOF control. - S1.11 uses relative depth notes such as “footing shall be (minimum) 4'-0" below exterior finished grade” for perimeter foundations and similar minimum-depth notes for interior column footings. - S1.11 does not show TOF/BOF elevations, benchmarks, or explicit step locations along the perimeter/interior foundation lines. - S0.02 includes typical stepped wall footing details, but S1.11 does not identify where stepping occurs or provide elevation transitions.	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
19		3.11	M3.11, S0.08, S1.41	Structural	RTU screen enclosures shown on the roof plans require structural bracing/attachments to primary steel, but the screen support locations/connection requirements are not laid out on the roof framing plan for field execution. - Architectural roof plan notes “12'-0" HIGH RTU SCREEN ENCLOSURE” and “17'-0" HIGH RTU SCREEN ENCLOSURE” around Area A RTUs (A3.11). - Structural typical detail shows mechanical roof screening brace with HSS posts/base plates bolted to structural steel beam and web stiffeners at post locations (S0.08, Detail 8). - Roof framing plan Area A shows RTU dashed outlines but no screen post/support layout or connection-point callouts coordinated to the screen enclosure extents (S1.41).	FBI	
20		S1.31	A0.31, A0.32, A1.31	Structural	Architecturally required depressed slab areas are not defined on the structural Level 3 framing plans. - Primary location: Level 3 Area A toilet clusters on A0.31 vs S1.31. - A0.31 shows depressed-slab boundary symbols and slab elevation callouts “TO SLAB 29'-1”” at toilet clusters around grids 1.40–1.48/A.42–A.46 and 1.94–2.08/A.42–A.46. - S1.31 does not show slab step/depression notation at these toilet locations. - A0.32 calls for a 6 1/2" depressed slab for the Kinetics “RIM” isolated slab system. - S1.33 shows an outline matching the region but provides no T.O. slab elevations, slab step details, or deck/framing notes describing the depression.	FBI	
21		S4.02	S1.33, S4.04	Structural	Braced frame brace member type shown in elevations does not match the brace connection details provided. - Primary location: BF-1B/BF-2B on S4.02 compared to S4.04 Braced Frame Details. - S4.02 labels BF-1B and BF-2B diagonal braces as “2" DIA ROD.” - S4.04 brace connection details depict a slotted “BRACING MEMBER” welded to gusset plates, not a rod brace connection. - The applicable connection detail set for the rod-braced condition is not identified on the BF-1B/BF-2B elevations.	FBI	
22		S1.11 & S1.13		Structural	Foundation drawings appear to be calling for rigid insulation underneath entire SOG. Reviewing some of the typical details, it does not look like rigid insulation is included everywhere. Confirm if rigid inuslation is required under the entirey of the SOG or just along perimter. Have seen it just 4' in from foundation edge in the past.	FBI	
23		S2.01		Structural	Foundation insulation seems to be contradictory throughout details. Architectural details on A6.51 show rigid insulation on exterior of foundation wall whereas foundation details on S2.01 show rigid insulation on interior of foundation walls. Please confirm if which is correct.	FBI	
24				Structural	Some bathrooms, particularly the gang bathrooms on the first floor show floor drains. Confirm if intention is for a depressed slab with mud set sloped toward drain. If so, depressed slab should be called out on structural drawings.	FBI	
25		S1.41		Structural	RTUs in area A don't seem to be calling for slabs whereas all others do. Confirm if RTUs in section A of the building should also be on concrete slabs. If so, should be shown on structural drawings.	FBI	
26		General		Structural	No timber details/No general notes pertaining to timber on S0.01	FBI	
27		S1.21-S1.23		Structural	WF connection details to CMU walls should be called out. - Can some connections to CMU walls be avoided by adding girders. For example B2.0-B2.4 on 2.08 line could a WF along 2.08 line be added to carry the beams in this bay? - Same comment on 1.68 line.	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
28		S1.43		Structural	RTU located between 1.44 and 1.76 line, is there an RTU pad required?	FBI	
29		General		Structural	Provide details for the Kinetics noise control RIM Isolated slab system.		
Architectural/Interiors							
30	07 81 23	A0.21		Architectural	Fireproofing basis is inconsistent on Level 2 Area A horizontal control plan (cementitious spray-applied noted) vs spec section provided (07 81 23 Intumescent Fire Protection). - A0.21 General Note 17: structural steel columns/framing in Type II-A to be delivered un-primed to receive “CEMENTITIOUS SPRAY-APPLIED FIREPROOFING”. - A0.21 plan callouts at hatched areas: “...RECEIVE 2-HOUR SPRAY APPLIED FIREPROOFING” and “BOTTOM OF FLOOR DECK...RECEIVE 2-HOUR SPRAY APPLIED FIREPROOFING”. - Spec 07 81 23 titled “Intumescent Fire Protection” describes intumescent thin-film systems (no cementitious spray-applied system).	FBI	
31	07 54 00			Architectural	Roofing membrane seam/attachment method conflicts with TPO heat-welded system requirements elsewhere in the section. - Membrane is specified as TPO per ASTM D6878/D6878M (Section 07 54 00, 2.04.A.1, Page 1051). - Field Quality Control requires “seam weld” testing and references heat welding machine use (Section 07 54 00, 3.10.D, Page 1058). - Installation states “Seal seams by contact adhesive” with 3-inch overlaps (Section 07 54 00, 3.06.C, Page 1057).	FBI	
32		A3.12	A3.50, A6.14, A6.70, E2.40, M3.11, M3.12, S0.08, S1.41	Architectural	Rooftop RTU/equipment screen enclosures are shown but lack an architectural assembly/roof-interface detail reference for flashing and attachment coordination. - Primary location: A3.12 roof plan note calling out “12'-0" HIGH RTU SCREEN ENCLOSURE ‘CENTRIA BR5-36...’”. - A4.11 Detail 3 notes a “12'-0" EQUIPMENT ACOUSTIC SCREEN WITH BRACING” but provides no architectural materials/attachment/roof-membrane tie-in detailing. - A4.13 elevations repeat the 12'-0" RTU screen enclosure note without any architectural detail callout for the roof/waterproofing interface. - Structural roof screen bracing is referenced (S0.08) while the roof flashing/penetration interface is not keyed on architectural sheets.	FBI	
33		A10.11	126613, A10.70, A10.71, A9.50	Architectural	Gym bleacher depressed slab limits are referenced in details but not shown/dimensioned on the gym plans. - Primary location: H6 and H12/A9.50 gym floor system/threshold details. - H6 and H12/A9.50 state “DEPRESSED CONCRETE SLAB; SEE PLAN FOR LIMITS OF DEPRESSED AREA” and require “SOLID F.R.T. WOOD BLOCKING AT BLEACHER SUPPORT & CASTER PATH.” - A10.70 enlarged gym plan shows motorized retractable bleachers but does not depict depressed slab limits or caster path/blocking extents.	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
34		A6.70	072700, 075400, A3.50, A6.10	Architectural	Roof-to-wall air/vapor barrier transition notes are inconsistent between top-of-wall details and roof transition details. - Primary location: H7/A6.70 top-of-wall detail. - A6.70 top-of-wall notes call for a roof bellows/backer rod condition but do not show a transition tape/reglet termination tying roof VR to wall VR/AIB. - A3.50 roof transition detail (R13/R6) calls for wall VR/AIB to lap over roof VR/AIB and be sealed with manufacturer transition tape, which is not reflected in A6.70. - Multiple A6.70 top-of-wall details (H7, A14, A7) use similar bellows language while the A3.50 roof detail shows explicit VR/AIB lap/seal terminology.	FBI	
35		A0.11	A1.72, P1.11	Architectural	Floor drain locations and slab depression extents for toilet rooms with FD are not dimensioned/locatable between A1.72, A0.11, and P1.11. - A1.72 General Note 14: refer to Horizontal Control Plans for floor drain locations. - A1.72 General Note 15: gang toilet rooms sloping to floor drains include a 3" slab depression; refer to Horizontal Control Plans for slab depressions. - A0.11 does not show FD locations or slab depressions for these toilet rooms. - P1.11 shows FD symbols in the Level 1 toilet rooms but without dimensions/coordinates to set drains and form slab depressions.	FBI	
36	14 24 00	A7.10		Architectural	Elevator type/equipment location is ambiguous between drawings and spec (machine room shown at Level 3 vs hydraulic equipment location in spec). - G24/A7.10 labels “ELEVATOR MACHINE ROOM 328” adjacent to the hoistway on Level 3. - Spec 14 24 00 indicates “Hydraulic Motor and Pump Location: Adjacent to hoistway at lowest floor.”	FBI	
37		A8.50	081113, A8.10	Architectural	BL frames: glazing stop & glazing scope conflicts. - Q5/L5/Q9/L9: field-applied glazing stop, tamper screws, corridor side. - A8.10 N4: glazing in HM openings by glass & glazing subcontractor. - 08 11 13: glazing factory-installed; stops non-removable at non-secure side.	FBI	
38	05 51 00	A7.11		Architectural	Stair tread/landing concrete fill is assigned to the concrete toppings contractor in A7.11 notes, but Metal Stairs spec 05 51 00 assigns the stair work to the Miscellaneous Metals trade. - A7.11 Vertical Circulation General Notes #8: "Peastone concrete fill at treads and landings shall be provided and installed by the concrete toppings contractor." - 05 51 00 Part 1.01 (Page 903): "work ... included in the Miscellaneous Metals Trade Bid." - 05 51 00 Part 1.02 (Page 903) and 2.02 (Page 905): metal stairs with (field-installed) concrete fill treads/landings are included in this section.	FBI	
39		FS2.01	114000, A10.12, FS1.12, P1.33	Architectural FS Structural	Walk-in cooler/freezer (and related floor pan/grate) floor recess requirements are specified but not shown/dimensioned in plan. - Primary location: Kitchen 162 walk-in cooler/freezer area (A10.12 / FS2.01 references). - FS2.01 schedule notes Items 12 (Walk-in Cooler), 13 (Walk-in Freezer), and 46 (Floor Pan & Grate) “Requires floor recess by GC.” - A10.12 Kitchen 162 plan shows no slab depression/recess callouts at the walk-in cooler/freezer locations. - FS2.01 provides no recess dimensions (length/width/depth), edge conditions, or referenced architectural/structural detail callouts.	FBI	

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40		A7.51	A10.73, E1.12, E2.12	Architectural	Stage wood step construction detail does not incorporate the integrated LED lighting and power outlets called out at the cafeteria stage steps. - A25/A10.73 note at stage seating/steps: “WOOD STEPS, LED LIGHTING INCORPORATED AND POWER OUTLETS” without a referenced step/lighting/outlet integration detail. - R20/A7.51 is titled “WOOD STAGE STEPS @ SLAB ON GRADE” but does not show integrated lighting channels/driver access, outlet box locations, or routing provisions (no electrical coordination in the step section). - E1.12 shows “FLEXIBLE TAPE TYPE FIXTURE MOUNTED UNDER STAGE STAIRS (TYP.)” with fixture tag LC1, but no corresponding architectural step section shows where the fixture mounts within the step assembly. - E2.12 does not indicate how power is distributed into the step construction where “power outlets” are called for on A10.73.	FBI	
41		A1.74	A0.31, A0.32, P1.31, P1.32	Architectural	Floor drain locations and required 3" slab depressions for Toilet 307, 327B, 329, 330, 334B & 357B not shown on A1.74 and not shown on the referenced horizontal control plans. - A1.74 Enlarged Toilet Room General Note 14: "Refer to horizontal control plans for floor drain locations." - A1.74 Enlarged Toilet Room General Note 15: gang toilet rooms sloping to drain require "3 inch slab depression…sloped to drain"; enlarged plans L16 (Toilet 307), L6 (Toilet 357B) and A10 (Toilets 327B/329/330/334B) do not show drain symbols or depressed-slab boundaries/extents. - A0.31 (Level 3 HCP Area A) and A0.32 (Level 3 HCP Area B): no floor drain symbols and no depressed slab delineation in these toilet rooms; sheet notes direct floor drain locations to plumbing drawings and floor drain elevations to enlarged floor plans.	FBI	
42		A3.50	075400, M3.11, M3.12	Architectural/Mechanical	Mechanical curb flashing scope and curb height/wood blocking coordination are not consistently defined at typical curb details. - K17/A3.50 calls out “GALVANIZED COUNTER FLASHING: BY SC-HVAC” and “ROOFING MEMBRANE FLASHING: BY SC-ROOF.” - Spec 07 54 00 assigns mechanical curbs to HVAC, but counterflashing to the roofer (“HVAC Trade Contractor to furnish and install curb; roofer to furnish and install membrane flashing and counterflashing”).	FBI	
43		A6.51		Architectural	Architectural details on A6.51 shows exterior sidewalks needing to be in place in order to set storefronts/curtain walls. Is it possible to change this detail so we do not have to wait until exterior concrete is done to set storefront/curtain wall. Fontaine has seen steel angle utilized in the past to support install on strefront and curtainwall prior to exterior concrete.	FBI	
44		A6.60		Architectural	Architectural mid wall details show a FRJS system at slab edge. Is the intention for the FRJS system to be between stud cavities? Looks like there is a CFMF runner called out between studs. Is this a brace between vertical studs and the intention is for balloon framing or is this runner horizontally across stud bay and acts as a break in the wall at slab level? Is it possible to extend pour stop thus allowing for framing on higher floors to begin earlier in time?	FBI	
45		A6.70		Architectural	Similar question to mid wall details as top of wall details. Is it possible to install support steel angles on SS thus allowing parapets to be framed earlier in time and in turn allowing the roof installation to begin sooner?	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
46		A6.70		Architectural	Top of wall details show general concept being parapets slope back to plane of roof presumabley using roof drain system tied to site drainage structure. Looks like MCM panel roof edge is flat potentially allowing ponding on top of roof edge. Should this also be pitched slightly back toward plane of roof?	FBI	
47		A6.70		Architectural	Looks like there is a closure piece between MCM panel system and brick veneer. Assume this would be owned by same sub F&I MCM panel system? If so, if possible, should be called out on drawings. Same general note for all thru wall flashings, etc. on exterior details.	FBI	
48		A6.70		Architectural	General note on backup systems associated with exterior facade details. Have run into many arguments with subs about who owns what. In general, subs who own the finish face system should own the backup system behind it. (i.e. for MCM, that same sub should own z-girt attachment system and insulation.	FBI	
49		A8.70		Architectural	Typical curtain wall head detail F21/A8.70 shows silicone sheet flashing set into glazing pocket as installed by curtainwall sub, but then assigns sealing that silicone sheet flashing back to AVB by WDC. Would recommend keeping this all with curtainwall sub as it avoids finger pointing if there is a leak during testing or throughout the project and WDC does not need to come back around before facade installation begins.	FBI	
50		AG0.04		Architectural	Mason should own entirety of entry sign (aside from concrete, AVB, LED sign). See note calling out CUVM veneer and thru wall by mason, but don't see CMU, brick veneer, and cast stone cap called out to be my mason. Please confirm this scope belows to mason. If so, and if possible, should make it crystal clear on drawings of what they own.	FBI	
51		A3.50		Architectural	Detail R13/A3.50 shows thru wall flashing by my roofing subcontractor. Reccomend switching that that to mason. Mason would need to wait for roofer to show up and install the thru wall before continuing with their veneer. On previous project we achevied this by the thru flashing actually extending beyond the counterflashing piece attached to term bar instead of interlocked with thru wall flashing as currently shown. Detail R6/A3.50 similar concept. This shows a drip edge thru wall (persumabely owned by metal panel sub, should be called out that way), underneath it another piece of flahsing underneath it. In this isntance the piece of flashing wouldn't be needed. The drip flashing is your thru wall ties back to AVB. You would extend it beyond counterflashing as shown.	FBI	
52				Architectural	General comment - Reccomend whoever owns the thru-wall flashing that it is crystal clear they also own means and methods to tie back/seal to AVB and own compatible product with AVB system.	FBI	
53				Architectural	Walk-ins will likely have slab depression. Finish floor in kitchen and walk-ins is calling for epoxy. Should include detail for walk-ins that shows there will need to be some type of product required to build up floor in walks in before epoxy install. Experienced this on another project. Ended up using an Ardex floor filler/self leveling product prior to epoxy application.	FBI	
54	07 54 00			Architectural	Consider adding Rhinobond system: Cold weather performance — RhinoBond uses electromagnetic induction welding to bond the membrane directly to the insulation plates below, eliminating the need for adhesives that are temperature-sensitive	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
55		K12/A3.50		Architectural	General for all roof penetrations: Recommend including spray foam insulation at underside of roof deck for all roof penetrations to prevent air loss. if so, need to add at all details and tag to drywall/carpenter. Provide extents and thickness	FBI	
56		A3.50		Architectural	Details K7,K12 and K17 - All blocking should be continuous off roof dens deck layer to underside of what is being supported, or a knee wall built, which should be clearly noted.	FBI	
57		A3.50		Architectural	K23 - Confim steel curb leveling frame shoujld be HD galvanized	FBI	
58		A7.53		Architectural	Elevator sill angle - Angle with studs is typically detailed so the angle is attached to the slab edge form.	FBI	
59		General		Architectural	Provide location dimensions to all borrowed lites, marker boards, tack boards, etc on interior elevations.Please coordinate with all outlets and switches to minimize issues in the field.	FBI	
60		A9.22		Architectural	Rm 256 - Floor type does not seem to exist in legend	FBI	
61		General		Architectural	Provide folding partition heights and dimensions	FBI	
62		General		Architectural	In the gym please provide dimensional locations to shot clocks, scoreboards and other equipment and devices.	FBI	
Electrical/Low Voltage/Fire Alarm							
63		E3.01	E3.00, E3.02, E3.04	Electrical	Main service/switchboard configuration (MSB vs MSB2) and ratings are inconsistent between the one-line, electrical room plan, and switchboard schedule. - E3.01 shows two separate main switchboards labeled “MSB” and “MSB2,” each shown as “2500A, 277/480V, 3Ø, 4WIRE.” - E3.00 Main Electrical Room plan shows a main switchboard labeled “MSB,” but “MSB2” is not explicitly identified on the room plan. - E3.02 includes a “SWITCHBOARD ‘MSB’ SCHEDULE” with header “3000A BUS” (277/480V, 3PHASE, 4W, 65 KAIC), which does not match the 2500A switchboard labeling shown on E3.01.	FBI	

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64	26 00 10	E4.11		Fire Alarm	Fire alarm drawings allow MC cable where concealed while the fire alarm specification requires conduit/raceway. - Primary location: E4.22 General Fire Alarm Note 4. - E4.11 General Fire Alarm Note 4 states MC cable is allowed where concealed. - E4.22 General Fire Alarm Note 4 states MC cable is allowed where concealed. - E4.31 General Fire Alarm Note 4 states MC cable is allowed where concealed. - Spec Section 2.16 states all wiring shall be installed in conduit or raceway.	FBI	
65		E2.31	260010, E0.01, T1.31, T2.01	Electrical	Automated lighting control system (ALCS) basis-of-design/manufacturer differs between drawings and specifications. - E0.03 “AUTOMATED LIGHTING CONTROL SYSTEM ONE-LINE DIAGRAM” notes basis-of-design as “WATTSTOPPER PLUS SYSTEM (w/ POLARIS 3D AND PCS SOFTWARE)” and depicts Wattstopper architecture/components. - Spec Section 2.18 “AUTOMATED LIGHTING CONTROL SYSTEM” describes a Crestron ZUM wired dimming/switching solution (ZUMNET/ ZUMLINK devices) and lists Crestron products (e.g., ZUMNET-JBOX, ZUMLINK-KP, ZUM-HUB4). - E0.03 notes list “LUTRON, N-LIGHT, CRESTRON” as acceptable manufacturers, but the diagram and labeled equipment remain Wattstopper-based.	FBI	
66		E3.03	230548, S1.21, S1.23	Electrical	Trapeze-mounted transformer support detail lacks buildable attachment/coordination information beyond a generic diagram and “confirm with structural engineer” note. - Detail 7/E3.03: shows “Building structure / Steel beam” and “Secure to beam,” but no connection/anchor type called out for attaching the (4) trapeze rods to the beam. - Detail 7/E3.03: indicates “Approved chain or steel wire to secure trapeze support from seismic deflection (typical for 4)” with no referenced seismic restraint detail/criteria for this suspended transformer condition. - Detail 7/E3.03: “Enclose bottom of transformer” note without any enclosure detail, dimensions, or coordination reference. - Detail 7/E3.03: “NOTE: CONFIRM WITH STRUCTURAL ENGINEER.”	FBI	
67		E3.06	A7.53, P1.01	Electrical	Elevator sump pump and control panel tags are inconsistent between schedule and detail on E3.06. - E3.06 Electrical Schedule of Plumbing Equipment lists “SP-1 ELEVATOR SUMP PUMP (SIMPLEX)” and control panel “SPCP-1.” - Detail 1/E3.06 labels the equipment as “ESP-1” and “ESCP-1.” - P1.01 identifies the elevator sump pump as “SP-1,” creating a three-sheet coordination conflict (P1.01 vs E3.06 schedule vs E3.06 detail).	FBI	
68		E3.06	P0.01	Electrical	Detail 3/E3.05 (Elevator Sump Pumps) cites wrong plumbing keynote for BMS connection. - Note reads “ALSO REFER TO PLUMBING SCHEDULE KEYNOTE #4 FOR CONNECTION TO BMS.” - E3.06 Plumbing Schedule Keynote #4 is GFCI breakers; BMS connection is Keynote #3.	FBI	
69		E0.04			Is there anything on site that the town wants to run future underground spare conduits for?		

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70		General Fire Alarm			Provide Knox box location approved by Fire Department		
Mechanical							
71		M1.11	A10.11, E3.04	Mechanical	Kiln exhaust for Art Storage/Kiln 116A not shown on M1.11 while electrical documents reference a kiln exhaust fan. - A10.11 shows Room 116A with two “KILN” equipment symbols. - E3.04 includes “KILN EXHAUST FAN TIE-IN DETAIL” (Ameco kiln and Skutt kiln). - M1.11 shows only general ductwork to 116A; no dedicated exhaust duct/hood/fan indicated.	FBI	
72		M1.32	A2.32	Mechanical	Large ductwork is routed within the footprint of low-ceiling areas shown on A2.32 without a section/clearance indication tying duct elevations to finished ceiling heights. - A2.32 Extended Learning 301B ceiling tag shows WD-1 at 8'-6". - M1.32 shows a large duct main labeled approximately 70"x34" routed through the same Extended Learning 301B area.	FBI	
73		M0.11	230548, A3.50	Mechanical	Rooftop curb/vibration curb insulation and lining requirements conflict between mechanical curb details (M0.11), architectural roof curb details (A3.50), and Spec 23 05 48 roof curb requirements. - M0.11 Rooftop Curb Detail A: “6" UNFACED MINERAL WOOL INSUL. THROUGHOUT ENTIRE CURB” and “(2) LAYERS 5/8" GYPSUM BOARD SIMILAR TO DUROCK LAYERED THROUGHOUT ENTIRE CURB.” - M0.11 Spring Roof Curb Detail – Detail B: “6" UNFACED MINERAL WOOL INSULATION (BY HVAC)” and “2 LAYERS 5/8" BOARD SIMILAR TO DUROCK (BY HVAC),” plus “2" RIGID BOARD INSULATION (BY ROOF CURB MANUF.).” - A3.50 K23 (roof termination at mechanical vibration curb): “2" INSULATION, BY SC-HVAC” shown at the curb interior face (no 6" mineral wool / 2x 5/8" board assembly shown). - A3.50 K17 (roof termination at mechanical curb): curb called out as “INSULATED CURB: BY SC-HVAC” without matching the M0.11 insulation/lining build-up. - Spec 23 05 48, 2.02(A).26 (Roof Curb) requires factory-installed “1.7 inch thick R-12 foam insulation” for spring curbs and a sound barrier package supporting “two layers of 1/2 inch concrete board,” differing from M0.11’s 6" mineral wool and “(2) layers 5/8" gypsum board similar to Durock.”	FBI	
74		M1.11	M1.21, M1.31	Mechanical	Level 1 Area A SA/RA risers labeled “48"x20" S.A. & R.A. DUCTS UP” do not match the duct sizes shown for the same risers on upper-level plans. - M1.11 shows two riser pairs called out only by a shared note “48"x20" S.A. & R.A. DUCTS UP” (one near Music/Chorus 106A/corridor 105 and one near ELL 146/Extended Learning 131E). - M1.21 shows both ducts at the corresponding riser pairs explicitly labeled 48"x20". - M1.31 shows both ducts at the corresponding riser pairs explicitly labeled 50"x34". - No transition/riser detail indicates where the 48"x20" changes to 50"x34" within the vertical run. Could mechanical engineer clearly annotate the riser size at each floor?	FBI	

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75		M1.12	A2.12, S1.43	Mechanical	Large ducts routed through low-ceiling admin/servery areas without any duct elevation/offset info (Level 1 Area B). The ceiling north of the radius soffit will need to be lowered to allow space for the mains from the RTU space to pass through. - Ramp 169A/Cafeteria perimeter shows 38"x26" duct segment; A2.12 shows WD-2 ceiling 12'-4"/VARIES at Ramp 169A and GYP soffit 10'-0" at Servery perimeter.	FBI	
76		M1.12	A2.12, S1.43	Mechanical	Admin/Health suite shows 34"x18" SA/RA duct ups and large 26"x10" vertical duct serving Corridor 191/Medical 190/Conference 188 with no elevation callouts. There looks to be 2’4” of ceiling cavity space which will be tight where the duct drops into the 1st floor	FBI	
77		M2.11	A2.11, M1.11	Mechanical	Corridor 102 has medium pressure duct that is 12” deep (16” with wrap), 6” HW/CHW (9” with wrap), and a smattering of low pressure duct with VAVs with sound attenuators & clearance requirements, 4 FP mains from 2.5” to 6”, a 3” DCW, 2” DHW, no to mention lighting, space for sprinkler heads, electric, LV, etc….which all need to fit within a ceiling cavity of 2’6 (2’4” with spray fireproofing). I think this ceiling will need to be adjusted to allow sufficient space.	FBI	
78	23 00 10	M0.15		Mechanical	Roof penetration responsibility note conflicts with HVAC spec cross-reference for roof flashing. - Duct Penetration Through Roof Detail note states "COUNTERFLASHING BY HVAC CONTRACTOR". - HVAC spec Section 23 00 10 lists roof flashing of vents/curbs under roofing sections ("refer to Section 07 54 00 & 07 62 00").	FBI	
79		General			RTU curb uplift engineering/design to be provided by design or delegated?	FBI	
Plumbing							
80		P1.00A	312113, P1.00B, P1.41	Plumbing	6" radon pipe/riser on P1.00A conflicts with Spec 31 21 13 requiring 4" sub-slab ventilation pipe and 4" vertical risers. - P1.00A legend: (1) “6" RADON PIPE” and (2) “6" PIPE RISER FOR RADON VENTILATION UP.” - Spec 31 21 13 2.01.B.1: “4-inch solid and perforated…PVC pipe.” - Spec 31 21 13 2.01.C.1: vertical riser pipe “4-inch diameter solid PVC pipe.” - P1.41 shows “6" VTR” terminations corresponding to the radon risers.	FBI	
81		P1.41	312113, P1.00B	Plumbing	Radon/sub-slab ventilation risers shown on P1.00B are not shown terminating through the roof or identified as roof penetrations on P1.41. - P1.00B includes multiple callouts "2" for "6\" PIPE RISER FOR RADON VENTILATION UP" distributed across Area B. - P1.41 roof plan shows roof penetrations labeled as standard "4\" VTR" and "4\" KVTR" with no radon/SSV-specific labels. - Spec 31 21 13 §3.02.D requires roof-top ventilation termination support frames at each roof penetration/vent termination as indicated on Drawings.	FBI	

Number	Spec Section	Sheet Number	Secondary Sheets	Discipline	Item Description	Author	A/E Response
82		P1.21	M2.21	Plumbing	Ceiling space congestion risk: major plumbing risers/branches are located in the same corridor/toilet-core zones as large hydronic mains, with no section/elevation establishing required clearances. - P1.21: large risers at toilet cores (e.g., "6" ST UP & DN" and sanitary/vent stack callouts). - M2.21: multiple large CHWS/CHWR/HWS/HWR mains/riser groups routed through the same corridor zones.	FBI	
83		P1.02	C4.01, P1.33	Plumbing	Grease interceptor (GI) connection setting (inverts/pipe sizes) is undefined between plumbing and civil. - P1.33 shows 4" KW leaving kitchen and directs connection to grease interceptor on civil drawings. - P1.02 shows grease interceptor with 4" KW inlet but no inlet/outlet invert elevations; outlet pipe not sized; note “REFER TO DWG P1.33”. - C4.01 labels grease trap/sewer connection “SEE MEP PLANS” and does not show grease-trap inverts.	FBI	

MASSACHUSETTS
Department of Elementary
and Secondary Education
Patrick Tutwiler | Interim Commissioner

May 16, 2025

Mike McGurl
Director of Capital Planning
Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109

Dear Director McGurl:

We have reviewed the documentation that was submitted by the Wilmington Public Schools on May 12, 2025 for the construction project at Wilmington Elementary School. We have done so in accordance with M.G.L. chapter 70B, section 6(6), which instructs us to certify "...that adequate provisions have been made in the school project for children with disabilities, as defined in section 1 of chapter 71B...".

We are satisfied with the district's proposal and believe their special education plan will provide the community with an opportunity to serve its special education students well. Because of the inclusion of several "calming rooms," DESE requests that the district notes the attached advisory, which represents the Commonwealth's latest guidance on the use of quiet/sensory/de-escalation rooms.

The Massachusetts Department of Elementary and Secondary Education certifies that this school project has been planned to adequately provide appropriate space to serve the programs and school populations referenced in M.G.L. chapter 70B, section 6(6) noted above.

Sincerely,

Matthew J. Deninger
DESE designee on the MSBA Board of Directors

Cc: Vani Rastogi-Kelly, Director, Public School Monitoring, DESE
Amy Paulin, Assistant Director, Public School Monitoring, DESE
Andrew MacKenzie, Supervisor, Public School Monitoring, DESE
Katie DeCristofaro, Capital Program Manager, MSBA
Veatriki Dagkalakou, Project Manager, MSBA
Elena Seiti, Senior Capital Program Manager, MSBA

Allison Sullivan, Senior Project Coordinator, MSBA
Robin McElaney, Senior Project Coordinator, MSBA
Claire Lerner, Project Coordinator, MSBA

APPENDIX A

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

RECEIVED
JUN 16 2025
MASS. HIST. COMM
RC. 76918

PROJECT NOTIFICATION FORM

After review of MHC files and the materials you submitted, it has been determined that this project is unlikely to affect significant historic or archaeological resources.

RC. 76918

7/9/25

Joshua Dorin
Preservation Planner
Massachusetts Historical Commission

Date

Project Name: Wilmington Wildwood Elementary School

Location / Address: 320 Salem Street

City / Town: Wilmington, MA 01887

Project Proponent

Name: Dore + Whittier Architects

Address: 260 Merrimac St. Bldg. 7, Floor 2

City/Town/Zip/Telephone: Newburyport MA 01950

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	Type of License or funding (specify)
Massachusetts School Building Authority (MSBA)	Facility Construction Grant

Project Description (narrative):

The project will seek to develop a new Prekindergarten - Grade 5 Elementary School to address the school needs in the District.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

A new building project will include complete demolition of the existing building.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

No the project will not include rehabilitation of the existing building.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

The proposed project will include all new construction. Refer to the attached plans.

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

No known to exist within the project's area of potential impact.

What is the total acreage of the project area?

Woodland	0.738 acres	Productive Resources:	
Wetland	0.024 acres	Agriculture	acres
Floodplain	0 acres	Forestry	acres
Open space	4.147 acres	Mining/Extraction	acres
Developed	7.236 acres	Total Project Acreage	12.145 acres

What is the acreage of the proposed new construction? Varies, see attached acres

What is the present land use of the project area?

The current site includes one (1) elementary school serving grades 4-5. The site also includes parking, access drives, and athletic fields.

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

See attached.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: Lee Dore Digitally signed by Lee Dore DN: C=US, E=ldore@doreandwhitler.com, OU="Dore + Whitler", CN=Lee Dore Date: 2025.06.10 14:28:35-04'00' Date:

Name: Lee P. Dore

Address: 260 Merrimac Street, Floor 2

City/Town/Zip: Newburyport MA 01950

Telephone: (978)499 2999

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

OFFICE OF THE INSPECTOR GENERAL
MASSACHUSETTS

JEFFREY S. SHAPIRO
Inspector General

January 13, 2025

Via Electronic Mail

R. Eric Slagle, Town Manager
Town of Wilmington
121 Glen Road, Room 111
Wilmington, MA 01887
eslagle@wilmingtonma.gov

Re: Application to Use the Construction Management At-Risk Alternative Delivery Method for the Wilmington Wildwood Elementary School Project

Dear Mr. Slagle:

Good day.

On December 3, 2024, pursuant to Chapter 149A of the Massachusetts General Laws and 945 CMR 2.00, the town of Wilmington (Wilmington) submitted to the Office of the Inspector General (OIG) an application to use the construction management at-risk (CM at-risk) alternative delivery method for the Wildwood Elementary School consolidation project.

Based on all the information provided, Wilmington has met the statutory requirements for using the CM at-risk delivery method for the project. Accordingly, the OIG is issuing this notice to proceed to use the CM at-risk delivery method as specified in M.G.L. c. 149A, §§ 1-13. However, please note that the initial application was missing required responses and exhibited a flawed understanding of the CM at-risk delivery method. It is incumbent upon Wilmington and the project team to fully comprehend the statutory requirements in order to execute the project in accordance with the law.

The OIG reminds Wilmington that it must properly dispose of any surplus equipment and supplies from the current schools using Chapter 30B of the Massachusetts General Laws. Please review a recent OIG letter detailing a school district's failure to follow Chapter 30B during a renovation project.

This approval is conditioned on Wilmington using a CM at-risk firm that the Division of Capital Asset Management and Maintenance (DCAMM) has certified, as well as DCAMM-certified trade contractors. Therefore, Wilmington must require each CM at-risk firm to supply both a certificate of eligibility and an update statement during both the prequalification phase and the technical proposal phase of the selection process. In addition, Wilmington must require each trade contractor to supply a certificate of eligibility and an update statement during the prequalification phase and again at the bidding phase of the selection process. Wilmington must reject as invalid all contractors' statements of qualifications, proposals and bids that do not provide such certificates of eligibility or update statements.

If, during the course of the project, Wilmington changes its Owner's Project Manager (OPM) or Designer, please submit information about the new OPM or Designer to the OIG. Also, if Wilmington decides not to proceed with the CM at-risk delivery method for any reason, please notify the OIG within 30 days of that decision.

As a condition of the approval, Wilmington is required to submit the following project milestone information to the OIG.

1. Selected CM at-risk firm,
2. Date the initial cost-plus CM at-risk contract was signed,
3. Date physical on-site work started,
4. Date the guaranteed maximum price (GMP) was set,
5. Percent of design document completion when the GMP was set,
6. Date of substantial completion, and
7. Final total cost of the project.

At each milestone, Wilmington must use this Form to submit the information.

Wilmington must also provide the OIG with a final report within 70 days of project completion. The final report must discuss Wilmington's experience using CM at-risk, the final project schedule, budget and final actual costs. Wilmington must use this Form to submit the final project report.

The project milestone report and final project report forms are available on the OIG's website.

All correspondence regarding this project may be sent to igo.municipal@mass.gov.

Please feel free to contact Kerri-Anne Hollingshead, Senior Policy Analyst at Kerri-Anne.Hollingshead@mass.gov or 617-722-8871 or me at Jeffrey.S.Shapiro@mass.gov or 617-722-8806 if you have any questions or concerns regarding this building process approval.

Sincerely,

Jeffrey S. Shapiro, Esq., CIG
Inspector General

cc (by email):

Glenn Brand, Ed.D., Superintendent of Schools, Town of Wilmington
Gregory B. Bendel, Select Board Chair, Town of Wilmington
David A. Ragsdale, School Committee, Town of Wilmington
Nicholas Golden, School Committee, Town of Wilmington
Stephen Turner, School Committee, Town of Wilmington

Julie Leduc, Director of OPM Services, Symmes, Maini and McKee Associates
Sarah Traniello, Assistant Project Manager, Symmes, Maini and McKee Associates
Joshua Giles, Director, Government Outreach and Public Policy, OIG
Kerri-Anne Hollinghead, Senior Policy Analyst, Government Outreach and Public Policy, OIG
Nataliya Urciuoli, Senior Executive Assistant, OIG

Date:	3/10/2025
District:	Wilmington School District
Project Name:	Wildwood Early Childhood Center - PK-5 Elementary School Project
MSBA Project ID:	

SITE PERMIT	REQUIREMENTS	FILING DATE	EXPECTED RESPONSE DATE	TRIGGER - YES/NO	AGENCY COMMENTS/SUGGESTED ACTIONS	DESIGNER RESPONSES
CONCOM	NOI	3/11/2026	5/6/2026			Meeting with Conservation identified on-site wetland area as jurisdictional.
MHC	PNF	6/16/2025	7/9/2025	No	It has been determined that this project is unlikely to affect significant historic or archaeological resources.	Completed
MA-DOT	PNF with MHC	6/16/2025	7/9/2025	No	See MHC comment	See MHC comment
MA-DEP	NOI	3/11/2026	5/6/2026			Meeting with Conservation identified on-site wetland area as jurisdictional.
NHESP	NOI	12/12/2025	3/13/2026			This project does not require a NHESP permit.
MEPA	PNF with MHC	6/16/2025	7/9/2025	No	See MHC comment	See MHC comment

Instructions to complete the permit tracking table:

1. Enter the date the PNF/NOI was filed.
2. Enter the date when the response is expected.
3. If a response is received from CONCOM/MHC/MA-DOT/MA-DEP/NHESP/MEPA, mention 'YES' in the 'trigger' column. Summarize the proposed/requested/mandated action by the agencies in a few words and corresponding Designer responses in the appropriate column. Please include the full response as an attachment with this submittal for MSBA's reference.
4. If there is no response by the expected response date, mention 'NO' in the 'trigger' column.
5. Indicate “Not Applicable” (where appropriate) in the "trigger" column and describe why each item is not applicable.
6. Describe the status of the following approvals. Any status updates/concerns/notes can be mentioned in the 'Designer Responses' column.
7. Make sure to attach the sheet with every submittal for the project to track any changes.
8. Provide the status of any other state or federal approval not listed above (the following list is not a comprehensive itemization of required state approvals; other requirements may apply, and some items listed below may not be applicable to this project).
9. Provide a copy of the PNF, NOI, appropriate application forms and/or approval letters where applicable.

Architect and Engineer Certification

By signing this certification, I hereby certify that all of the information provided in this "Permit Tracking Table" is true, complete and accurate to the best of my knowledge and belief.

Name of Architecture Firm: Dore & Whittier Architects, Inc.

Name of Architect: Lee Dore

Signature of Architect: Lee Dore Digitally signed by Lee Dore DN: C=US, E=lpdore@doreandwhittier.com, OU="Dore + Whittier", CN=Lee Dore Date: 2026.03.12 07:45:26-04'00'

Date: 6/9/2025

By signing this certification, I hereby certify that all of the information provided in this "Permit Tracking Table" is true, complete and accurate to the best of my knowledge and belief.

Name of Engineering Firm: CDW Consultants, Inc.

Name of Engineer: Eric Wilhelmsen

Signature of Engineer: Digitally signed by Eric Wilhelmsen Date: 2026.03.11 16:46:15-04'00'

Date: 6/9/2025

Use this MEPA guideline checklist to check any aspects that apply to the project, to understand if an ENF/EIR, or any additional review from MEPA may be required.

MEPA Trigger	(a) ENF and Mandatory EIR. (Triggered by any of the items in this column)		(b) ENF and Other MEPA Review if the Secretary So Requires. (Triggered by any of the items in this column)	
DGA/ ENVIRONMENTAL JUSTICE PROTOCOLS	1. If your site has an Environmental Justice population within a 1-mile DGA (Designated Geographical Area) while the project DOES NOT (a) exceed any Air threshold at 301 CMR 11.03(8) OR; (b) generate 150 or more New ADT(Average Daily Traffic) of diesel vehicle traffic over a duration of 1 year (excluding public transit trips) 2. If your site has an Environmental Justice population within a 5-mile DGA (Designated Geographical Area) while the project (a) exceeds any Air threshold at 301 CMR 11.03(8) OR; (b) generates 150 or more New ADT(Average Daily Traffic) of diesel vehicle traffic over a duration of 1 year (excluding public transit trips)	☐ ☐ ☐ ☐	None	
LAND	1. Direct alteration of 50 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices. 2. Creation of ten or more acres of impervious area.	☐ ☐	1. Direct alteration of 25 or more acres of land, unless the Project is consistent with an approved conservation farm plan or forest cutting plan or other similar generally accepted agricultural or forestry practices. 2. Creation of five or more acres of impervious area. 3. Disposition or change in use of land or an interest in land subject to Article 97 of the Amendments to the Constitution of the Commonwealth, unless the Secretary waives or 4. Conversion of land in active agricultural use to nonagricultural use, provided the land includes soils classified as prime, state-important or unique by the United States Department 5. Release of an interest in land held for conservation, preservation or agricultural or watershed preservation purposes, unless the Secretary waives or modifies the replacement 6. Approval in accordance with M.G.L. c. 121A of a New urban redevelopment project or a fundamental change in an approved urban redevelopment project, provided that the Project 7. Approval in accordance with M.G.L. c. 121B of a New urban renewal plan or a major modification of an existing urban renewal plan.	☐ ☐ ☐ ☐ ☐ ☐ ☐
STATE-LISTED SPECIES UNDER M.G.L. c. 131A (Massachusetts Endangered Species Act).	None		1. Alteration of designated significant habitat. 2. Greater than two acres of disturbance of designated priority habitat, as defined in 321 CMR 10.02, that results in a take of a state-listed endangered or threatened species or species of special concern.	☐ ☐
WETLANDS, WATERWAYS AND TIDELANDS.	1. Provided that a Permit is required: (a) alteration of one or more acres of salt marsh or bordering vegetating wetlands; or (b) alteration of ten or more acres of any other wetlands. 2. Alteration requiring a variance in accordance with the Wetlands Protection Act. 3. Construction of a New dam. 4. Structural alteration of an existing dam that causes an Expansion of 20% or any decrease in impoundment Capacity. 5. Provided that a Chapter 91 License is required, New non-water dependent use or Expansion of an existing non-water dependent structure, provided the use or structure occupies one or more acres of waterways or tidelands.	☐ ☐ ☐ ☐ ☐ ☐	1. Provided that a Permit is required: (a) alteration of coastal dune, barrier beach or coastal bank; (b) alteration of 500 or more linear feet of bank along a fish run or inland bank; (c) alteration of 1,000 or more sf of salt marsh or outstanding resource waters; (d) alteration of 5,000 or more sf of bordering or isolated vegetated wetlands; (e) New fill or structure or Expansion of existing fill or structure, except a pile- supported structure, in a velocity zone or regulatory floodway; or (f) alteration of ½ or more acres of any other wetlands.	☐ ☐ ☐ ☐ ☐ ☐

			2. Construction of a New roadway or bridge providing access to a barrier beach or a New utility line providing service to a structure on a barrier beach. 3. Dredging of 10,000 or more cy of material. 4. Disposal of 10,000 or more cy of dredged material, unless at a designated in-water disposal site. 5. Provided that a Chapter 91 License is required, New or existing unlicensed non-water dependent use of waterways or tidelands, unless the Project is an overhead utility line, a 6. Construction, reconstruction or Expansion of an existing solid fill structure of 1,000 or more sf base area or of a pile-supported or bottom-anchored structure of 2,000 or more sf base area, except a seasonal, pile-held or bottom-anchored float, provided the structure occupies flowed tidelands or other waterways.	☐ ☐ ☐ ☐ ☐
WATER	1. New withdrawal or Expansion in withdrawal of: (a) 2,500,000 or more gpd from a surface water source; or (b) 1,500,000 or more gpd from a groundwater source. 2. New interbasin transfer of water of 1,000,000 or more gpd or any amount determined significant by the Water Resources Commission. 3. Construction of one or more New water mains ten or more miles in length. 4. Provided that the Project is undertaken by an Agency, New water service to a municipality or water district across a municipal boundary through New or existing pipelines, unless a	☐ ☐ ☐ ☐ ☐	1. New withdrawal or Expansion in withdrawal of 100,000 or more gpd from a water source that requires New construction for the withdrawal. 2. New withdrawal or Expansion in withdrawal of 500,000 or more gpd from a water supply system above the lesser of current system-wide authorized withdrawal volume or three- 3. Construction of one or more New water mains five or more miles in length. 4. Construction of a New drinking water treatment plant with a Capacity of 1,000,000 or more gpd. 5. Expansion of an existing drinking water treatment plant by the greater of 1,000,000 gpd or 10% of existing Capacity. 6. Alteration requiring a variance in accordance with the Watershed Protection Act, unless the Project consists solely of one single family dwelling. 7. Non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities.	☐ ☐ ☐ ☐ ☐ ☐ ☐
WASTEWATER	1. Construction of a New wastewater treatment and/or disposal facility with a Capacity of 2,500,000 or more gpd. 2. New interbasin transfer of wastewater of 1,000,000 or more gpd or any amount determined significant by the Water Resource Commission. 3. Construction of one or more New sewer mains ten or more miles in length. 4. Provided that the Project is undertaken by an Agency, New sewer service to a municipality or sewer district across a municipal boundary through New or existing pipelines, unless an 5. New discharge or Expansion in discharge of any amount of sewage, industrial waste water or untreated stormwater directly to an outstanding resource water. 6. New Capacity or Expansion in Capacity for storage, treatment, processing, combustion or disposal of 150 or more wet tpd of sewage sludge, sludge ash, grit, screenings, or other	☐ ☐ ☐ ☐ ☐ ☐	1. Construction of a New wastewater treatment and/or disposal facility with a Capacity of 100,000 or more gpd. 2. Expansion of an existing wastewater treatment and/or disposal facility by the greater of 100,000 gpd or 10% of existing Capacity. 3. Construction of one or more New sewer mains: (a) that will result in an Expansion in the flow to a wastewater treatment and/or disposal facility by 10% of existing Capacity; or (b) five or more miles in length. 4. New discharge or Expansion in discharge: (a) to a sewer system of 100,000 or more gpd of sewage, industrial waste water or untreated stormwater; (b) to a surface water of: i. 100,000 or more gpd of sewage; ii. 20,000 or more gpd of industrial waste water; or iii. any amount of sewage, industrial waste water or untreated stormwater requiring a variance from applicable water quality regulations; or (c) to groundwater of: i. 10,000 or more gpd of sewage within an area, zone or district established, delineated or identified as necessary or appropriate to protect a public drinking water supply, an ii. 50,000 or more gpd of sewage within any other area; iii. 20,000 or more gpd of industrial waste water; or iv. any amount of sewage, industrial waste water or untreated stormwater requiring approval by the Department of Environmental Protection of a variance from Title 5 of 5. New Capacity or Expansion in Capacity for:	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

			(a) combustion or disposal of any amount of sewage sludge, sludge ash, grit, screenings, or other sewage sludge residual materials; or (b) storage, treatment, or processing of 50 or more wet tpd of sewage sludge or sewage	☐ ☐
TRANSPORTATION.	1. Unless the Project consists solely of an internal or on-site roadway or is located entirely on the site of a non-roadway Project: (a) construction of a New roadway two or more miles in length; or (b) widening of an existing roadway by one or more travel lanes for two or more miles. 2. New interchange on a completed limited access highway. 3. Construction of a New airport. 4. Construction of a New runway or terminal at an existing airport. 5. Construction of a New rail or rapid transit line along a New, unused or abandoned right-of-way for transportation of passengers or freight (not including sidings, spurs or other lines 6. Generation of 3,000 or more New adt on roadways providing access to a single location. 7. Construction of 1,000 or more New parking spaces at a single location.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	1. Unless the Project consists solely of an internal or on-site roadway or is located entirely on the site of a non-roadway Project: (a) construction of a New roadway one-quarter or more miles in length; or (b) widening of an existing roadway by four or more feet for one-half or more miles, excluding widening to add bicycle or pedestrian accomodations. 2. Construction, widening or maintenance of a roadway or its right-of-way that will: (a) alter the bank or terrain located ten more feet from the existing roadway for one- half or more miles, unless necessary to install a structure or equipment; (b) cut five or more living public shade trees of 14 or more inches in diameter at breast height; or (c) eliminate 300 or more feet of stone wall. 3. Expansion of an existing runway at an airport. 4. Construction of a New taxiway at an airport. 5. Expansion of an existing taxiway at Logan Airport. 6. Expansion of an existing terminal at Logan Airport by 100,000 or more sf. 7. Expansion of an existing terminal at any other airport by 25,000 or more sf. 8. Construction of New or Expansion of existing air cargo buildings at an airport by 100,000 or more sf. 9. Conversion of a military airport to a non-military airport. 10. Construction of a New rail or rapid transit line for transportation of passengers or freight. 11. Discontinuation of passenger or freight service along a rail or rapid transit line. 12. Abandonment of a substantially intact rail or rapid transit right-of-way. 13. Generation of 2,000 or more New adt on roadways providing access to a single location. 14. Generation of 1,000 or more New adt on roadways providing access to a single location and construction of 150 or more New parking spaces at a single location. 15. Construction of 300 or more New parking spaces at a single location.	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
ENERGY.	1. Construction of a New electric generating facility with a Capacity of 100 or more MW. 2. Expansion of an existing electric generating facility by 100 or more MW. 3. Construction of a New fuel pipeline ten or more miles in length. 4. Construction of electric transmission lines with a Capacity of 230 or more kv, provided the transmission lines are five or more miles in length along New, unused or abandoned right	☐ ☐ ☐ ☐	1. Construction of a New electric generating facility with a Capacity of 25 or more MW. 2. Expansion of an existing electric generating facility by 25 or more MW. 3. Construction of a New fuel pipeline five or more miles in length. 4. Construction of electric transmission lines with a Capacity of 69 or more kv, provided the transmission lines are one or more miles in length along New, unused or abandoned right	☐ ☐ ☐ ☐
AIR.	1. Construction of a New Stationary Source with federal potential emissions, after construction and the imposition of required controls, of: 250 tpy of any criteria air pollutant; 40 tpy of any HAP; 100 tpy of any combination of HAPs; or 100,000 tpy of GHGs based on CO2 Equivalent.	☐	1. Construction of a New Stationary Source with federal potential emissions, after construction and the imposition of required controls, of: 100 tpy of PM10, PM 2.5, CO, lead or SO2; 50 tpy of VOC or NOx; 10 tpy of any HAP; or 25 tpy of any combination of HAPs.	☐

	2. Modification of an existing Stationary Source with federal potential emissions that collectively will result, after construction and the imposition of required controls, of 75,000 tpy of GHGs based on CO2 Equivalent.	☐	2. Modification of an existing Stationary Source resulting in a "significant net increase" in actual emissions, provided that the stationary source or facility is major for the pollutant. For purposes of this threshold, a "significant net increase" in actual emissions shall mean an increase in emissions of: 15 tpy of PM10; 10 tpy of PM 2.5; 100 tpy of CO; 40 tpy of SO2; 25 tpy of VOC or NOx; 0.6 tpy of lead.	☐
SOLID AND HAZARDOUS WASTE.	1. New Capacity or Expansion in Capacity of 150 or more tpd for storage, treatment, processing, combustion or disposal of solid waste, unless the Project is a transfer station, is an Expansion of an existing facility within a validly site assigned area for the proposed use, or is exempt from site assignment requirements.	☐	1. New Capacity or Expansion in Capacity for combustion or disposal of any quantity of solid waste, or storage, treatment or processing of 50 or more tpd of solid waste, unless the Project is exempt from site assignment requirements. 2. Provided that a Permit is required in accordance with M.G.L. c. 21D, New Capacity or Expansion in Capacity for the storage, recycling, treatment or disposal of hazardous waste.	☐ ☐
HISTORICAL AND ARCHAEOLOGICAL RESOURCES.	None		1. demolition of all or any exterior part of any Historic Structure listed in or located in any Historic District listed in the State Register of Historic Places or the Inventory of Historic and 2. destruction of all or any part of any Archaeological Site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth.	☐ ☐
AREAS OF CRITICAL ENVIRONMENTAL CONCERN.	None		1. Any Project of ½ or more acres within a designated ACEC, unless the Project consists solely of one single family dwelling.	☐
REGULATIONS.	None		Promulgation of New or revised regulations, of which a primary purpose is protecting against Damage to the Environment, that significantly reduce: 1. standards for environmental protection; . 2.opportunities for public participation in permitting or other review processes; or 3. public access to information generated or provided in accordance with the regulations.	☐ ☐ ☐

Architect and Engineer Certification

By signing this certification, I hereby certify that all of the information provided in this "MEPA Trigger Checklist" is true, complete and accurate to the best of my knowledge and belief.

Dore & Whittier Architects, Inc.

Name of Architecture Firm

Lee Dore

Name of Architect

Lee Dore Digitally signed by Lee Dore DN: C=US, E=lpdore@doreandwhittier.com, OU="Dore + Whittier", CN=Lee Dore Date: 2026.03.12 10:48:19-04'00'

Signature of Architect

3/12/2026

Date

By signing this certification, I hereby certify that all of the information provided in this "MEPA Trigger Checklist" is true, complete and accurate to the best of my knowledge and belief.

CDW Consultants, Inc.

Name of Engineering Firm

Eric Wilhelmsen

Name of Engineer

Digitally signed by Eric Wilhelmsen Date: 2026.03.12 09:34:49-04'00'

Signature of Engineer

3/12/2026

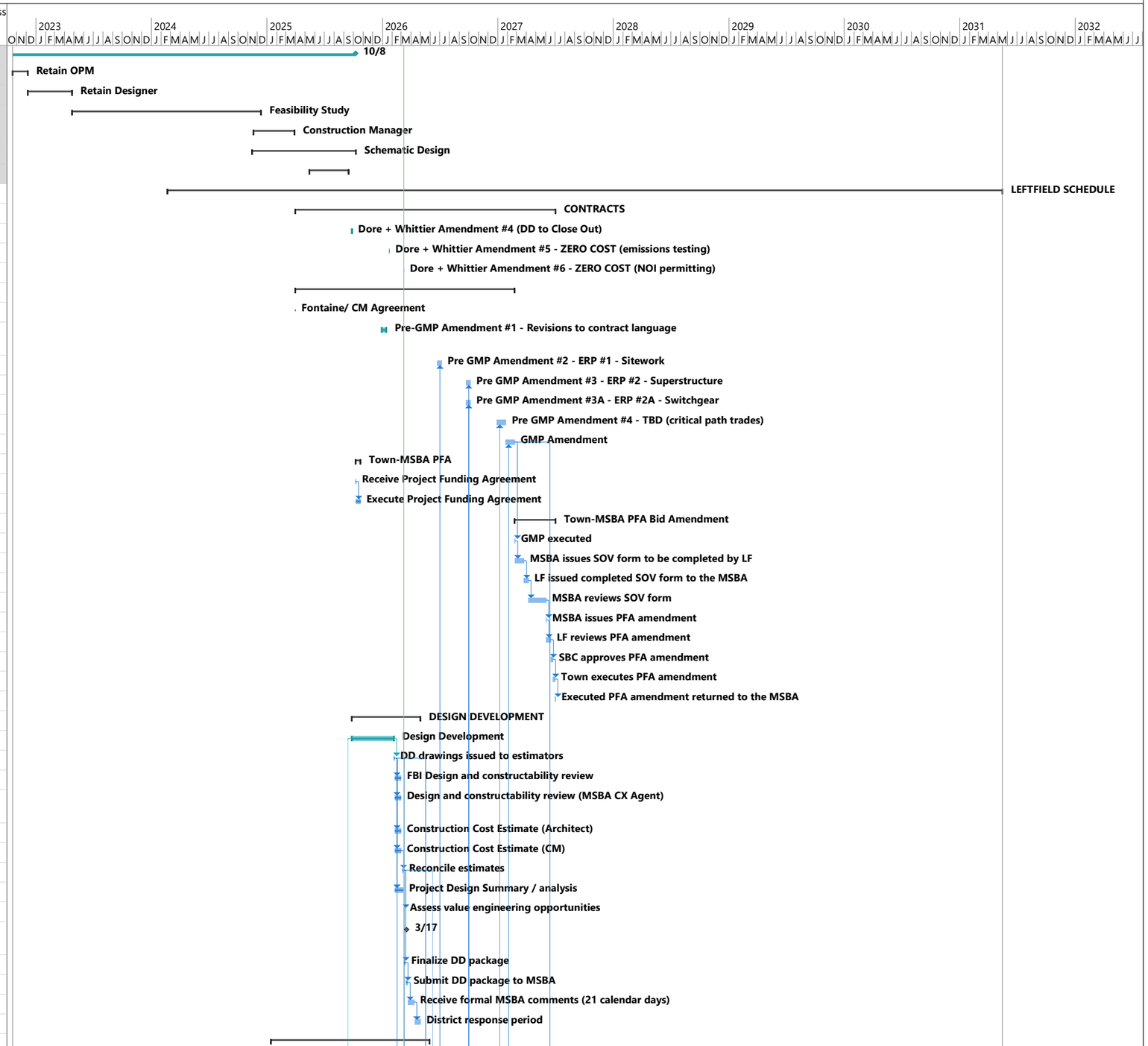
Date

LeftField
THE RIGHT CHOICE IN PROJECT MANAGEMENT

Wilmington Elementary School - DD Schedule

March 20, 2026

ID	Task Mod	% Comple	Task Name	Duration	Start	Finish	Predecess
1		**99%**	**SCHEDULE - PRE LEFTFIELD ENGAGEMENT**	**0 days?**	**Wed 10/8/25**	**Wed 10/8/25**	
2	✓	**100%**	**Retain OPM**	**34 days**	**Wed 10/19/22**	**Tue 12/6/22**	
9	✓	**100%**	**Retain Designer**	**100 days**	**Tue 12/6/22**	**Mon 4/24/23**	
19	✓	**100%**	**Feasibility Study**	**428 days**	**Tue 4/25/23**	**Fri 12/13/24**	
37	✓	**100%**	**Construction Manager**	**94 days**	**Tue 11/19/24**	**Fri 3/28/25**	
49		**99%**	**Schematic Design**	**235 days**	**Thu 11/14/24**	**Wed 10/8/25**	
62	✓	**100%**	**Project Scope & Budget**	**88 days**	**Thu 5/15/25**	**Tue 9/16/25**	
71		**6%**	**LEFTFIELD SCHEDULE**	**1887 days?**	**Wed 2/21/24**	**Thu 5/15/31**	
72		**13%**	**CONTRACTS**	**589 days**	**Mon 3/31/25**	**Thu 7/1/27**	
73	✓	100%	Dore + Whittier Amendment #4 (DD to Close Out)	1 day	Fri 9/26/25	Fri 9/26/25	
74	✓	100%	Dore + Whittier Amendment #5 - ZERO COST (emissions testin	1 day	Thu 1/22/26	Thu 1/22/26	
75	✓	100%	Dore + Whittier Amendment #6 - ZERO COST (NOI permitting)	1 day	Mon 3/9/26	Mon 3/9/26	
76		**12%**	**Fontaine**	**496 days**	**Mon 3/31/25**	**Mon 2/22/27**	
77	✓	100%	Fontaine/ CM Agreement	1 day	Mon 3/31/25	Mon 3/31/25	
78		90%	Pre-GMP Amendment #1 - Revisions to contract language	10 days	Tue 12/30/25	Mon 1/12/26	
79		0%	Pre GMP Amendment #2 - ERP #1 - Sitework	10 days	Tue 6/23/26	Mon 7/6/26	212
80		0%	Pre GMP Amendment #3 - ERP #2 - Superstructure	10 days	Tue 9/22/26	Mon 10/5/26	216
81		0%	Pre GMP Amendment #3A - ERP #2A - Switchgear	10 days	Tue 9/22/26	Mon 10/5/26	220
82		0%	Pre GMP Amendment #4 - TBD (critical path trades)	20 days	Tue 12/29/26	Mon 1/25/27	225
83		0%	GMP Amendment	20 days	Tue 1/26/27	Mon 2/22/27	226
84	✓	**100%**	**Town-MSBA PFA**	**11 days**	**Wed 10/8/25**	**Wed 10/22/25**	
85	✓	100%	Receive Project Funding Agreement	1 day	Wed 10/8/25	Wed 10/8/25	
86	✓	100%	Execute Project Funding Agreement	10 days	Thu 10/9/25	Wed 10/22/25	85
87		**0%**	**Town-MSBA PFA Bid Amendment**	**93 days**	**Tue 2/23/27**	**Thu 7/1/27**	
88		0%	GMP executed	1 day	Tue 2/23/27	Tue 2/23/27	83
89		0%	MSBA issues SOV form to be completed by LF	20 days	Wed 2/24/27	Tue 3/23/27	88
90		0%	LF issued completed SOV form to the MSBA	10 days	Wed 3/24/27	Tue 4/6/27	89
91		0%	MSBA reviews SOV form	40 days	Wed 4/7/27	Tue 6/1/27	90
92		0%	MSBA issues PFA amendment	1 day	Wed 6/2/27	Wed 6/2/27	91
93		0%	LF reviews PFA amendment	10 days	Thu 6/3/27	Wed 6/16/27	92
94		0%	SBC approves PFA amendment	5 days	Thu 6/17/27	Wed 6/23/27	93
95		0%	Town executes PFA amendment	5 days	Thu 6/24/27	Wed 6/30/27	94
96		0%	Executed PFA amendment returned to the MSBA	1 day	Thu 7/1/27	Thu 7/1/27	95
97		**87%**	**DESIGN DEVELOPMENT**	**155 days**	**Fri 9/26/25**	**Thu 4/30/26**	
98	✓	100%	Design Development	95 days	Fri 9/26/25	Thu 2/5/26	
99	✓	100%	DD drawings issued to estimators	1 day	Fri 2/6/26	Fri 2/6/26	98
100	✓	100%	FBI Design and constructability review	15 days	Mon 2/9/26	Fri 2/27/26	99
101	✓	100%	Design and constructability review (MSBA CX Agent)	15 days	Mon 2/9/26	Fri 2/27/26	99
102	✓	100%	Construction Cost Estimate (Architect)	15 days	Mon 2/9/26	Fri 2/27/26	99
103	✓	100%	Construction Cost Estimate (CM)	15 days	Mon 2/9/26	Fri 2/27/26	99
104	✓	100%	Reconcile estimates	2 days	Thu 3/5/26	Fri 3/6/26	103
105	✓	100%	Project Design Summary / analysis	20 days	Mon 2/9/26	Fri 3/6/26	99
106	✓	100%	Assess value engineering opportunities	1 day	Mon 3/9/26	Mon 3/9/26	104
107	✓	100%	School Building Committee mtg (approve DD scope, sched and budget)	1 day	Tue 3/17/26	Tue 3/17/26	
108	✓	100%	Finalize DD package	5 days	Mon 3/9/26	Fri 3/13/26	104
109	✓	100%	Submit DD package to MSBA	5 days	Mon 3/16/26	Fri 3/20/26	108
110		0%	Receive formal MSBA comments (21 calendar days)	15 days	Mon 3/23/26	Fri 4/10/26	109
111		0%	District response period	14 days	Mon 4/13/26	Thu 4/30/26	110
112		**52%**	**MISC PROJECT APPROVALS**	**360 days**	**Mon 1/13/25**	**Fri 5/29/26**	

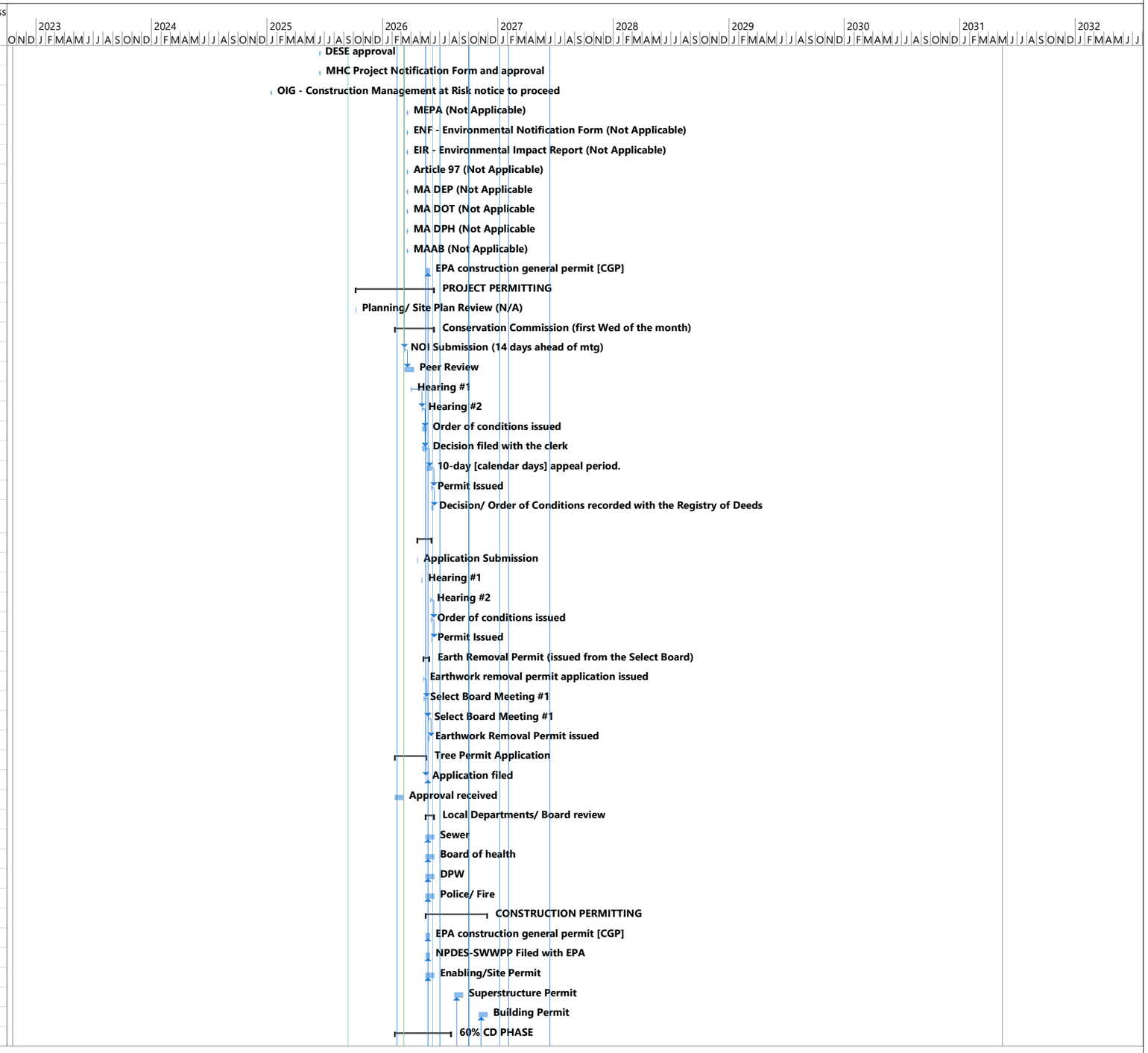


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Wilmington Elementary School - DD Schedule

March 20, 2026

ID	Task Mod	% Comple	Task Name	Duration	Start	Finish	Predecess
113		100%	DESE approval	1 day	Mon 6/16/25	Mon 6/16/25	
114		100%	MHC Project Notification Form and approval	1 day	Mon 6/16/25	Mon 6/16/25	
115		100%	OIG - Construction Management at Risk notice to proceed	1 day	Mon 1/13/25	Mon 1/13/25	
116		100%	MEPA (Not Applicable)	1 day	Fri 3/20/26	Fri 3/20/26	
117		100%	ENF - Environmental Notification Form (Not Applicable)	1 day	Fri 3/20/26	Fri 3/20/26	
118		100%	EIR - Environmental Impact Report (Not Applicable)	1 day	Fri 3/20/26	Fri 3/20/26	
119		100%	Article 97 (Not Applicable)	1 day	Fri 3/20/26	Fri 3/20/26	
120		100%	MA DEP (Not Applicable	1 day	Fri 3/20/26	Fri 3/20/26	
121		100%	MA DOT (Not Applicable	1 day	Fri 3/20/26	Fri 3/20/26	
122		100%	MA DPH (Not Applicable	1 day	Fri 3/20/26	Fri 3/20/26	
123		100%	MAAB (Not Applicable)	1 day	Fri 3/20/26	Fri 3/20/26	
124		0%	EPA construction general permit [CGP]	10 days	Mon 5/18/26	Fri 5/29/26	164
125		**0%**	**PROJECT PERMITTING**	**178 days**	**Wed 10/8/25**	**Fri 6/12/26**	
126		0%	Planning/ Site Plan Review (N/A)	1 day	Wed 10/8/25	Wed 10/8/25	
127		**0%**	**Conservation Commission (first Wed of the month)**	**90 days**	**Mon 2/9/26**	**Fri 6/12/26**	
128		0%	NOI Submission (14 days ahead of mtg)	1 day	Wed 3/11/26	Wed 3/11/26	99
129		0%	Peer Review	20 days	Thu 3/12/26	Wed 4/8/26	128
130		0%	Hearing #1	1 day	Wed 4/1/26	Wed 4/1/26	
131		0%	Hearing #2	1 day	Wed 5/6/26	Wed 5/6/26	130
132		0%	Order of conditions issued	10 days	Thu 5/7/26	Wed 5/20/26	131
133		0%	Decision filed with the clerk	10 days	Thu 5/7/26	Wed 5/20/26	131
134		0%	10-day [calendar days] appeal period.	10 days	Thu 5/21/26	Wed 6/3/26	133
135		0%	Permit Issued	1 day	Thu 6/4/26	Thu 6/4/26	134
136		0%	Decision/ Order of Conditions recorded with the Registry of Deeds	3 days	Fri 6/5/26	Tue 6/9/26	135
137		**0%**	**Special Permit Ground Water Protection District (Planning**	**33 days**	**Tue 4/21/26**	**Thu 6/4/26**	
138		0%	Application Submission	1 day	Tue 4/21/26	Tue 4/21/26	
139		0%	Hearing #1	1 day	Tue 5/5/26	Tue 5/5/26	
140		0%	Hearing #2	1 day	Tue 6/2/26	Tue 6/2/26	
141		0%	Order of conditions issued	1 day	Wed 6/3/26	Wed 6/3/26	140
142		0%	Permit Issued	1 day	Thu 6/4/26	Thu 6/4/26	141
143		**0%**	**Earth Removal Permit (issued from the Select Board)**	**14 days**	**Mon 5/11/26**	**Thu 5/28/26**	
144		0%	Earthwork removal permit application issued	1 day	Mon 5/11/26	Mon 5/11/26	
145		0%	Select Board Meeting #1	1 day	Tue 5/12/26	Tue 5/12/26	144
146		0%	Select Board Meeting #1	1 day	Mon 5/25/26	Mon 5/25/26	145
147		0%	Earthwork Removal Permit issued	3 days	Tue 5/26/26	Thu 5/28/26	146
148		**0%**	**Tree Permit Application**	**71 days**	**Mon 2/9/26**	**Mon 5/18/26**	
149		0%	Application filed	1 day	Mon 5/18/26	Mon 5/18/26	99,164
150		0%	Approval received	20 days	Mon 2/9/26	Fri 3/6/26	
151		**0%**	**Local Departments/ Board review**	**20 days**	**Mon 5/18/26**	**Fri 6/12/26**	
152		0%	Sewer	20 days	Mon 5/18/26	Fri 6/12/26	164
153		0%	Board of health	20 days	Mon 5/18/26	Fri 6/12/26	164
154		0%	DPW	20 days	Mon 5/18/26	Fri 6/12/26	164
155		0%	Police/ Fire	20 days	Mon 5/18/26	Fri 6/12/26	164
156		**0%**	**CONSTRUCTION PERMITTING**	**140 days**	**Mon 5/18/26**	**Fri 11/27/26**	
157		0%	EPA construction general permit [CGP]	10 days	Mon 5/18/26	Fri 5/29/26	164
158		0%	NPDES-SWPPP Filed with EPA	10 days	Mon 5/18/26	Fri 5/29/26	164
159		0%	Enabling/Site Permit	20 days	Mon 5/18/26	Fri 6/12/26	164
160		0%	Superstructure Permit	20 days	Mon 8/17/26	Fri 9/11/26	179
161		0%	Building Permit	20 days	Mon 11/2/26	Fri 11/27/26	194
162		**0%**	**60% CD PHASE**	**128 days**	**Mon 2/9/26**	**Wed 8/5/26**	

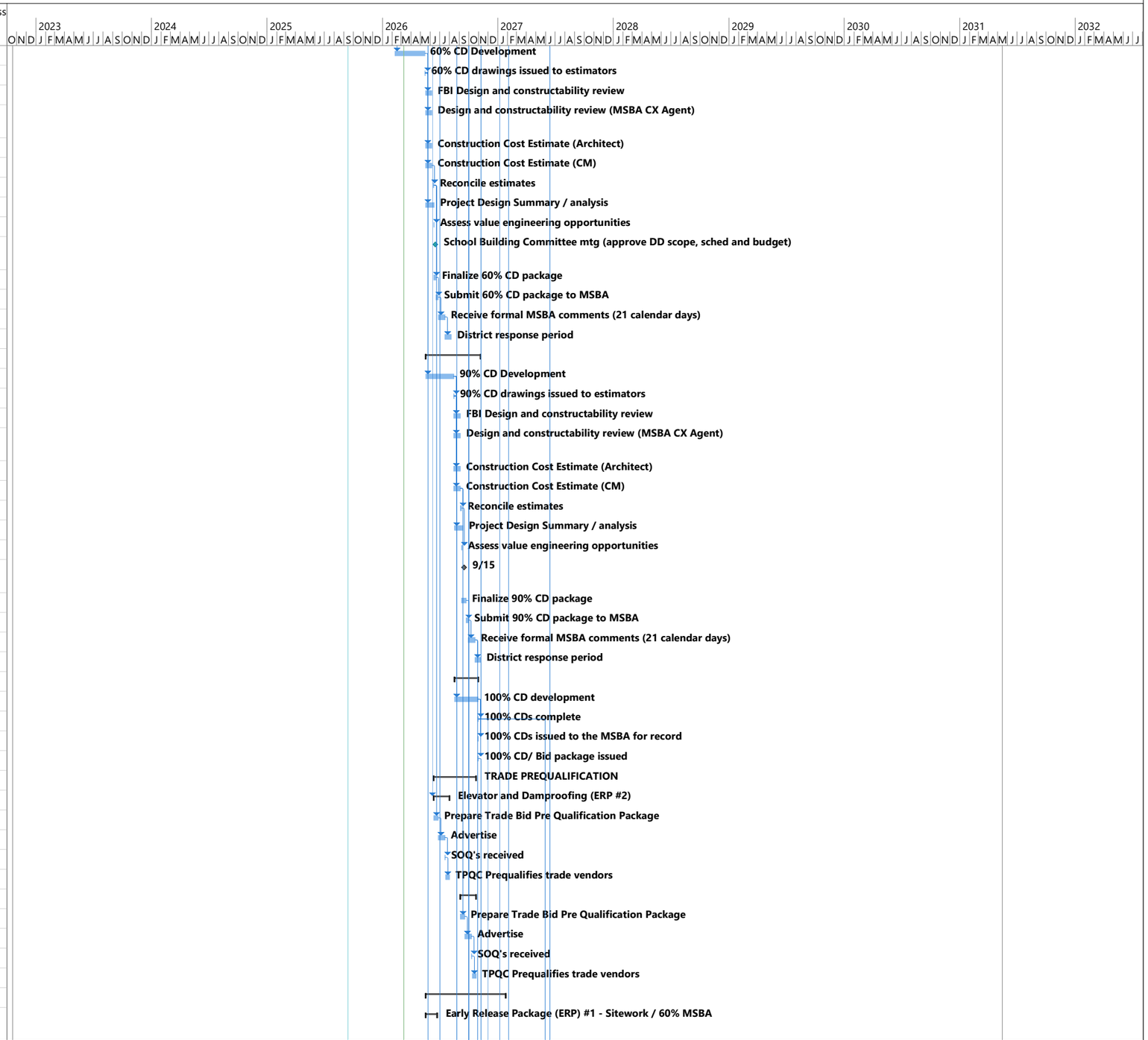


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Wilmington Elementary School - DD Schedule

March 20, 2026

ID	Task Mod	% Comple	Task Name	Duration	Start	Finish	Predecess
163		0%	60% CD Development	69 days	Mon 2/9/26	Thu 5/14/26	99
164		0%	60% CD drawings issued to estimators	1 day	Fri 5/15/26	Fri 5/15/26	163
165		0%	FBI Design and constructability review	15 days	Mon 5/18/26	Fri 6/5/26	164
166		0%	Design and constructability review (MSBA CX Agent)	15 days	Mon 5/18/26	Fri 6/5/26	164
167		0%	Construction Cost Estimate (Architect)	15 days	Mon 5/18/26	Fri 6/5/26	164
168		0%	Construction Cost Estimate (CM)	15 days	Mon 5/18/26	Fri 6/5/26	164
169		0%	Reconcile estimates	2 days	Wed 6/10/26	Thu 6/11/26	168
170		0%	Project Design Summary / analysis	20 days	Mon 5/18/26	Fri 6/12/26	164
171		0%	Assess value engineering opportunities	1 day	Fri 6/12/26	Fri 6/12/26	169
172		0%	School Building Committee mtg (approve DD scope, sched and budget)	1 day	Tue 6/16/26	Tue 6/16/26	
173		0%	Finalize 60% CD package	5 days	Fri 6/12/26	Thu 6/18/26	169
174		0%	Submit 60% CD package to MSBA	5 days	Fri 6/19/26	Thu 6/25/26	173
175		0%	Receive formal MSBA comments (21 calendar days)	15 days	Fri 6/26/26	Thu 7/16/26	174
176		0%	District response period	14 days	Fri 7/17/26	Wed 8/5/26	175
177		**0%**	**90% CD PHASE**	**125 days**	**Mon 5/18/26**	**Fri 11/6/26**	
178		0%	90% CD Development	64 days	Mon 5/18/26	Thu 8/13/26	164
179		0%	90% CD drawings issued to estimators	1 day	Fri 8/14/26	Fri 8/14/26	178
180		0%	FBI Design and constructability review	15 days	Fri 8/14/26	Thu 9/3/26	178
181		0%	Design and constructability review (MSBA CX Agent)	15 days	Fri 8/14/26	Thu 9/3/26	178
182		0%	Construction Cost Estimate (Architect)	15 days	Fri 8/14/26	Thu 9/3/26	178
183		0%	Construction Cost Estimate (CM)	15 days	Fri 8/14/26	Thu 9/3/26	178
184		0%	Reconcile estimates	2 days	Fri 9/4/26	Mon 9/7/26	183
185		0%	Project Design Summary / analysis	20 days	Mon 8/17/26	Fri 9/11/26	179
186		0%	Assess value engineering opportunities	1 day	Tue 9/8/26	Tue 9/8/26	184
187		0%	School Building Committee mtg (approve DD scope, sched and budget)	1 day	Tue 9/15/26	Tue 9/15/26	
188		0%	Finalize 90% CD package	10 days	Tue 9/8/26	Mon 9/21/26	
189		0%	Submit 90% CD package to MSBA	5 days	Tue 9/22/26	Mon 9/28/26	188
190		0%	Receive formal MSBA comments (21 calendar days)	15 days	Tue 9/29/26	Mon 10/19/26	189
191		0%	District response period	14 days	Tue 10/20/26	Fri 11/6/26	190
192		**0%**	**100% CD PHASE**	**55 days?**	**Mon 8/17/26**	**Fri 10/30/26**	
193		0%	100% CD development	54 days	Mon 8/17/26	Thu 10/29/26	179
194		0%	100% CDs complete	1 day	Fri 10/30/26	Fri 10/30/26	193
195		0%	100% CDs issued to the MSBA for record	1 day?	Fri 10/30/26	Fri 10/30/26	193
196		0%	100% CD/ Bid package issued	1 day?	Fri 10/30/26	Fri 10/30/26	193
197		**0%**	**TRADE PREQUALIFICATION**	**96 days**	**Fri 6/12/26**	**Fri 10/23/26**	
198		**0%**	**Elevator and Damproofing (ERP #2)**	**36 days**	**Fri 6/12/26**	**Fri 7/31/26**	**104**
199		0%	Prepare Trade Bid Pre Qualification Package	10 days	Fri 6/12/26	Thu 6/25/26	169
200		0%	Advertise	15 days	Fri 6/26/26	Thu 7/16/26	199
201		0%	SOQ's received	1 day	Fri 7/17/26	Fri 7/17/26	200
202		0%	TPQC Prequalifies trade vendors	10 days	Mon 7/20/26	Fri 7/31/26	201
203		**0%**	**All Remaining Filed Sub Trades (ERP #3)**	**36 days**	**Fri 9/4/26**	**Fri 10/23/26**	
204		0%	Prepare Trade Bid Pre Qualification Package	10 days	Fri 9/4/26	Thu 9/17/26	183
205		0%	Advertise	15 days	Fri 9/18/26	Thu 10/8/26	204
206		0%	SOQ's received	1 day	Fri 10/9/26	Fri 10/9/26	205
207		0%	TPQC Prequalifies trade vendors	10 days	Mon 10/12/26	Fri 10/23/26	206
208		**0%**	**EARLY RELEASE PACKAGES FOR BIDDING**	**181 days**	**Mon 5/18/26**	**Mon 1/25/27**	
209		**0%**	**Early Release Package (ERP) #1 - Sitework / 60% MSBA**	**26 days**	**Mon 5/18/26**	**Mon 6/22/26**	

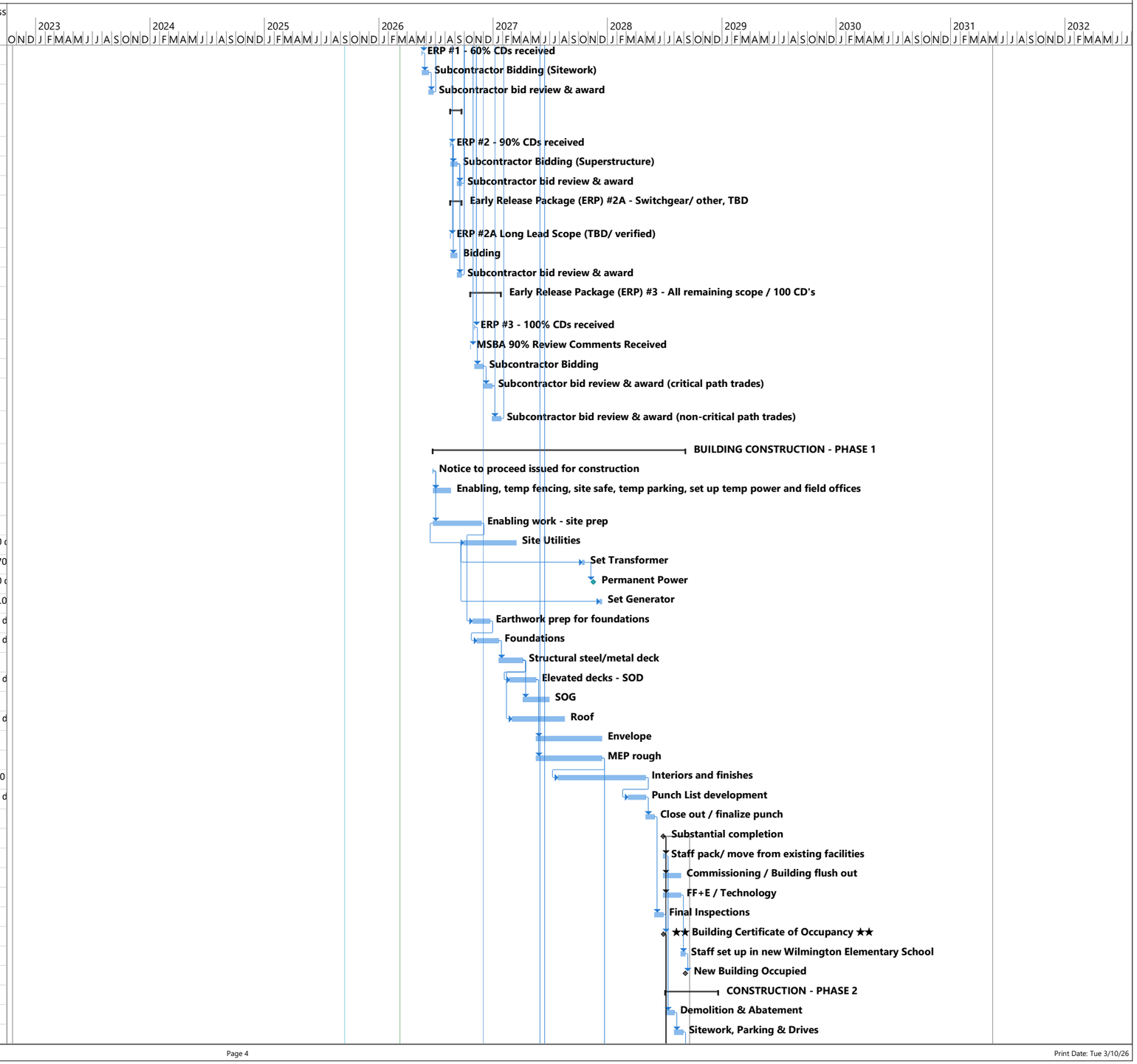


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Wilmington Elementary School - DD Schedule

March 20, 2026

ID	Task Mode	% Complete	Task Name	Duration	Start	Finish	Predecessors
210		0%	ERP #1 - 60% CDs received	1 day	Mon 5/18/26	Mon 5/18/26	164
211		0%	Subcontractor Bidding (Sitework)	15 days	Tue 5/19/26	Mon 6/8/26	210
212		0%	Subcontractor bid review & award	10 days	Tue 6/9/26	Mon 6/22/26	211
213		**0%**	**Early Release Package (ERP) #2 - Concrete, Damproofing, Steel, and Elevator / 90% MSBA**	**26 days**	**Mon 8/17/26**	**Mon 9/21/26**	
214		0%	ERP #2 - 90% CDs received	1 day	Mon 8/17/26	Mon 8/17/26	179
215		0%	Subcontractor Bidding (Superstructure)	15 days	Tue 8/18/26	Mon 9/7/26	214
216		0%	Subcontractor bid review & award	10 days	Tue 9/8/26	Mon 9/21/26	215
217		**0%**	**Early Release Package (ERP) #2A - Switchgear/ other, TBD**	**26 days**	**Mon 8/17/26**	**Mon 9/21/26**	
218		0%	ERP #2A Long Lead Scope (TBD/ verified)	1 day	Mon 8/17/26	Mon 8/17/26	179
219		0%	Bidding	15 days	Tue 8/18/26	Mon 9/7/26	214
220		0%	Subcontractor bid review & award	10 days	Tue 9/8/26	Mon 9/21/26	215
221		**0%**	**Early Release Package (ERP) #3 - All remaining scope / 100 CD's**	**70 days**	**Tue 10/20/26**	**Mon 1/25/27**	
222		0%	ERP #3 - 100% CDs received	1 day	Mon 11/2/26	Mon 11/2/26	196
223		0%	MSBA 90% Review Comments Received	1 day	Tue 10/20/26	Tue 10/20/26	190
224		0%	Subcontractor Bidding	20 days	Tue 11/3/26	Mon 11/30/26	222
225		0%	Subcontractor bid review & award (critical path trades)	20 days	Tue 12/1/26	Mon 12/28/26	224
226		0%	Subcontractor bid review & award (non-critical path trades)	20 days	Tue 12/29/26	Mon 1/25/27	225
227		**0%**	**BUILDING CONSTRUCTION - PHASE 1**	**577 days**	**Mon 6/22/26**	**Tue 9/5/28**	
228		0%	Notice to proceed issued for construction	1 day	Mon 6/22/26	Mon 6/22/26	
229		0%	Enabling, temp fencing, site safe, temp parking, set up temp power and field offices	40 days	Tue 6/23/26	Mon 8/17/26	228
230		0%	Enabling work - site prep	110 days	Tue 6/23/26	Mon 11/23/26	228
231		0%	Site Utilities	120 days	Tue 9/29/26	Mon 3/15/27	230SS+70 d
232		0%	Set Transformer	5 days	Tue 10/12/27	Mon 10/18/27	231SS+270
233		0%	Permanent Power	1 day	Tue 11/16/27	Tue 11/16/27	232FS+20 d
234		0%	Set Generator	5 days	Tue 12/7/27	Mon 12/13/27	231SS+310
235		0%	Earthwork prep for foundations	40 days	Tue 10/27/26	Mon 12/21/26	230FS-20 d
236		0%	Foundations	50 days	Tue 11/10/26	Mon 1/18/27	235FS-30 d
237		0%	Structural steel/metal deck	55 days	Tue 1/19/27	Mon 4/5/27	236
238		0%	Elevated decks - SOD	60 days	Tue 2/23/27	Mon 5/17/27	237FS-30 d
239		0%	SOG	60 days	Tue 4/6/27	Mon 6/28/27	237
240		0%	Roof	120 days	Tue 3/2/27	Mon 8/16/27	237FS-25 d
241		0%	Envelope	150 days	Tue 5/18/27	Mon 12/13/27	238
242		0%	MEP rough	150 days	Tue 5/18/27	Mon 12/13/27	238
243		0%	Interiors and finishes	200 days	Tue 7/27/27	Mon 5/1/28	242FS-100
244		0%	Punch List development	40 days	Tue 3/7/28	Mon 5/1/28	243FS-40 d
245		0%	Close out / finalize punch	20 days	Tue 5/2/28	Mon 5/29/28	244
246		0%	Substantial completion	1 day	Mon 6/26/28	Mon 6/26/28	
247		0%	Staff pack/ move from existing facilities	5 days	Tue 6/27/28	Mon 7/3/28	246
248		0%	Commissioning / Building flush out	40 days	Tue 6/27/28	Mon 8/21/28	246
249		0%	FF+E / Technology	40 days	Tue 6/27/28	Mon 8/21/28	246
250		0%	Final Inspections	20 days	Tue 5/30/28	Mon 6/26/28	245
251		0%	★★ Building Certificate of Occupancy ★★	1 day	Tue 6/27/28	Tue 6/27/28	250
252		0%	Staff set up in new Wilmington Elementary School	10 days	Tue 8/22/28	Mon 9/4/28	249
253		0%	New Building Occupied	1 day	Tue 9/5/28	Tue 9/5/28	252
254		**0%**	**CONSTRUCTION - PHASE 2**	**121 days**	**Tue 7/4/28**	**Tue 12/19/28**	
255		0%	Demolition & Abatement	20 days	Tue 7/4/28	Mon 7/31/28	247
256		0%	Sitework, Parking & Drives	20 days	Tue 8/1/28	Mon 8/28/28	255

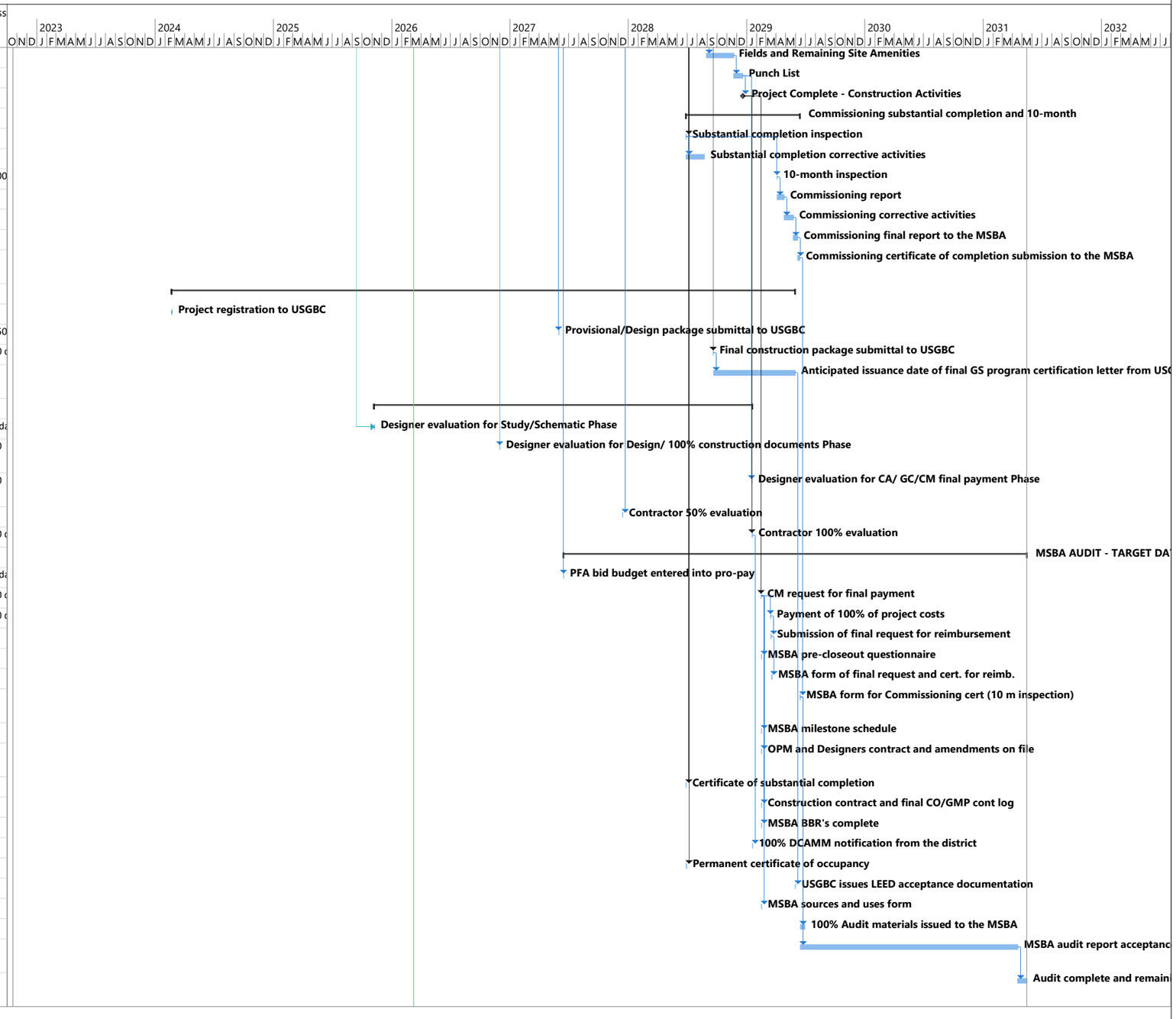


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Wilmington Elementary School - DD Schedule

March 20, 2026

ID	Task Mod	% Comple	Task Name	Duration	Start	Finish	Predecess
257		0%	Fields and Remaining Site Amenities	60 days	Tue 8/29/28	Mon 11/20/28	256
258		0%	Punch List	20 days	Tue 11/21/28	Mon 12/18/28	257
259		0%	Project Complete - Construction Activities	1 day	Tue 12/19/28	Tue 12/19/28	258
260		**0%**	**Commissioning substantial completion and 10-month**	**252 days**	**Tue 6/27/28**	**Wed 6/13/29**	
261		0%	Substantial completion inspection	1 day	Tue 6/27/28	Tue 6/27/28	246
262		0%	Substantial completion corrective activities	40 days	Wed 6/28/28	Tue 8/22/28	261
263		0%	10-month inspection	1 day	Wed 4/4/29	Wed 4/4/29	261FS+200
264		0%	Commissioning report	15 days	Thu 4/5/29	Wed 4/25/29	263
265		0%	Commissioning corrective activities	20 days	Thu 4/26/29	Wed 5/23/29	264
266		0%	Commissioning final report to the MSBA	10 days	Thu 5/24/29	Wed 6/6/29	265
267		0%	Commissioning certificate of completion submission to the MSBA	5 days	Thu 6/7/29	Wed 6/13/29	266
268		**1%**	**LEED Documentation**	**1375 days**	**Wed 2/21/24**	**Tue 5/29/29**	
269	✓	100%	Project registration to USGBC	1 day	Wed 2/21/24	Wed 2/21/24	
270		0%	Provisional/Design package submittal to USGBC	1 day	Mon 5/31/27	Mon 5/31/27	194FS+150
271		0%	Final construction package submittal to USGBC	1 day	Tue 9/19/28	Tue 9/19/28	246FS+60 d
272		0%	Anticipated issuance date of final GS program certification letter from USGBC	180 days	Wed 9/20/28	Tue 5/29/29	271
273		**20%**	**DCAMM Documentation**	**834 days**	**Fri 11/7/25**	**Wed 1/17/29**	
274	✓	100%	Designer evaluation for Study/Schematic Phase	1 day	Fri 11/7/25	Fri 11/7/25	98SS+30 da
275		0%	Designer evaluation for Design/ 100% construction documents Phase	1 day	Mon 11/30/26	Mon 11/30/26	194FS+20 days
276		0%	Designer evaluation for CA/ GC/CM final payment Phase	1 day	Tue 1/16/29	Tue 1/16/29	258FS+20 days
277		0%	Contractor 50% evaluation	1 day	Tue 12/14/27	Tue 12/14/27	242
278		0%	Contractor 100% evaluation	1 day	Wed 1/17/29	Wed 1/17/29	259FS+20 d
279		**0%**	**MSBA AUDIT - TARGET DATES**	**1023 days**	**Tue 6/15/27**	**Thu 5/15/31**	
280		0%	PFA bid budget entered into pro-pay	1 day	Tue 6/15/27	Tue 6/15/27	83FS+80 da
281		0%	CM request for final payment	1 day	Wed 2/14/29	Wed 2/14/29	259FS+40 d
282		0%	Payment of 100% of project costs	1 day	Thu 3/15/29	Thu 3/15/29	281FS+20 d
283		0%	Submission of final request for reimbursement	1 day	Fri 3/16/29	Fri 3/16/29	282
284		0%	MSBA pre-closeout questionnaire	1 day	Thu 2/15/29	Thu 2/15/29	281
285		0%	MSBA form of final request and cert. for reimb.	1 day	Mon 3/19/29	Mon 3/19/29	283
286		0%	MSBA form for Commissioning cert (10 m inspection)	1 day	Thu 6/14/29	Thu 6/14/29	267
287		0%	MSBA milestone schedule	1 day	Thu 2/15/29	Thu 2/15/29	281
288		0%	OPM and Designers contract and amendments on file	1 day	Thu 2/15/29	Thu 2/15/29	281
289		0%	Certificate of substantial completion	1 day	Tue 6/27/28	Tue 6/27/28	246
290		0%	Construction contract and final CO/GMP cont log	1 day	Thu 2/15/29	Thu 2/15/29	281
291		0%	MSBA BBR's complete	1 day	Thu 2/15/29	Thu 2/15/29	281
292		0%	100% DCAMM notification from the district	1 day	Thu 1/18/29	Thu 1/18/29	278
293		0%	Permanent certificate of occupancy	1 day	Wed 6/28/28	Wed 6/28/28	251
294		0%	USGBC issues LEED acceptance documentation	1 day	Wed 5/30/29	Wed 5/30/29	272
295		0%	MSBA sources and uses form	1 day	Thu 2/15/29	Thu 2/15/29	281
296		0%	100% Audit materials issued to the MSBA	10 days	Fri 6/15/29	Thu 6/28/29	286
297		0%	MSBA audit report acceptance form - will be issued by the MSBA, may take upwards of 2 years.	480 days	Fri 6/15/29	Thu 4/17/31	286
298		0%	Audit complete and remaining reimbursement retainage is released by the MSBA	20 days	Fri 4/18/31	Thu 5/15/31	297



FONTAINE BROS., INC.

WILMINGTON ELEMENTARY SCHOOL

RECONCILED DD ESTIMATE

Project #2633
Wilmington, MA

March 10, 2026

Wilmington Elementary School

Wilmington, Massachusetts

Deliverable

Design Development Documents Cost Estimate

Key Project Stakeholders

Owners Project Manager: LeftField

Architect: Dore + Whittier

Design Document Details

DD Drawings Dated: February 6, 2026

DD Specifications Dated: February 6, 2026

Addendum #1 Dated: February 19, 2026

Geotechnical Report Dated: January 19, 2026



Fontaine Bros., Inc.

Springfield Office
510 Cottage Street
Springfield, Massachusetts 01104
(413) 781-2020

Worcester Office
12 East Worcester Street
Worcester, MA 01604

TABLE OF CONTENTS

TAB 1

- CSI MASTERFORMAT COST ESTIMATE

TAB 2

- UNIFORMAT COST ESTIMATE - SUMMARY

TAB 3

- UNIFORMAT COST ESTIMATE - DETAIL

1

Fontaine Bros. CSI Summary - Combined

CSI Division			Cost/SF		Total Amount
02-0000	*EXISTING CONDITIONS & DEMO*	165,035 sf	12.12 /sf	$	2,000,000
03-0000	*CONCRETE*	165,035 sf	30.17 /sf	$	4,978,802
04-0000	*MASONRY*	165,035 sf	43.32 /sf	$	7,150,096
05-0000	*METALS*	165,035 sf	60.74 /sf	$	10,023,638
06-0000	*ROUGH CARPENTRY*	165,035 sf	9.02 /sf	$	1,488,972
06-2000	*FINISH CARPENTRY*	165,035 sf	3.24 /sf	$	533,945
07-0000	*THERMAL & MOIST PROTECT*	165,035 sf	52.22 /sf	$	8,617,568
08-0000	*DOORS & WINDOWS*	165,035 sf	28.99 /sf	$	4,785,076
09-0000	*FINISHES*	165,035 sf	81.38 /sf	$	13,431,301
10-0000	*SPECIALTIES*	165,035 sf	4.81 /sf	$	794,475
11-0000	*EQUIPMENT*	165,035 sf	8.43 /sf	$	1,390,670
12-0000	*FIXED FURNISHINGS*	165,035 sf	18.99 /sf	$	3,133,205
14-0000	*CONVEYING SYSTEMS*	165,035 sf	1.57 /sf	$	258,750
21-0000	*FIRE SUPRESSION*	165,035 sf	7.31 /sf	$	1,206,770
22-0000	*PLUMBING*	165,035 sf	21.98 /sf	$	3,628,243
23-0000	*HVAC*	165,035 sf	85.90 /sf	$	14,176,380
26-0000	*ELECTRICAL*	165,035 sf	69.36 /sf	$	11,446,776
31-0000	*EARTHWORK*	165,035 sf	38.39 /sf	$	6,335,645
32-0000	*EXTERIOR IMPROVEMENTS*	165,035 sf	48.64 /sf	$	8,027,259
33-0000	*UTILITIES*	165,035 sf	23.13 /sf	$	3,817,328
			Total Direct Cost	$	107,224,898
			Design Contingency	$	5,361,245
			Escalation	$	4,664,283
			Construction Contingency	$	2,680,622
			Sub Default Insurance	$	767,810
			General Requirements	$	5,681,683
			General Conditions	$	5,733,391
			Preconstruction Services	NIC	
			General Liability Insurance	$	1,507,040
			Performance Bonds	$	956,523
			Builder's Risk Insurance	$	265,624
			Pollution Insurance	$	66,062
			Building Permit	NIC	
			CM Fee (OH&P)	$	2,720,000
			Project Total	**$**	**137,629,181**

BREAKOUTS (INCLUDED IN BASE BID)		
Temporary Playground	$	150,000.00
Exterior Level 1 Ballistic Glazing (Curtainwall & Window bottom sash)	$	420,000.00
Classroom Door Sidelight Ballistic Glazing at All Levels	$	237,000.00
Level 1 Interior Entrance Ballistic Glazing	$	225,000.00
ALTERNATES		
Basketball Court	$	(103,591.00)
Salvage Existing Curbs	$	63,708.00
Building Over-Excavation Alternate	$	1,692,623.00

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
02-0000.000	***EXISTING CONDITIONS & DEMO***					
)1	Hazardous Material Abatement	1.00	ls	1,200,000.00	/ls	1,200,000
01	Hazardous Material Abatement - Roofing Assumption	1.00	ls	250,000.00	/ls	250,000
110	Demolition	1.00	ls	450,000.00	/ls	450,000
110	Premium Time	1.00	ls	100,000.000	/ls	100,000
	EXISTING CONDITIONS & DEMO			***12.119/sf***		***2,000,000***
	165,035.00 sf					
03-0000.000	***CONCRETE***					
105	Stage Ramp	1.00	ls	25,000.00	/ls	25,000
105	Stairs and Landings, Stair 1	2.00	Flt	4,500.00	/Flt	9,000
105	Stairs and Landings, Stair 2	2.00	Flt	4,500.00	/Flt	9,000
105	Stairs and Landings, Stair 3	2.00	Flt	4,500.00	/Flt	9,000
105	Stairs and Landings, Stair 4	3.00	Flt	4,500.00	/Flt	13,500
105	Stairs and Landings, Cafeteria, Stair 5	1.00	Flt	4,500.00	/Flt	4,500
105	Stairs and Landings, Stage Stair, Corridor & Stair 6	1.25	Flt	4,500.00	/Flt	5,625
125	Concrete Form & Place - Footings	3,586.00	sfca	20.00	/sfca	71,720
125	Concrete Form & Place - Spread Footings	13,145.00	sfca	20.00	/sfca	262,900
125	Concrete Form & Place - Frost Walls	13,020.00	sfca	20.00	/sfca	260,400
125	Concrete Form & Place - Masonry Stub Walls	3,100.00	sfca	20.00	/sfca	62,000
125	Concrete Form & Place - Brick Shelf (three sides)	3,100.00	sfca	20.00	/sfca	62,000
125	General Concrete - Winter Conditions	1.00	ls	300,000.00	/ls	300,000
125	Concrete 90%-100 CD Bridging Allowance	1.00	ls	100,000.000	/ls	100,000
100	Place & Finish - SOD, RTU Pads, 7" Normal Weight	4,450.00	sf	13.00	/sf	57,850
100	Place & Finish - SOD, 5-1/4" Light Weight	87,000.00	sf	13.00	/sf	1,131,000
100	Place & Finish - SODs - House Keeping Pads, Allow	250.00	sf	30.00	/sf	7,500
100	Building Wrap and Weather Protection - For SOD Heating					
100	Place & Finish - SOD, RTU Pads, 5- 1/4" Normal Weight - added per RECON	7,000.00	sf	13.00	/sf	91,000
12	15 mil Vapor Barrier	76,300.00	sf	1.50	/sf	114,450
20	2" Rigid Foundation Insulation - Vertical	6,510.00	sf	3.00	/sf	19,530
120	2" Rigid Insulation Under Slab, Full Coverage	76,300.00	sf	4.50	/sf	343,350
14	Re-Bar, Footings, Piers, Walls	101.00	tons	2,500.00	/tons	252,500
14	Re-Bar, SOG	10.00	tons	2,500.00	/tons	25,000
14	Re-Bar, SOD	22.00	tons	2,500.00	/tons	55,000
14	Re-Bar, SOD, RTU Pads	6.00	tons	2,500.00	/tons	15,000
----	6" Roof MEP Pad	3,939.00	sf	6.30	/sf	24,816
----	6" Roof MEP Pad - removed per RECON	-3,939.00	sf	6.30	/sf	(24,816)
20	Concrete - SOD, Light Weight	1,780.00	cy	180.00	/cy	320,400
20	Concrete - SOD Roof Top Units	96.00	cy	171.00	/cy	16,416
20	Concrete - Footings, Includes Mat / Spread Footings	1,308.00	cy	171.00	/cy	223,668

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
:0	Concrete - Walls, Frost	322.00	cy	171.00 /cy	55,062
20	Concrete - Walls, Masonry Stub	58.00	cy	171.00 /cy	9,918
20	Concrete - Brick Shelf, 6" Tall x 8" Width	23.00	cy	171.00 /cy	3,933
20	Concrete - SOG 5", (Includes Thickened & Haunched)	1,180.00	cy	171.00 /cy	201,780
10	Place & Finish SOG - 5"	76,300.00	sf	11.00 /sf	839,300
500	Grout Elevator Sill Angles	3.00	ea	500.00 /ea	1,500
	CONCRETE			***30.168/sf***	***4,978,802***
	165,035.00 sf				

04-0000.000 MASONRY

:	Cast Stone Lintels	1,065.00	lf	135.00 /lf	143,775
2	Cast Stone Veneer & Banding	5,965.00	lf	200.00 /lf	1,193,000
2	Cast Stone Cap - 2'4" w x 12'4" l x 5" d - Exterior Monument Signage	28.76	sf	160.00 /sf	4,602
2	Cast Stone Panels	6,761.00	sf	160.00 /sf	1,081,760
110	Brick Veneer Types 1 & 2 - Belden Brick, Smoky Gray Velour & Belcrest 550	40,505.00	sf	46.00 /sf	1,863,230
110	Brick Veneer Type 3 - Glen Gery, Bermuda Blue Glazed	3,215.00	sf	48.00 /sf	154,320
110	Brick Veneer - Exterior Monument Signage	96.30	sf	46.00 /sf	4,430
110	Exterior Mock up - Masonry Allowance	1.00	ls	50,000.00 /ls	50,000
102	Interior CMU Walls				
102	Wall Type D - Interior 4" CMU - None Shown				
102	Wall Type E - Interior 8" CMU	13,483.00	sf	38.00 /sf	512,354
102	Wall Type G - Interior 12" CMU	14,395.00	sf	42.00 /sf	604,590
102	Wall Type G - Interior 12" CMU Acoustical "SoundCell" - NIC				
102	Wall Type H - Interior 6" CMU	1,387.00	sf	34.00 /sf	47,158
102	Exterior CMU Backup Walls				
102	Wall Type X3 - Exterior 8" CMU	6,254.00	sf	38.00 /sf	237,652
102	Wall Type X4 - Exterior 12" CMU	497.00	sf	42.00 /sf	20,874
102	Exterior 6" CMU Wall - Exterior Monument Signage	22.00	sf	35.00 /sf	770
102	Exterior 12" CMU Wall - Exterior Monument Signage	22.00	sf	42.00 /sf	924
102	Exterior CUVM Veneer - Custom Cast Stone, Light Buff	8,170.00	sf	70.00 /sf	571,900
102	Exterior CUVM Veneer - Custom Cast Stone, Light Buff - Exterior Monument Signage	12.16	sf	70.00 /sf	851
5	Masonry Staging - Exterior	44,000.00	sf	6.25 /sf	275,000
5	Masonry Staging - Interior	29,265.00	sf	6.25 /sf	182,906
5	Winter Conditions - Masonry	1.00	ls	200,000.000 /ls	200,000

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	MASONRY			***43.325/sf***	***7,150,096***
	165,035.00 sf				
05-0000.000	***METALS***				
ı 01	Structural Steel - 12' Equipment Screen Wall, Allowance	100.00	tn	5,100.00 /tn	510,000
a 01	Structural Steel - Floor Structure, 15 PSF	615.00	tn	5,100.00 /tn	3,136,500
a 01	Structural Steel - Roof Structure, 20 PSF - Gym	127.00	tn	5,100.00 /tn	647,700
a 01	Structural Steel - Roof Structure, 15 PSF	497.00	tn	5,100.00 /tn	2,534,700
a 01	Structural Steel - Braced Frames (HSS 8x8x1/2 Assumed)				
a 01	Structural Steel - Coordination Allowance, Floors	1.00	ls	100,000.000 /ls	100,000
a 01	Structural Steel - Coordination Allowance, Roof	1.00	ls	50,000.00 /ls	50,000
a 01	Structural Steel - 90%-100% CD Bridging Allowance	1.00	ls	150,000.00 /ls	150,000
320	Metal Roof Decking -3" - 20 Gage	65,988.30	sf	6.50 /sf	428,924
320	Metal Roof Decking -3" - 16 Gage at Roof Equipment	3,450.30	sf	8.00 /sf	27,602
320	Metal Roof Decking - Acoustic - NIC				
618	Metal Floor Deck - 5-1/4"	97,281.45	sf	8.00 /sf	778,252
618	Metal Floor Deck - Acoustical				
10	Stair 1 - Stair and Railings	2.00	Flt	40,000.00 /Flt	80,000
10	Stair 2 - Stair and Railings	2.00	Flt	40,000.00 /Flt	80,000
10	Stair 3 - Stair and Railings	2.00	Flt	40,000.00 /Flt	80,000
10	Stair 4 - Stair and Railings	3.00	Flt	75,000.00 /Flt	225,000
10	Stair 5 - Feature Stair and Railings, Cafeteria	1.00	Flt	85,000.00 /Flt	85,000
10	Stair 6 - Stage Stair and Ramp Rails	1.00	Flt	12,500.00 /Flt	12,500
10	Roof Access Stair and Platform at Mechanical Pump Room	1.00	ls	18,000.00 /ls	18,000
10	Stair 4 - Roof Landing and Stair	1.00	ls	10,000.00 /ls	10,000
10	Stair 4 - Wire Mesh Panels	122.00	sf	185.00 /sf	22,570
10	Roof Ladder	1.00	ea	10,000.00 /ea	10,000
10	Misc. Metals Allowance	165,035.00	sf	2.00 /sf	330,070
10	Misc. Metals Coordination - adjusted per RECON	1.00	ls	125,000.00 /ls	125,000
10	Bollards - w Landscaping	16.00	ea		
10	Catwalk, Railings & Ladder Allowance - None Shown - NIC				
10	Bollards - Light Type - w Landscaping	16.00	ea		
140	Loose Lintels - Masonry	1,580.00	lf	35.00 /lf	55,300
140	Overhead Door supports	3.00	ea	5,000.00 /ea	15,000
140	Misc. Folding Door Support	6.00	ea	3,500.00 /ea	21,000
140	Exterior Louvers, Allowance	1.00	ls	85,000.00 /ls	85,000
140	Patient Lift Support - Assume Nurses office / PT	2.00	ea	2,500.00 /ea	5,000
140	Misc Metals - Roof	165,035.00	sf	0.75 /sf	123,776
140	Misc Metals - Floor Construction	165,035.00	sf	0.75 /sf	123,776
140	Misc Metals - Exterior Walls	165,035.00	sf	0.50 /sf	82,518
140	Unistrut Ceiling Systems - None Shown				
140	Galvanized Steel Posts at PFN Metal Siding - Roof	8.00	ea	950.00 /ea	7,600
140	Curtainwall Support Angle - Allowance added per RECON	1.00	ls	50,000.00 /ls	50,000
22	Sill Angles	3.00	ea	1,750.00 /ea	5,250
22	Sump Pit Frame Grate	1.00	ea	1,200.00 /ea	1,200

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
22	Hoist Beam & Lifeline Beam	2.00	ea	1,800.00 /ea	3,600
22	Pit Ladders	1.00	ea	2,800.00 /ea	2,800
	METALS			***60.736/sf***	***10,023,638***
	165,035.00 sf				
06-0000.000	***ROUGH CARPENTRY***				
2	General Roof Blocking - adjusted per RECON	87,222.00	sf	1.25 /sf	109,028
2	Roof Blocking Perimeter	2,800.00	lf	18.00 /lf	50,400
2	Window Blocking	5,530.00	lf	15.00 /lf	82,950
2	Interior Borrowed Light Blocking	892.00	lf	15.00 /lf	13,380
2	In-Wall Blocking	165,035.00	sf	0.85 /sf	140,280
2	Misc. Blocking	1.00	ls	50,000.00 /ls	50,000
2	Temporary Safety and Railings	1.00	ls	25,000.00 /ls	25,000
50-11	Glu-Lam Timber Beams	720.00	lf	285.00 /lf	205,200
50-11	Glu-Lam Timber Beams per Addendum 1	370.00	lf	265.00 /lf	98,050
50-11	Glu-Lam 16" x 16" x 28' - Columns	252.00	lf	300.00 /lf	75,600
50-11	Glu-Lam 16" x 16" x 13'6" - Columns per Addendum 1	81.00	lf	285.00 /lf	23,085
50-11	Dowel-Laminated Timber Paneling w 3/4" APA-Rated Sturd-I-Floor Tongue & Groove Sheathing	4,800.00	sf	45.00 /sf	216,000
50-11	Dowel-Laminated Timber Paneling w 3/4" APA-Rated Sturd-I-Floor Tongue & Groove Sheathing per Addendum 1	1,900.00	sf	45.00 /sf	85,500
50-11	Glu-Lam Installation	6,700.00	sf	35.00 /sf	234,500
50-11	Glu-Lam Connections Allowance	1.00	ls	50,000.00 /ls	50,000
50-11	Glu-Lam Temp Protection	1.00	ls	30,000.00 /ls	30,000
	ROUGH CARPENTRY			***9.022/sf***	***1,488,972***
	165,035.00 sf				
06-2000.000	***FINISH CARPENTRY***				
2	Interior Finish Carpentry	1.00	ITEM		
2	Bookcases - heights vary - adjusted per RECON, including wood veneer	156.75	lf	350.00 /lf	54,863
2	Short Bookcases	16.00	ea		
2	Tall Bookcases	25.00	ea		
2	Bookcases on Casters, Freestanding	20.00	ea		
2	Wood Trim at LEGO Walls - Corridors	55.00	lf	55.00 /lf	3,025

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
?	Admin Office Desk	1.00	ls	15,000.00	/ls	15,000
2	Library Circulation Desk per A5/A10.80	1.00	ls	20,000.00	/ls	20,000
2	Custom Mailbox	17.00	lf	550.00	/lf	9,350
2	Wood Wall Paneling	51.50	lf	70.00	/lf	3,605
2	Wood Stage Risers	150.00	lf	25.00	/lf	3,750
2	Includes LED Strip Lighting - w Electrical	150.00	lf			
2	Library Built-in Bench per A23/A10.80	33.09	lf	625.00	/lf	20,681
2	Window Seating - included above	33.09	lf			
2	Extended Learning Built-in Benches w Storage per Q26/A10.80	63.47	lf	125.00	/lf	7,934
2	Gym Corridor Wood Benches per Q21/A10.80	46.75	lf	250.00	/lf	11,688
2	Stair 5 Seating - Allowance	14.00	lf	250.00	/lf	3,500
2	Custom Trash / Recycle Stations	35.00	lf	650.00	/lf	22,750
2	Solid Surface Window Sills	1,005.50	lf	45.00	/lf	45,248
2	Millwork and FF&E Protection	1.00	ls	65,000.00	/ls	65,000
2	Millwork not yet shown	165,035.00	sf	1.50	/sf	247,553
	FINISH CARPENTRY			***3.235/sf***		***533,945***
	165,035.00 sf					

07-0000.000 THERMAL & MOIST PROTECT

?	Elevator Pit Crystalline Waterproofing	1.00	ea	8,500.00	/ea	8,500
2	Foundation Sheet Waterproofing	7,926.00	sf	9.50	/sf	75,297
2	4" Rigid insulation at MCM Panel Roof edge	6,300.00	sf	6.00	/sf	37,800
2	4" Rigid insulation at MCM Panel Roof edge - additional per RECON	9,700.00	sf	6.00	/sf	58,200
2	4" Rigid Cavity Wall Insulation (Brick Veneer)	58,651.00	sf	6.00	/sf	351,906
10	Air Vapor Barrier - Exterior Walls	81,282.00	sf	7.00	/sf	568,974
10	Air Vapor Barrier - Roof - w Roofing Assembly	83,243.00	sf			
10	Air Vapor Barrier at roof edge / Overhang	8,775.00	sf	4.50	/sf	39,488
10	Air Vapor Barrier at canopy columns and soffits	2,300.00	sf	4.50	/sf	10,350
10	Air Vapor Barrier / Flashing at windows	8,410.00	lf	1.25	/lf	10,513
2	MCM Composite Panels - Allucabond - None Shown					
2	MCM Composite Panels @ Roof Edges & Flats	9,685.00	sf	98.00	/sf	949,130
2	MCM Composite Panels @ Roof Edges & Flats - additional per RECON	7,500.00	sf	98.00	/sf	735,000
2	MLT Springlock/ Counter Flashing	1,300.00	sf	25.00	/sf	32,500
2	Roof Screen w/Acoustic Metal Panel - 12' Height	13,400.00	sf	110.00	/sf	1,474,000
2	Linear Metal Ceilings at Canopies	4,271.00	sf	95.00	/sf	405,745
2	PFN Metal Siding on 4" CFMF Duct Enclosures	491.00	sf	100.00	/sf	49,100
	THERMAL & MOIST PROTECT			***29.124/sf***		***4,806,502***
	165,035.00 sf					

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
07-5000.000	***ROOFING***					
2	TPO Roofing, 9" Rigid Insulation, Deck Sheathing	87,222.00	sf	28.00	/sf	2,442,216
2	9" Tapered insulation for roofing - included above	29,368.00	sf			
2	Flash Roofing to Curbs	1,166.00	lf	2.00	/lf	2,332
2	Premium for Fire Rated Deck Sheathing at Roof type R1.1	66,000.00	sf	2.25	/sf	148,500
	ROOFING			***15.712/sf***		***2,593,048***
	165,035.00 sf					
07-7000.000	***ROOF & WALL ACCESSORIES***					
0	Elevator Vents - None Shown					
10	Roof Stair gate and landing	2.00	ea	8,460.83	/ea	16,922
10	Roof Ladders	1.00	ea	8,460.83	/ea	8,461
20	Roof Walkway pads (24" width)	3,388.00	sf	15.00	/sf	50,820
20	MEP Curbs with 6" ACED Mineral Wool insulation	284.00	sf	6.00	/sf	1,704
20	Roof Hatch	0.00	ea			
20	Rooftop Disconnect (Electrical)	5.00	ea	1,000.00	/ea	5,000
20	Stair for Roof Access	1.00	ea	1,000.00	/ea	1,000
20	PFN Roof Scupper	1.00	ea	800.00	/ea	800
20	Roof Proteciton/Railing System - Allowance	1.00	ls	250,000.00	/ls	250,000
	ROOF & WALL ACCESSORIES			***2.028/sf***		***334,706***
	165,035.00 sf					
07-8000.000	***FIREPROOFING / CAULKING***					
02	Misc. Fire Stopping w/ Trades					
2	Fireproofing - Columns, Beams, Floor Decking, Roofing Decking, Braced Framing - 1 Hr.	165,035.00	sf	2.25	/sf	371,329
2	Fireproofing, Low -> Medium Density - Premium	165,035.00	sf	0.80	/sf	132,028
2	Gymnasium, Intumescent Paint - Allowance	1.00	ls	100,000.000	/ls	100,000
2	Building Wrap and Weather Protection, for Fireproofing Work	1.00	ls	75,000.00	/ls	75,000
2	Fireproofing - Structural Steel in hatched areas only per A0.11 - A0.32 - 2 Hr.	2,640.00	sf	3.00	/sf	7,920
2	Patch Days	10.00	cds	3,200.00	/cds	32,000
40	Misc. Interior Caulking	165,035.00	sf	0.50	/sf	82,518

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
!	Exterior Joint/Control & Caulking	165,035.00	sf	0.50	/sf	82,518
	FIREPROOFING / CAULKING			***5.352/sf***		***883,312***
	165,035.00 sf					
08-0000.000	***DOORS & WINDOWS***					
0	Interior Doors					
10	Type - F HM, 3' - 0"x7' - 0"	1.00	lfs	850.00	/lfs	850
10	Type - F WOOD, 3' - 0"x7' - 0" 45 MIN	2.00	lfs	850.00	/lfs	1,700
10	Type - F WOOD, 3' - 0"x7' - 0"	186.00	lfs	750.00	/lfs	139,500
10	Type - F WOOD, 3' - 0"x7' - 0" 90 MIN	6.00	lfs	750.00	/lfs	4,500
10	Type - FG WOOD, 3' - 0"x7' - 0"	2.00	lfs	675.00	/lfs	1,350
10	Type - G WOOD, 3' - 0"x7' - 0"	52.00	lfs	600.00	/lfs	31,200
10	Type - F WOOD, 4' - 0"x7' - 0"	2.00	lfs	850.00	/lfs	1,700
10	Type - F WOOD, 6' - 0"x7' - 0" 60 MIN	9.00	pair	1,500.00	/pair	13,500
10	Type - F WOOD, 6' - 0"x7' - 0" 90 MIN	2.00	pair	1,500.00	/pair	3,000
10	Type - F WOOD, 6' - 0"x7' - 0" 45 MIN	1.00	pair	1,500.00	/pair	1,500
10	Type - F WOOD, 6' - 0"x7' - 0"	12.00	pair	850.00	/pair	10,200
10	Type - FG WOOD, 6' - 0"x7' - 0"	3.00	pair	1,500.00	/pair	4,500
10	Type - FG HM, 6' - 0"x7' - 0"	2.00	pair	1,350.00	/pair	2,700
10	Type - G WOOD, 6' - 0"x7' - 0"	8.00	pair	1,200.00	/pair	9,600
220	EXTERIOR DOORS					
220	Type - F HM, 3' - 0"x7' - 0"	4.00	lfs	850.00	/lfs	3,400
220	Type - FG HM, 6' - 0"x7' - 0"	4.00	pair	1,650.00	/pair	6,600
100	Interior Frames					
100	Frame Install - Installed w/ GWB					
100	Type 1 - HM 3' - 0" x 7' - 0"	120.00	ea	350.00	/ea	42,000
100	Type 1 - HM 3' - 0" x 7' - 0", 45 minutes	2.00	ea	350.00	/ea	700
100	Type 1 - HM 3' - 0" x 7' - 0", 60 minutes	1.00	ea	350.00	/ea	350
100	Type 1 - HM 3' - 0" x 7' - 0", 90 minutes	5.00	ea	350.00	/ea	1,750
100	Type 1A - HM 3' - 0" x 7' - 0"	1.00	ea	400.00	/ea	400
100	Type 1B - HM 3' - 0" x 7' - 0"	1.00	ea	350.00	/ea	350
100	Type 2 - HM 6' - 0" x 7' - 0"	17.00	ea	400.00	/ea	6,800
100	Type 2 - HM 6' - 0" x 7' - 0", 45 minutes	1.00	ea	400.00	/ea	400
100	Type 2 - HM 6' - 0" x 7' - 0", 90 minutes	2.00	ea	400.00	/ea	800
100	Type 2A - HM 6' - 0" x 7' - 0"	9.00	ea	400.00	/ea	3,600
100	Type 2A - HM 6' - 0" x 7' - 0", 60 minutes	9.00	ea	400.00	/ea	3,600
100	Type 3 - HM 3' - 0" x 7' - 0" w/ sidelite	56.00	ea	450.00	/ea	25,200
100	Type 3A - HM 3' - 0" x 7' - 0" w/ sidelite	62.00	ea	450.00	/ea	27,900
100	Type 4 - HM 3' - 0" x 7' - 0"	2.00	ea	450.00	/ea	900
100	Type 5 - HM 3' - 0" x 7' - 0" w/ sidelite	2.00	ea	600.00	/ea	1,200
100	Fire Rating Premium	20.00	ea	200.00	/ea	4,000
100	Borrowed Lite Frames	61.00	ea	450.00	/ea	27,450
50	OHD - Overhead Sectional Door 10' x 10' - Receiving/General Supply 155	1.00	ea	15,000.00	/ea	15,000
50	OHG - Overhead Coiling Door 20'-4" x 11'-5" - Kitchen 162	2.00	ea	25,000.00	/ea	50,000
10	Interior Storefront Assemblies	980.00	sf	150.00	/sf	147,000
10	1 Hour Fire Rated Premium at Interior Storefronts	450.00	sf	300.00	/sf	135,000
10	PT Mirrors, Allow	1.00	ls	5,000.00	/ls	5,000
10	Transom & Sidelite Glazing	1,690.00	sf	85.00	/sf	143,650

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
10	Narrow Lite Glazing	13.25	sf	85.00	/sf	1,126
10	Borrowed Lites - BL-1	290.00	sf	85.00	/sf	24,650
10	Borrowed Lites - BL-2	45.00	sf	85.00	/sf	3,825
10	Borrowed Lites - BL-3 - None Shown					
10	Borrowed Lites - BL-4	500.00	sf	85.00	/sf	42,500
10	Borrowed Lites - BL-5, Bullet Resistant	11.00	sf	450.00	/sf	4,950
10	Borrowed Lites - BL-6, Transaction Window - 24 SF	1.00	ea	5,000.00	/ea	5,000
10	Ballistic Glazing at all Classroom door side lights	790.00	sf	300.00	/sf	237,000
1000	Interior Aluminum Doors					
1000	ALUMINUM, Single Door	1.00	lfs	8,000.00	/lfs	8,000
1000	ALUMINUM, Double Door	8.00	lfs	8,000.00	/lfs	64,000
1000	Interior Curtainwall Assembly	165.00	sf	150.00	/sf	24,750
1000	Interior Curtainwall Double Doors	4.00	lfs	8,000.00	/lfs	32,000
1000	Exterior Aluminum Doors					
1000	ALUMINUM, Single Door	1.00	lfs	12,500.00	/lfs	12,500
1000	ALUMINUM, Double Door	10.00	lfs	12,500.00	/lfs	125,000
1000	ALUMINUM, Double Door - Exterior Ballistic	4.00	lfs	25,000.00	/lfs	100,000
1000	Level 1 Ballistic Glazing premium - adjusted for only bottom sash of windows per RECON	1,400.00	sf	300.00	/sf	420,000
1000	Sunshades	370.00	lf	250.00	/lf	92,500
1000	Exterior Aluminum Windows					
1000	W1 Windows	1,825.00	sf	175.00	/sf	319,375
1000	W1a Windows	240.00	sf	175.00	/sf	42,000
1000	W2 Windows	3,840.00	sf	175.00	/sf	672,000
1000	Exterior Aluminum Curtainwall, Triple Glazed	4,850.00	sf	185.00	/sf	897,250
1000	Includes additional Ballistic Glazing for designated openings per RECON:	9.00	lf	25,000.00	/lf	225,000
1000	CW-13	165.00	sf			
1000	SF-1	79.00	sf			
1000	SF-2	160.00	sf			
1000	167B	46.00	sf			
1000	Includes CW-9	152.00	sf			
1000	Includes 167A	46.00	sf			
10	Door and Hardware Install	333.00	ea	550.00	/ea	183,150
10	Finish Hardware - Allowance	369.00	lfs	750.00	/lfs	276,750
10	Door and Hardware Install - Exterior	8.00	lfs	550.00	/lfs	4,400
10	Exterior Finish Hardware - Allowance	8.00	lfs	1,500.00	/lfs	12,000
10	Exterior Finish Hardware - Auto Openers	9.00	lfs	4,500.00	/lfs	40,500
10	Interior Finish Hardware - Auto Openers	8.00	lfs	4,500.00	/lfs	36,000
	DOORS & WINDOWS			***28.994/sf***		***4,785,076***
	165,035.00 sf					
09-0000.000	***FINISHES***					
00	Interior Walls					
100	A, 1 Layer GWB ea Face, Acoustical Insul, 6" Studs	27,970.00	sf	18.00	/sf	503,460
100	A1, 1 Layer GWB ea Face, Acoustical Insul, 6" Studs - 1 HR	5,359.00	sf	20.50	/sf	109,860

Item		Description	Takeoff Qty		Total Unit Cost		Amount
	00	A2, 2 Layer GWB ea Face, Acoustical Insul, 6" Studs - 2 HR	7,208.00	sf	20.00	/sf	144,160
	100	A2A, 2 Layer GWB ea Face, Acoustical Insul, 6" Studs - Non-Rated Acoustic Barrier	49,833.00	sf	25.00	/sf	1,245,825
	100	B, 1 Layer GWB ea Face, Acoustical Insul, 3-5/8" Studs - None Shown					
	100	B1, 1 Layer GWB ea Face, Acoustical Insul, 3-5/8" Studs - 1 HR - None Shown					
	100	BR, 1 Layer GWB ea Face, 1 Side Bullet Resistant Fiberglass, Acoustical Insul, 6" Studs - 1 HR	505.00	sf	75.00	/sf	37,875
	100	C, 1 Layer GWB ea Face, Acoustical Insul, 8" Studs - None Shown					
	100	C1, 1 Layer GWB ea Face, Acoustical Insul, 8" Studs - 1 HR - None Shown					
	100	F, 1 Side GWB, Acoustical Insul, 2-1/2" Studs	1,318.00	sf	12.00	/sf	15,816
	100	F2, 1 Side 2 Layers GWB, Acoustical Insul, 2-1/2" Studs - None Shown					
	100	F4, 1 Side GWB, Acoustical Insul, 3-5/8" Studs	49,369.00	sf	12.50	/sf	617,113
	100	F4A, 1 Side GWB, Acoustical Insul, 3-5/8" Studs - Non-Rated Acoustic Barrier - None Shown					
	100	F5, 1 Side 2 Layers GWB, Acoustical Insul, 3-5/8" Studs	4,221.00	sf	15.00	/sf	63,315
	100	F6, 1 Side 1 Layer GWB, Acoustical Insul, 6" Studs	20,588.00	sf	13.00	/sf	267,644
	100	F6A, 1 Side 1 Layer GWB, Acoustical Insul, 6" Studs - Non-Rated Acoustic Barrier - None Shown					
	100	F7 - Not Shown on AGO.02	543.00	sf	15.00	/sf	8,145
	100	F8, 1 Side 1 Layer GWB, 7/8" Hat Channel	1,830.00	sf	11.00	/sf	20,130
	100	HF8, 6" CMU, 1 Side 1 Layer GWB, 7/8" Hat Channel	6,628.00	sf	35.00	/sf	231,980
	100	M, 2 Layers GWB ea Face, Acoustical Insul, 6" Studs - None Shown					
	100	M1, 2 Layers GWB ea Face, Acoustical Insul, 6" Studs - 1 HR - None Shown					
	100	N, 8" CMU, 1 Side 1 Layer GWB, Acoustical Insul, 3-5/8" Studs - None Shown					
	100	N1, 8" CMU, 1 Side 1 Layer GWB, Acoustical Insul, 3-5/8" Studs - 1 HR - None Shown					
	100	S1, 1 Side 1 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 2-1/2" Studs - 1 HR - None Shown					
	100	S2, 1 Side 2 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 2-1/2" Studs - 2 HR - None Shown					
	100	S6, 1 Side 2 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 6" Studs - 2 HR - None Shown					
	100	S7, 1 Side 1 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 6" Studs - 1 HR	3,279.00	sf	22.00	/sf	72,138
	100	S10, 2 Layers GYP Coreboard, 2" Channel Framing Brace - 2 HR - None Shown					
	100	Exterior Walls					
	100	EXT WALL Back Up, 8" or 6" LGMF, GWB interior Face, Batt Insul	66,875.00	sf	24.50	/sf	1,638,438
	100	Exterior Wall - Densglass Sheathing	66,875.00	sf	6.00	/sf	401,250
	100	Unknown Wall Type(s)	18,512.00	sf	25.00	/sf	462,800
	100	FRP - Allowance	1.00	ls	5,000.00	/ls	5,000
	100	Drywall General Conditions					
	100	General Carp / Labor	165,035.00	sf	2.00	/sf	330,070

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
00	Lifts & Staging	1.00	ls	45,000.00	/ls	45,000
100	Mock ups	1.00	ls	20,000.00	/ls	20,000
100	Miscellaneous					
100	Wall and Soffit Coordination	1.00	ls	50,000.00	/ls	50,000
100	Misc. Touchup and Patching Allowance	1.00	ls	50,000.00	/ls	50,000
100	Misc. Engineering & Associated Work	1.00	ls	25,000.00	/ls	25,000
2499	GWB Ceilings	10,085.00	sf	15.00	/sf	151,275
2499	GWB Ceilings - Rated	1,400.00	sf	20.00	/sf	28,000
2499	GWB Soffiting Allowance	165,035.00	sf	1.50	/sf	247,553
2499	GWB Ceiling Clouds					
2499	GWB Ceilings, Exterior Canopy Soffits	660.00	sf	15.00	/sf	9,900
50	Wall Tile - Painted Mosaic Tile Mural					
50	Wall Tile - Restrooms- 9' AFF	18,000.00	sf	32.00	/sf	576,000
50	Wall Tile - Corridors - 4'6" AFF, 18" x 36"	17,525.00	sf	32.00	/sf	560,800
50	Wall Tile - Cafeteria/Stage 4'3" AFF	1,400.00	sf	32.00	/sf	44,800
50	Wall Tile - Custodial - 4'3" AFF	1,016.00	sf	32.00	/sf	32,512
50	Wall Tile - Cafeteria/Stage 2'10" AFF	100.00	sf	32.00	/sf	3,200
10	Ceramic Floor Tile					
10	Ceramic Floor Tile, 12" x 24"					
10	Waterproofing Membrane / Crack Suppression Membrane					
10	Floor Protection					
2	Terrazzo	18,425.00	sf	42.00	/sf	773,850
2	Terrazzo Treads - Cafeteria Stair	26.00	ea	720.00	/ea	18,720
2	Terrazzo Treads - Stair 2	50.00	ea	720.00	/ea	36,000
2	Terrazzo Treads - Stair 4	82.00	ea	900.00	/ea	73,800
2	Terrazzo inlays, Allowance	1.00	ls	12,000.00	/ls	12,000
2	Floor Protection	18,425.00	sf	1.50	/sf	27,638
2	Terrazzo Landings	1,925.00	sf	50.00	/sf	96,250
2	QZT-1 Quartz Tile	3,535.00	sf	6.50	/sf	22,978
2	Wax and Seal Quartz Tile	3,535.00	sf	1.50	/sf	5,303
2	Floor Protection	3,535.00	sf	0.75	/sf	2,651
2	ACP-1A, Ultima High NRC by Armstrong	96,195.00	sf	8.00	/sf	769,560
2	ACP-2, now ACP-1A per 2/19 email					
2	ACP-2A, now ACP-1A per 2/19 email					
2	ACP-3 - None Shown					
2	ACP-4 - None Shown					
2	ACP-5A, Ceramaguard Fine Fissured by Armstrong	5,625.00	sf	9.00	/sf	50,625
2	ACP-6A, now ACP-1A per 2/19 email					
2	WD-1, Armstrong Woodworks Linear Closed	6,850.00	sf	60.00	/sf	411,000
2	WD-2, Armstrong Woodworks Linear Tegular	1,685.00	sf	60.00	/sf	101,100
2	Floors Moisture Mitigation Testing	10.00	loc	400.00	/loc	4,000
2	Floors Moisture Mitigation - Epoxy & Gym	19,500.00	sf	5.00	/sf	97,500
2	Floors Moisture Mitigation Testing - removed per RECON	-10.00	loc	400.00	/loc	(4,000)
2	Floors Moisture Mitigation - Epoxy & Gym - removed per RECON	-19,500.00	sf	5.00	/sf	(97,500)
2	Common Work Results for Flooring	165,035.00	sf	0.65	/sf	107,273
40	Epoxy Flooring (Custodial) - Dur-a-Flex	7,915.00	sf	25.00	/sf	197,875
40	Floor Protection	7,915.00	sf	1.50	/sf	11,873
145	2-1/2" Wood Athletic Flooring System - Gymnasium	11,585.00	sf	28.00	/sf	324,380
145	Wood Flooring, Stage, Allowance	1,345.00	sf	27.00	/sf	36,315
145	Floor Protection	12,930.00	sf	1.50	/sf	19,395
2	LIN - Linoleum Flooring, BOD = Forbo	81,735.00	sf	8.00	/sf	653,880
2	ESD Static Control Tile (SDT-1)	375.00	sf	15.00	/sf	5,625
2	RAF-1 - Rubber Athletic Flooring, 6mm Thick	4,130.00	sf	24.00	/sf	99,120
2	RSF-1 Resilient Sheet Flooring, BOD = Nora Systems Norament	3,435.00	sf	8.00	/sf	27,480

Item		Description	Takeoff Qty		Total Unit Cost		Amount
	?	Resilient Base	15,440.00	lf	3.50	/lf	54,040
	2	Floor Protection	89,675.00	sf	0.75	/sf	67,256
	2	RAF - Rubber Stair Landings	1,135.00	sf	24.00	/sf	27,240
	2	Rubber Tile Landings & Treads	4.00	flt	4,500.00	/flt	18,000
	002	Seal concrete	3,480.00	sf	4.00	/sf	13,920
	002	Floor Protection	3,480.00	sf	0.75	/sf	2,610
	002	Paint Concrete Floors, Epoxy Paint					
f 10		Carpet Tile, BOD = Interface, Aerial	949.56	sy	60.00	/sy	56,974
f 10		Floor Protection	8,550.00	sf	0.75	/sf	6,413
	20	Metal Grating Frames, Vestibule	955.00	sf	29.00	/sf	27,695
	20	Walk Off Mats	955.00	sf	15.00	/sf	14,325
	20	1/4" Floor Prep	1.00	ls	5,000.00	/ls	5,000
	2	Digitally Printed Wallcoverings (3,380 SF)	1.00	ls	42,250.00	/ls	42,250
	2	DPW-1 - Extended Learning 105C					
	2	DPW-2 - Extended Learning 105E					
	2	DPW-3 - Extended Learning 131E					
	2	DPW-4 - Extended Learning 131C					
	2	DPW-5 - Office 182					
	2	DPW-6 - Corridor 102					
	2	DPW-7 - Extended Learning 205C					
	2	DPW-8 - Extended Learning 230C					
	2	DPW-9 - Extended Learning 205E					
	2	DPW-10 - Extended Learning 230F					
	2	DPW-11 - Extended Learning 230E					
	2	DPW-12 - Cafeteria 168 - w Acoustical Panels					
	2	DPW-13 - Extended Learning 301A					
	2	DPW-14 - Extended Learning 301B					
	2	DPW-15 - Extended Learning 350A					
	2	DPW-16 - Extended Learning 333E					
	2	DPW-17 - Extended Learning 333F					
	2	DPW-18 - Extended Learning 333C					
	2	DPW-19 - Extended Learning 302C					
	2	DPW-20 - Corridor 170					
	2	Stainless Steel Wall Panels - STE Classroom	117.00	sf	15.00	/sf	1,755
	2	Acoustical Wall Panels, Custom Colors	2,220.00	sf	75.00	/sf	166,500
	2	Wood Slat Panels w Acoustical Felt Backing	2,130.00	sf	85.00	/sf	181,050
	2	Tectum Panels w/Custom Images	436.00	sf	65.00	/sf	28,340
	2	2" Tectum Ceiling Panels	440.00	sf	30.00	/sf	13,200
	2	Acoustical Wall Panels, Allowance for Locations Not Shown	1.00	ls	25,000.00	/ls	25,000
	2	2" Tectum Ceiling Panels - Gym - added per RECON	5,000.00	sf	30.00	/sf	150,000
	30	Paint Exterior HM Door Frames	13.00	ea	250.00	/ea	3,250
	30	Paint Exterior HM Doors	13.00	lfs	350.00	/lfs	4,550
	10	Paint Walls	278,692.00	sf	1.00	/sf	278,692
	10	Paint Touch up Allowance	1.00	ls	25,000.00	/ls	25,000
	20	Paint Exposed Ceilings	27,980.00	sf	3.50	/sf	97,930
	20	Paint GWB Ceilings	11,453.00	sf	3.50	/sf	40,086
	30	Paint Pan Stairs & Rails	12.00	Flt	2,500.00	/Flt	30,000
	40	Paint Doors And Frames	376.00	lfs	230.00	/lfs	86,480
	40	Painting Sequencing Allowance	1.00	ls	30,000.00	/ls	30,000
	40	Painting MEP Allowance	1.00	ls	30,000.00	/ls	30,000

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	FINISHES			***81.385/sf***	***13,431,301***
	165,035.00 sf				
10-0000.000	***SPECIALTIES***				
2	Magnetic White Boards 6' x 5'	31.00	ea	475.00 /ea	14,725
2	Magnetic White Boards 3'6" x 3'6"	53.00	ea	400.00 /ea	21,200
2	Tackboards 8' x 2'	38.00	ea	500.00 /ea	19,000
2	Tackboards 6'x6'-6"	75.00	ea	625.00 /ea	46,875
2	Tackboards 5'8" x 1"	52.00	ea	500.00 /ea	26,000
2	Tackboards 4'x5'	1.00	ea	445.00 /ea	445
2	Tackboards 4'x4'	110.00	ea	345.00 /ea	37,950
2	Tackboards 3'6" x 3'6"	55.00	ea	250.00 /ea	13,750
2	Tackboards 3'6 x 1'	110.00	ea	200.00 /ea	22,000
2	Wall Hung TV - By Others - NIC				
110	Signage, TYPE-A (Typical Room)	58.00	ea	60.00 /ea	3,480
110	Signage, TYPE-B (Classroom/Office)	78.00	ea	100.00 /ea	7,800
110	Signage, TYPE-C (Entrance to Suite of Rooms)	58.00	ea	60.00 /ea	3,480
110	Signage, TYPE-D.1 (Male Toilet)	7.00	ea	55.00 /ea	385
110	Signage, TYPE-D.2 (Female Toilet)	7.00	ea	55.00 /ea	385
110	Signage, TYPE-E (Unisex Toilet)	36.00	ea	60.00 /ea	2,160
110	Signage, TYPE-F (Electric, Emergency Electric, IDF/MDF, & Elevator Machine Rooms)	12.00	ea	60.00 /ea	720
110	Signage, TYPE-G (Use at Elevators)	3.00	ea	70.00 /ea	210
110	Signage, TYPE-H (Use at Stair Landing)	12.00	ea	150.00 /ea	1,800
110	Signage, TYPE-J (Use at all Corridor Side of All Stair Doors)	12.00	ea	55.00 /ea	660
110	Signage, TYPE-K (Use at all communicating doors)	2.00	ea	60.00 /ea	120
110	Signage, TYPE-T (Use at all Elevator Machine Rooms)	1.00	ea	100.00 /ea	100
110	LEED Plaques	3.00	ea	850.00 /ea	2,550
110	10x8 ADA Elevator	3.00	ea	75.00 /ea	225
110	12x16 Wayfinding	6.00	ea	215.00 /ea	1,290
110	14x10 Stair Signage	5.00	ea	425.00 /ea	2,125
110	Time Capsule Plaque	1.00	ea	800.00 /ea	800
110	36x42 Dedication Plaque	3.00	ea	8,000.00 /ea	24,000
110	Vinyl Door Numbering	319.00	ea	50.00 /ea	15,950
110	Misc. Signage	1.00	ls	15,000.00 /ls	15,000
110	6" Aluminum Lettering	54.00	letter	70.00 /letter	3,780
110	18" Aluminum Lettering, Face Lit - 'Wilmington Elementary School'	26.00	letter	240.00 /letter	6,240
110	1-Sided Monument Signage - Allowance	1.00	ls	22,000.00 /ls	22,000
110	Includes Exterior 5" Fabricated Letter, Aluminum "WILMINGTON ELEMENTARY SCHOOL"	26.00	ea		
110	Includes Exterior 4" Fabricated Letter, Aluminum "320 SALEM STREET"	14.00	ea		
110	Includes LED Outdoor Signage - 33" x 66" x 10"	1.00	ea		
110	Includes aluminum mounting insert	1.00	ea		
110	38" X 84" MDF Project Signage - Allowance	1.00	ls	1,300.00 /ls	1,300
2	Plastic Toilet Partitions - Standard Height, 55"	34.00	ea	1,200.00 /ea	40,800
2	Plastic Toilet Partitions - ADA	15.00	ea	1,800.00 /ea	27,000
2	Urinal Screen	1.00	ea	500.00 /ea	500

Item	Description	Takeoff Qty		Total Unit Cost		Amount
!	Toilet Partition Installation	1.00	ls	45,000.00	/ls	45,000
20	Curtains & Track	3.00	ea	3,000.00	/ea	9,000
2	Operable Partition - 35' x 10' Height - 155 per Door Schedule; 252 per Dwgs	1.00	ea	70,000.00	/ea	70,000
2	Operable Partition - 23' x 8' Height	3.00	ea	40,000.00	/ea	120,000
2	Operable Partition - 12' x 8' Height - adjusted per RECON	1.00	ea	20,000.00	/ea	20,000
2	42" Grab Bars	100.00	ea	100.00	/ea	10,000
2	Toilet Paper Dispensers	78.00	ea	65.00	/ea	5,070
2	Paper Towel Dispensers	62.00	ea	100.00	/ea	6,200
2	Mirror, framed 18' x 30'	74.00	ea	350.00	/ea	25,900
2	Janitor Mop Racks	7.00	ea	250.00	/ea	1,750
2	Changing Table - Prek / K Toilets	13.00	ea	850.00	/ea	11,050
2	Sanitary Napkin Disposal, Single Bathrooms	6.00	ea	100.00	/ea	600
2	Toilet Accessories - Installation	1.00	ls	20,000.00	/ls	20,000
2	Sharps Container	1.00	ea	250.00	/ea	250
2	Hand Sanitizer Stations	72.00	ea	80.00	/ea	5,760
30	Extinguishers & Recessed Cabinets	1.00	allow	30,000.00	/allow	30,000
30	AED and Cabinet Allowance	1.00	ls	15,000.00	/ls	15,000
10	Lockers, 15x15 Cares Storage 154	8.00	ea	530.00	/ea	4,240
10	Lockers, 18x15 Custodial/Storage 155B	10.00	ea	550.00	/ea	5,500
10	Lockers, 12x12 Kitchen 162	5.00	ea	470.00	/ea	2,350
50	Metal Storage Shelving - NIC					
	SPECIALTIES			***4.814/sf***		***794,475***
	165,035.00 sf					

11-0000.000 EQUIPMENT

30	Refrigerators	12.00	ea	1,800.00	/ea	21,600
100	Front Load Washer	1.00	ea	2,000.00	/ea	2,000
100	Front Load Dryer	1.00	ea	2,000.00	/ea	2,000
100	Freight	1.00	ls	1,500.00	/ls	1,500
100	Unload, Unwrap, and Drop Appliances in Place	14.00	ea	500.00	/ea	7,000
2	Food Service Equipment - Allowance	1.00	ls	876,120.00	/ls	876,120
001	Smart Board & Short Throw Projectors					
001	Smart Board & Short Throw Projectors - Prek / K Classrooms					
001	Smart Board & Short Throw Projectors - Classrooms					
001	Smart Board & Short Throw Projectors - Art Classrooms					
001	Smart Board & Short Throw Projectors - Music Classrooms					
001	Smart Board & Short Throw Projectors - Staff					
001	Smart Board & Short Throw Projectors - Media / Library					
010	Rigging and Curtain System	1.00	allow	75,000.00	/allow	75,000
010	Projector Screens	2.00	ea	15,000.00	/ea	30,000
10	Motorized Basketball Hoops, Winch, Connectors	6.00	ea	12,500.00	/ea	75,000

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
0	Motorized Divider Curtain in Gym	1.00	ea	20,000.00	/ea	20,000
10	Volley Ball Equipment - Allowance	1.00	ls	9,000.00	/ls	9,000
10	Pickle Ball Equipment - Allowance	1.00	ls	5,000.00	/ls	5,000
10	Volley Ball Equipment - Allowance - removed per RECON	-1.00	ls	9,000.00	/ls	(9,000)
10	Pickle Ball Equipment - Allowance - removed per RECON	-1.00	ls	5,000.00	/ls	(5,000)
38	Wall Pads - 6' tall x 2' wide, Fire Rated - Gym, Allowance	1,250.00	sf	35.00	/sf	43,750
38	Interior Scoreboard w/Shot Clock	2.00	ea	20,000.00	/ea	40,000
38	Traverse Wall, climbing Wall - Allowance	540.00	sf	75.00	/sf	40,500
38	Climbing Ropes	6.00	ea	2,000.00	/ea	12,000
38	Adaptive Swings & Hooks - Gym	4.00	ea	4,500.00	/ea	18,000
38	Calming Room Wall Padding - 6' Height	2,375.00	sf	40.00	/sf	95,000
38	Pull up bar	1.00	ea	1,200.00	/ea	1,200
38	PT Platform Swing	1.00	ea	5,500.00	/ea	5,500
001	Kiln (Furnish & Install)	2.00	ea	12,000.00	/ea	24,000
001	Owner Training - Kiln Vendor	1.00	ls	500.00	/ls	500
	EQUIPMENT			***8.427/sf***		***1,390,670***
	165,035.00 sf					

12-0000.000 FURNISHINGS

!	Window Treatments					
2	Type WS1, manual (5,475 SF)	164.00	ea	400.00	/ea	65,600
2	Type WS2, motorized (1,960 SF)	20.00	ea	550.00	/ea	11,000
2	Type WS3, motorized (2,210 SF)	11.00	ea	575.00	/ea	6,325
2	Type WS4, manual (2,480 SF)	269.00	ea	220.00	/ea	59,180
10	Manufactured Casework					
10	Base Cabinets w/Plam Tops	1,235.00	lf	500.00	/lf	617,500
10	Plam Tops w Brackets	255.00	lf	55.00	/lf	14,025
10	Base Cabinets w/Solid Surface Tops	655.00	lf	550.00	/lf	360,250
10	Solid Surface Tops w Brackets	60.00	lf	75.00	/lf	4,500
10	Typical Tall Cabinets	965.00	lf	825.00	/lf	796,125
10	Tall Storage Cubbies	615.00	lf	850.00	/lf	522,750
10	Tall Storage w Markerboard Surfacing	42.00	lf	925.00	/lf	38,850
10	EPI Pen & Inhaler Storage	1.00	ea	850.00	/ea	850
10	Typical Wall Cabinets	1,370.00	lf	300.00	/lf	411,000
10	Narcotics Cabinet	1.00	ea	250.00	/ea	250
10	Student Tables on Casters - STE	12.00	ea	900.00	/ea	10,800
10	Student Tables on Casters - STE - FF&R per RECON	-12.00	ea	900.00	/ea	(10,800)
001	Instrument & Music Library Storage System, Allowance	1.00	ls	25,000.00	/ls	25,000
001	M10-28x29	2.00	ea			
001	MS-70	9.00	ea			
001	MS-xx Music Storage Standard	2.00	ea			
10	Telescopic Bleachers - Gym, 84' Length, 600 Seat	1.00	ls	200,000.000	/ls	200,000

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	FURNISHINGS			***18.985/sf***	***3,133,205***
	165,035.00 sf				
14-0000.000	***CONVEYING SYSTEMS***				
2	Elevator Usage - Operator Time	15.00	Day	1,250.00 /Day	18,750
2	Elevator, Holeless Hydraulic, 4,000lbs	3.00	stop	80,000.00 /stop	240,000
2	Elevator, Cab Flooring - See Div 09 65 00, Resilient Flooring				
2	Elevator, Cab Walls - MFG Full Line of PLAM on plywood				
	CONVEYING SYSTEMS			***1.568/sf***	***258,750***
	165,035.00 sf				
21-0000.000	***FIRE SUPRESSION***				
	Fire Protection General Conditions				
1	Hydraulic Calculations	1.00	ls	2,600.00 /ls	2,600
1	Testing & Inspection	1.00	ls	2,200.00 /ls	2,200
1	Drain & Fill System	1.00	ls	2,800.00 /ls	2,800
1	Coordination and Management	1.00	ls	92,500.00 /ls	92,500
1	Commissioning Assistance	1.00	ls	15,000.00 /ls	15,000
1	Coordination Drawings / BIM	1.00	ls	25,000.00 /ls	25,000
1	Seismic Restraints / Bracing - includes design	1.00	ls	12,000.00 /ls	12,000
1	Coring & Patching / Firestopping	1.00	ls	4,500.00 /ls	4,500
1	Fire Protection Standpipe				
1	2-1/2" Dry Alarm Check Valve w/ Compressor	1.00	ea	6,300.00 /ea	6,300
1	6" Fire Sprinkler Pipe w/ Fittings & Hangers	810.00	lf	73.25 /lf	59,333
1	6" Fire Standpipe Riser	280.00	lf	75.85 /lf	21,238
1	6" Alarm Riser Check Valve Assembly	1.00	ea	7,200.00 /ea	7,200
1	4" Sprinkler Horizontal Standpipe w/ Fittings & Hangers	320.00	lf	56.60 /lf	18,112
1	2-1/2" Sprinkler Drain Pipe w/ Fittings & Hangers	440.00	lf	37.25 /lf	16,390
1	FDC-1 - Fire Department Connection Valve	1.00	ea	3,200.00 /ea	3,200
1	4" Zone Control Valve Assembly	4.00	ea	3,650.00 /ea	14,600
1	2-1/2" FDV in Recessed Cabinet	16.00	ea	1,120.00 /ea	17,920
1	2-1/2" FDV - Riser Fire Department Valve	12.00	ea	325.00 /ea	3,900
1	Fire Protection Sprinkler System				
1	Sprinkler Head - Upright Pendent	288.00	ea	105.00 /ea	30,240
1	Sprinkler Head - Sidewall Under Bleachers	10.00	ea	115.00 /ea	1,150
1	Sprinkler Head - Concealed Pendent	1,096.00	ea	100.00 /ea	109,600
1	Dry Sprinkler Head - Concealed Pendent	22.00	ea	110.00 /ea	2,420
1	Fire Suppression Water Supply and Equipment				

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	8" Fire Sprinkler Pipe - Incoming Service Main	30.00	lf	106.60 /lf	3,198
1	8" Backflow Preventer	1.00	ea	18,250.00 /ea	18,250
1	Fire Hose Cabinet (Stage Area)	1.00	ea	3,000.00 /ea	3,000
1	4" Wet Sprinkler Main Piping w/ Fittings & Hangers	2,680.00	lf	56.60 /lf	151,688
1	2-1/2" Wet Sprinkler Pipe	920.00	lf	37.25 /lf	34,270
1	2" Wet Sprinkler Pipe	4,182.00	lf	26.25 /lf	109,778
1	1-1/2" Wet Sprinkler Pipe	5,576.00	lf	22.40 /lf	124,902
1	Hoisting & Rigging / Floor Loading	1.00	ls	25,000.00 /ls	25,000
1	1-1/4" Wet Sprinkler Pipe	6,970.00	lf	18.60 /lf	129,642
1	2-1/2" Dry Sprinkler Pipe	220.00	lf	58.85 /lf	12,947
1	2" Dry Sprinkler Pipe	190.00	lf	48.45 /lf	9,206
1	1-1/2" Dry Sprinkler Pipe	120.00	lf	42.10 /lf	5,052
1	1-1/4" Dry Sprinkler Pipe	310.00	lf	37.65 /lf	11,672
1	Misc. Valves, Tags & Fittings	1.00	ls	70,698.710 /ls	70,699
1	Fire Hose Cabinet (Stage Area) - removed per RECON	-1.00	ea	3,000.00 /ea	(3,000)
1	Combination Test Connection and Drain Valve	4.00	ea	525.00 /ea	2,100
1	6" Butterfly Valve w/ Tamper Switch	2.00	ea	1,250.00 /ea	2,500
1	4" Butterfly Valve w/ Tamper Switch	4.00	ea	1,050.00 /ea	4,200
1	6" Water alarm check valve	1.00	ea	2,600.00 /ea	2,600
1	6" OS&Y Gate Valve	4.00	ea	1,085.00 /ea	4,340
1	4" OS&Y Gate Valve	4.00	ea	775.00 /ea	3,100
1	4" Check Valve	4.00	ea	1,250.00 /ea	5,000
1	4"Storz Connection	1.00	ea	560.00 /ea	560
1	4" PRV Valve	4.00	ea	330.00 /ea	1,320
1	4" PRV Valve - removed per RECON	-4.00	ea	330.00 /ea	(1,320)
1	EB-1 - Electric Bell	1.00	ea	525.00 /ea	525
1	Tamper Switch	12.00	ea	485.00 /ea	5,820
1	Flow Switch	4.00	ea	380.00 /ea	1,520
	FIRE SUPRESSION			***7.312/sf***	***1,206,770***
	165,035.00 sf				
22-0000.000	***PLUMBING***				
	Gas Piping				
1	Gas Piping, Devices and Equipment - Excluded				
1	Kitchen Plumbing Connections				
1	3-Compartment Sink - C&HW & Indirect Waste Connection Only	1.00	ea	1,210.00 /ea	1,210
1	Hose Reel CW/HW Connections Only	1.00	ea	880.00 /ea	880
1	Convection Steamer CW Connection	1.00	ea	650.00 /ea	650
1	Cooks Table w/ Sink - Connection Only	1.00	ea	880.00 /ea	880
1	Walk-in Cooler Indirect Waste Connection	1.00	ea	450.00 /ea	450
1	Disposer - CW & Waste Connection Only	1.00	ea	880.00 /ea	880
1	Fill Faucet - HW Connection Only	2.00	ea	585.00 /ea	1,170
1	Plumbing Fixtures				
1	P-1 - Water Closet (Wall Hung)	36.00	ea	1,325.00 /ea	47,700
1	P-1A - ADA Water Closet (Wall Hung)	29.00	ea	1,400.00 /ea	40,600
1	P-1B - ADA Water Closet (Wall Hung)	18.00	ea	1,400.00 /ea	25,200
1	P-2 - Urinal	1.00	ea	1,380.00 /ea	1,380

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	P-2A - Urinal	7.00	ea	1,550.00 /ea	10,850
1	P-3 - Lavatory (Wall Hung)	40.00	ea	1,750.00 /ea	70,000
1	P-3A - ADA Lavatory (Wall Hung)	18.00	ea	1,925.00 /ea	34,650
1	P-3B - ADA Lavatory (Wall Hung)	18.00	ea	1,950.00 /ea	35,100
1	P-5 - Sink w/ Integral Bubbler / Faucet (Recessed)	57.00	ea	2,100.00 /ea	119,700
1	P-5A - ADA Sink w/ Integral Bubbler / Faucet (Recessed)	79.00	ea	1,100.00 /ea	86,900
1	P-6 - Water Cooler / Bottle Fill	7.00	ea	2,280.00 /ea	15,960
1	P-6A - Large Sink	1.00	ea	2,280.00 /ea	2,280
1	P-7 - Mop Sink	8.00	ea	1,550.00 /ea	12,400
1	P-8A - Art Room Sink Faucet / Drain (Sink By Others) Solid Interceptor Art Room Sink	1.00	ea	1,900.00 /ea	1,900
1	Emergency Shower / Eyewash Station (Kitchen)	2.00	ea	3,650.00 /ea	7,300
1	Wall Carrier	167.00	ea	625.00 /ea	104,375
1	Domestic Water Distribution				
1	4" Domestic Water Pipe - Mains	300.00	lf	78.80 /lf	23,640
1	3" Domestic Water Pipe - Mains	260.00	lf	68.45 /lf	17,797
1	2-1/2" Domestic Water Pipe - Mains	180.00	lf	52.20 /lf	9,396
1	2" Domestic Water Pipe - Mains	1,240.00	lf	46.40 /lf	57,536
1	1-1/2" Domestic Water Pipe - Mains	890.00	lf	36.45 /lf	32,441
1	1-1/4" Domestic Water Pipe - Mains	290.00	lf	33.30 /lf	9,657
1	1" Domestic Water Pipe - Mains	1,260.00	lf	29.90 /lf	37,674
1	3/4" Domestic Water Pipe - Mains	1,680.00	lf	28.80 /lf	48,384
1	1/2" Domestic Water Pipe - Mains	1,560.00	lf	26.60 /lf	41,496
1	3/4" Domestic Water Pipe - Branch	4,200.00	lf	28.80 /lf	120,960
1	1/2" Domestic Water Pipe - Branch (Type "L" Cu.)	8,880.00	lf	26.60 /lf	236,208
1	Misc. Valves, Tags & Fittings	1.00	ls	158,797.00 /ls	158,797
1	Pipe Insulation - (1/2" - 1-1/4")	17,870.00	lf	9.90 /lf	176,913
1	Sanitary Waste & Vent Piping (Under Ground)				
1	4" Sanitary Waste & Vent Pipe (U)	1,990.00	lf	58.85 /lf	117,112
1	4" Kitchen Waste & Vent Pipe (U)	360.00	lf	58.85 /lf	21,186
1	3" Sanitary Waste & Vent Pipe (U)	280.00	lf	49.75 /lf	13,930
1	2" Kitchen Waste & Vent Pipe (U)	320.00	lf	36.60 /lf	11,712
1	Cleanout	29.00	ea	395.00 /ea	11,455
1	Sanitary Waste & Vent Piping (Above Ground)				
1	4" Sanitary Waste & Vent Pipe (A)	2,560.00	lf	58.85 /lf	150,656
1	3" Sanitary Waste & Vent Pipe (A)	330.00	lf	49.75 /lf	16,418
1	2" Sanitary Waste & Vent Pipe (A)	1,485.00	lf	36.60 /lf	54,351
1	1-1/2" Sanitary Waste & Vent Pipe (A)	7,620.00	lf	28.80 /lf	219,456
1	4" Kitchen Waste & Vent Pipe (A)	880.00	lf	46.80 /lf	41,184
1	2" Kitchen Waste & Vent Pipe (A)	1,390.00	lf	29.60 /lf	41,144
1	1-1/2" Kitchen Waste & Vent Pipe (A)	480.00	lf	28.80 /lf	13,824
1	Floor / Wall Cleanout	16.00	ea	425.00 /ea	6,800
1	Sanitary and Vent Equipment				
1	GI-1 - Grease Interceptor - Exterior				
1	Recessed Grease Interceptor 150 Lbs. / 75 Gallon)	2.00	ls	8,800.00 /ls	17,600
1	Oil Interceptor - 50 GPM (Zurn 1186)	1.00	ea	7,600.00 /ea	7,600
1	FS-1 - Floor Sink	6.00	ea	1,290.00 /ea	7,740
1	FD1- 2" Floor Drain	16.00	ea	440.00 /ea	7,040
1	FD2- 3" Floor Drain	8.00	ea	545.00 /ea	4,360
1	Trap Primer	30.00	ea	885.00 /ea	26,550
1	Storm Drainage Piping				
1	RD-1 - 15" Round Roof Drain / 6" Hub	20.00	ea	1,685.00 /ea	33,700
1	OD-1 - 15" Round Roof Overflow Drain / 6" Hub	20.00	ea	1,685.00 /ea	33,700
1	DN-1 - Downspout Outlet	14.00	ea	950.00 /ea	13,300
1	12" Storm Pipe (U)	290.00	lf	92.45 /lf	26,811
1	10" Storm Pipe (U)	590.00	lf	86.25 /lf	50,888
1	10" Storm Pipe (A)	80.00	lf	94.60 /lf	7,568
1	8" Storm Pipe (U)	360.00	lf	73.55 /lf	26,478

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
		8" Storm Pipe (A)	120.00	lf	82.40	/lf	9,888
	1	6" Storm Pipe (U)	390.00	lf	72.15	/lf	28,139
	1	6" Storm Pipe (A)	2,180.00	lf	72.15	/lf	157,287
	1	4" Storm Pipe (A)	280.00	lf	58.85	/lf	16,478
	1	Freezer Indirect Waste Connection	1.00	ea	250.00	/ea	250
	1	Hand Sink - Connection Only	4.00	ea	625.00	/ea	2,500
	1	Hand Sprayer - C&HW Connection Only	2.00	ea	950.00	/ea	1,900
	1	Hot Food Well - H&CW & Indirect Waste Connection	2.00	ea	600.00	/ea	1,200
	1	Cold Food Well - H&CW & Indirect Waste Connection	4.00	ea	600.00	/ea	2,400
	1	Prep Table w/ Double Sink - Connection Only	1.00	ea	650.00	/ea	650
	1	Steamer Unit, CW & Indirect Waste Connection	1.00	ea	950.00	/ea	950
	1	Warewasher Conveyor - H&CW & Indirect Waste Connection	1.00	ea	1,400.00	/ea	1,400
	1	Washing Machine Valve Box and Connection	1.00	ea	880.00	/ea	880
	1	Pipe Insulation - (1-1/2" - 4")	2,870.00	lf	14.20	/lf	40,754
	1	Domestic Water Equipment					
	1	BFP-1 - 4" Backflow Preventer	1.00	ea	7,250.00	/ea	7,250
	1	1-1/2" RPBP - Reverse Backflow Preventer	1.00	ea	1,400.00	/ea	1,400
	1	Triplex Water Booster Pump Station (5 HP /___Gallon)					
	1	TM-1 - Thermostatic Mixing Valve	1.00	ea	5,500.00	/ea	5,500
	1	TM-2 - Thermostatic Mixing Valve	1.00	ea	5,500.00	/ea	5,500
	1	RP-1 - In-Line Recirc Pump (16 GPM / 1/4 HP)	1.00	ea	1,650.00	/ea	1,650
	1	RP-2 - In-Line Recirc Pump (5 GPM / 1/8 HP)	1.00	ea	1,650.00	/ea	1,650
	1	HB - Hose Bib	14.00	ea	390.00	/ea	5,460
	1	FPHB - Frostproof Hose Bib	12.00	ea	480.00	/ea	5,760
	1	EWH-1 - Electric Water Heater (120 Gallon)	1.00	ea	38,250.00	/ea	38,250
	1	EWH-2 - Electric Water Heater (120 Gallon)	1.00	ea	38,250.00	/ea	38,250
	1	EWH-3 - Electric Water Heater (120 Gal /15 KW)	1.00	ea	29,650.00	/ea	29,650
	1	ET-1 - Expansion Tank	1.00	ea	4,800.00	/ea	4,800
	1	ET-2 - Expansion Tank	1.00	ea	4,800.00	/ea	4,800
	1	Elevator Sump Pump / Oil Separator	1.00	ea	4,800.00	/ea	4,800
	1	SM-1 - 4" Domestic Water Meter	1.00	ea	4,800.00	/ea	4,800
	1	SM-2 - 2-1/2" Domestic Water Meter	1.00	ea	2,850.00	/ea	2,850
	1	SM-4 - 1-1/2" Irrigation Water Meter	1.00	ea	2,400.00	/ea	2,400
	1	4" Water Meter	1.00	ea	8,500.00	/ea	8,500
	1	Water Filter Assembly (FBO) 3/4" CW Connection	2.00	ea	245.00	/ea	490
	1	Misc. Kitchen Equipment Connections	1.00	ls	25,000.00	/ls	25,000
	1	Radon Mitigation System					
	1	Radon In-Line Exhaust Fan	16.00	ea	560.00	/ea	8,960
	1	4" PVC (Sched 40) - Perforated Pipe	3,830.00	lf	38.80	/lf	148,604
	1	4" PVC (Sched 40) - Risers	660.00	lf	38.80	/lf	25,608
	1	Riser Supports	184.00	ea	55.00	/ea	10,120
	1	Crushed Stone - w/ Civil					
	1	Labeling	1.00	ls	800.00	/ls	800
	1	Fireproof Roof Seal / Boot	16.00	ea	240.00	/ea	3,840
	1	Plumbing General Conditions					
	1	Testing & Disinfection	1.00	ls	18,000.00	/ls	18,000
	1	Coordination & Management	1.00	ls	90,000.00	/ls	90,000
	1	Commissioning	1.00	ls	45,000.00	/ls	45,000
	1	Coordination Drawings / BIM	1.00	ls	75,000.00	/ls	75,000
	1	Seismic Restraints / Bracing	1.00	ls	35,000.00	/ls	35,000
	1	Coring & Patching / Firestopping	1.00	ls	22,500.00	/ls	22,500
	1	Hoisting & Rigging / Floor Loading	1.00	ls	15,000.00	/ls	15,000
	1	Equipment start up and inspection	1.00	ls	25,000.80	/ls	25,001
	1	Drain Pipe Insulation	2,160.00	lf	18.75	/lf	40,500
	1	Access Panels - Furnish Only	1.00	ls	10,000.00	/ls	10,000

Item	Description	Takeoff Qty		Unit Cost		Total Amount
	Water Softening System - Allowance added per RECON	1.00	ls	15,000.00	/ls	15,000
	PLUMBING			***21.985/sf***		***3,628,243***
	165,035.00 sf					
23-0000.000	***HVAC***					
	Chilled Water Systems					
1	ASHP-1 - Air Source Heat Pump Chiller (8 - 30 Tons)	1.00	ls	816,000.00	/ls	816,000
1	HVAC Air Distribution					
1	Ductwork Galvanized	158,122.00	lbs	18.00	/lbs	2,846,196
1	Kitchen Grease Duct	1.00	ls	75,000.00	/ls	75,000
1	Kitchen Dishwasher Aluminum Duct	1.00	ls	18,000.00	/ls	18,000
1	Displacement Diffuser	178.00	ea	345.00	/ea	61,410
1	RGD's	330.00	sf	215.00	/sf	70,950
1	Constant Volume Damper	8.00	ea	650.00	/ea	5,200
1	Kitchen Dishwasher Aluminum Duct	1.00	ls	18,000.00	/ls	18,000
1	Displacement Diffuser	178.00	ea	345.00	/ea	61,410
1	RGD's	330.00	sf	215.00	/sf	70,950
1	Constant Volume Damper	8.00	ea	650.00	/ea	5,200
1	Misc. Ductwork Accessories - Volume Dampers, Fire Dampers, Volume Dampers etc.	165,035.00	sf	0.45	/sf	74,266
1	Refrigerant Piping (Includes Hangers & Supports)					
1	Refrigerant Piping -	1,800.00	lf	42.65	/lf	76,770
1	Misc. Valves, Tags & Fittings	1.00	ls	7,677.00	/ls	7,677
1	Condensate Piping					
1	Condensate Drain Pipe (Type "L" Cu.)	580.00	lf	28.50	/lf	16,530
1	Hydronic Piping & Pumps (Includes Hangers & Supports)					
1	Hydronic CW/HW Piping - Mains (Blk Stl. Welded)	11,520.00	lf	71.65	/lf	825,408
1	Hydronic CW/HW Piping - Branch (Type "L" Cu.)	21,180.00	lf	38.85	/lf	822,843
1	6-Way Hydronic Control Valve	156.00	ea	490.00	/ea	76,440
1	BP-1 - ECOCIRC Pump (165 GPM)	1.00	ea	12,500.00	/ea	12,500
1	BP-2 - ECOCIRC Pump (165 GPM)	1.00	ea	12,500.00	/ea	12,500
1	CP-1 - Condensate Pump (6 GPH)	1.00	ea	850.00	/ea	850
1	Heating & Cooling Terminal Equipment					
1	CUH-01 - thru CUH-14 - HW Cabinet Unit Heater	14.00	ea	2,850.00	/ea	39,900
1	DCUe-1 thru DCUe-10 - Ductless Cooling Unit (Indoor Fan Coil Unit)	10.00	ea	16,500.00	/ea	165,000
1	DCUe-1 thru DCUe-10 - Ductless Cooling Unit (Outdoor Condensing Unit)	10.00	ea	7,400.00	/ea	74,000
1	FCU-1-1 - thru FCU-1-6 - Fan Coil	6.00	ea	3,200.00	/ea	19,200
1	RP-1 - HW Radiant Ceiling Panel - 24" - adjusted by 400lf per RECON	4,800.00	lf	145.00	/lf	696,000
1	UH-01 - thru UH-05 - Unit Heater	5.00	ea	2,150.00	/ea	10,750
1	VAV-1-1 Thru VAV-1-43	144.00	ea	1,685.00	/ea	242,640
1	WRU-1 - Wall Radiation Unit (Runttal)	96.00	lf	165.00	/lf	15,840
1	Testing & Balancing					
1	Testing & balancing	165,035.00	sf	0.75	/sf	123,776
1	HVAC General Requirements					

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
	Commissioning Support	1.00	ls	45,000.00	/ls	45,000
1	Coordination & management	1.00	ls	210,000.00	/ls	210,000
1	Coordination / BIM	1.00	ls	80,000.00	/ls	80,000
1	Seismic restraints / bracing	1.00	ls	28,000.00	/ls	28,000
1	Coring & patching / firestopping	1.00	ls	20,000.00	/ls	20,000
1	Hoisting & rigging / floor loading	1.00	ls	25,000.00	/ls	25,000
1	Equipment start up and inspection	1.00	ls	15,000.00	/ls	15,000
1	Access panels - furnish only	1.00	ls	5,000.00	/ls	5,000
1	ASHP-2 - Air Source Heat Pump Chiller (8 - 30 Tons)	1.00	ls	816,000.00	/ls	816,000
1	CP-2 - Condensate Pump (25 GPH)	1.00	ea	1,400.00	/ea	1,400
1	P-1 - Heat Pump Heating Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-2 - Heat Pump Heating Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-3 - Heat Pump Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-4 - Heat Pump Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	Heating Generating Equipment					
1	EB-1 - Electric Hot Water Boiler (1,633 MBH)	1.00	ea	65,000.00	/ea	65,000
1	EB-2 - Electric Hot Water Boiler (1,633 MBH)	1.00	ea	65,000.00	/ea	65,000
1	HX-1 - Plate & Frame Heat Exchanger	1.00	ea	20,000.00	/ea	20,000
1	AS-1 - Air Separator	1.00	ea	6,500.00	/ea	6,500
1	AS-3 - Air Separator	1.00	ea	6,500.00	/ea	6,500
1	AS-6 - Air Separator	1.00	ea	6,500.00	/ea	6,500
1	BT-1 - Heating Hot Water Buffer Tank (500 Gallon)	1.00	ea	9,800.00	/ea	9,800
1	BT-2 - Heating Hot Water Buffer Tank (500 Gallon)	1.00	ea	9,800.00	/ea	9,800
1	CSF-1 - Chemical Shot Feeder	1.00	ea	3,200.00	/ea	3,200
1	ET-1 - Heating Hot Water Expansion Tank	1.00	ea	6,800.00	/ea	6,800
1	ET-2 - Heating Hot Water Expansion Tank	1.00	ea	6,800.00	/ea	6,800
1	GF-1 - Glycol Make -Up Unit	1.00	ea	7,900.00	/ea	7,900
1	30% Glycol System Fill (Heating)	1.00	ls	18,000.00	/ls	18,000
1						
1	HX-2 - Plate & Frame Heat Exchanger	1.00	ea	20,000.00	/ea	20,000
1	AS-2 - Air Separator	1.00	ea	6,500.00	/ea	6,500
1	AS-4 - Air Separator	1.00	ea	6,500.00	/ea	6,500
1	AS-5 - Air Separator	1.00	ea	6,500.00	/ea	6,500
1	BT-3 - Chilled Water Buffer Tank (500 Gallon)	1.00	ea	9,500.00	/ea	9,500
1	BT-4 - Chilled Water Buffer Tank (500 Gallon)	1.00	ea	9,800.00	/ea	9,800
1	CSF-2 - Chemical Shot Feeder	1.00	ea	3,200.00	/ea	3,200
1	ET-3 - Chilled Water Expansion Tank	1.00	ea	6,800.00	/ea	6,800
1	ET-4 - Chilled Water Expansion Tank	1.00	ea	6,800.00	/ea	6,800
1	GF-2 - Glycol Make -Up Unit	1.00	ea	7,900.00	/ea	7,900
1	30% Glycol System Fill (Cooling)	1.00	ea	18,000.00	/ea	18,000
1	P-5 - Building Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-6 - Building Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-7 - Building Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-8 - Building Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-9 -CCHW Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-10 -CCHW Water Pump	1.00	ea	16,150.00	/ea	16,150
1	VFD-1 thru 10 - Variable Frequency Drive	10.00	ea	2,400.00	/ea	24,000
1	Pump Housekeeping Pads	12.00	ea	1,100.00	/ea	13,200
1	Insulation					
1	Duct wrap insulation	126,498.00	sf	5.75	/sf	727,364
1	Duct Liner	1.00	ls	45,000.00	/ls	45,000
1	Grease Duct Fire Wrap	1.00	ls	18,000.00	/ls	18,000
1	Hydronic Pipe Insulation - Mains	11,520.00	lf	16.00	/lf	184,320
1	Hydronic Pipe Insulation - Branch	32,700.00	lf	10.20	/lf	333,540
1	Refrigerant Pipe Insulation	1,800.00	lf	8.25	/lf	14,850
1	Exhaust Fans					
1	EF-1 - Receiving Exhaust Fan	1.00	ea	3,000.00	/ea	3,000

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	EF-2 - Toilet Exhaust Fan - Roof Mounted	1.00	ea	3,000.00 /ea	3,000
1	EF-3 - Toilet Exhaust Fan - Roof Mounted	1.00	ea	3,000.00 /ea	3,000
1	EF-4 - Toilet Exhaust Fan - Roof Mounted	1.00	ea	3,000.00 /ea	3,000
1	KEF-1 - Kitchen Exhaust	1.00	ea	9,500.00 /ea	9,500
1	PEV-1 - Penthouse Elevator Vent	1.00	ea	1,800.00 /ea	1,800
1	Central Air Handling Equipment				
1	RTU-A - Custom Air Handler Unit (CW/HW Coils - 17,000 Cfm)	1.00	ea	408,000.00 /ea	408,000
1	RTU-B - Custom Air Handler Unit (CW/HW Coils - 20,000 Cfm)	1.00	ea	480,000.00 /ea	480,000
1	RTU-C - Custom Air Handler Unit (CW/HW Coils - 17,000 Cfm)	1.00	ea	408,000.00 /ea	408,000
1	RTU-D - Custom Air Handler Unit (CW/HW Coils - 13,000 Cfm)	1.00	ea	312,000.00 /ea	312,000
1	RTU-E - Custom Air Handler Unit (CW/HW Coils - 3,255 Cfm)	1.00	ea	78,120.00 /ea	78,120
1	RTU-F - Custom Air Handler Unit (CW/HW Coils - 10,000 Cfm)	1.00	ea	240,000.00 /ea	240,000
1	RTU-G - Custom Air Handler Unit (CW/HW Coils - 3,000 Cfm)	1.00	ea	72,000.00 /ea	72,000
1	RTU-H - Custom Air Handler Unit (CW/HW Coils - 4,000 Cfm)	1.00	ea	96,000.00 /ea	96,000
1	RTU-I - Custom Air Handler Unit (CW/HW Coils - 2,000 Cfm)	1.00	ea	48,000.00 /ea	48,000
1	MAU-1 - Make-up Air Unit (CW/HW Coils - 4,500 Cfm)	1.00	ls	99,000.00 /ls	99,000
1	Roof Curbs and Dunnage	10.00	ea	5,500.00 /ea	55,000
1	Sound Attenuation	1.00	ls	75,000.00 /ls	75,000
20	Building Management System				
20	Building Management System	165,035.00	sf	8.00 /sf	1,320,280
	HVAC			***85.899/sf***	***14,176,380***
	165,035.00 sf				

26-0000.000 ELECTRICAL

	Electrical Demolition				
2	Disconnect , cut & make safe electric service in footprint of new building	1.00	ls	20,000.00 /ls	20,000
2	Normal Power and Distribution				
2	Switchboard MSB 2500/2000A MCB 277/480v 3-section	1.00	ea	238,790.00 /ea	238,790
2	Switchboard MSB2 2500/2000A MCB 277/480v 3-section	1.00	ea	238,790.00 /ea	238,790
2	Check metering modules	1.00	ea	20,000.00 /ea	20,000
2	Panel EV 600A MLO 120/208v 60p	1.00	ea	15,100.00 /ea	15,100
2	Panel KPP 250A MLO 120/208v 60p	1.00	ea	9,920.15 /ea	9,920
2	Panel LP1A 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP1B 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP2A 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP2B 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP2C 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793

Item	Description	Takeoff Qty		Total Unit Cost	Amount
2	Panel LP3A 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP3B 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel MHP1A 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP2A 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP2B 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP2C 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP3A 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP3B 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MP1A 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
2	Panel MP1B 250A MLO 120/208v 60p	1.00	ea	10,824.53 /ea	10,825
2	Panel MP2A 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
2	Panel MP2B 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
2	Panel MP2C 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
2	Panel MP3A 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
2	Panel MP3B 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
2	Panel OLP 100A MLO 277/480v 30p	1.00	ea	4,273.110 /ea	4,273
2	Panel PP1A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel PP1B 100A MLO 120/208v 60p 200% Neutral	1.00	ea	7,295.68 /ea	7,296
2	Panel PP1S 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel PP2A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel PP2B 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel PP2C 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel PP3A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel PP3B 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel TEP1A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel TEP1B 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
2	Panel TEP2A2 100A MLO 120/208v 60p 200% Neutral	1.00	ea	7,295.68 /ea	7,296
2	Panel TEPA2 100A MLO 120/208v 60p 200% Neutral	1.00	ea	7,295.68 /ea	7,296
2	30KVA UPS MDF Room	1.00	ea	49,510.85 /ea	49,511
2	T-4 30KVA K-13 Transformer 480-120/208v	2.00	ea	11,094.78 /ea	22,190
2	T-5 45KVA K-13 Transformer 480-120/208v	9.00	ea	14,069.12 /ea	126,622
2	T-6 75KVA K-13 Transformer 480-120/208v	5.00	ea	18,251.43 /ea	91,257
2	T-9 225KVA K-13 Transformer 480-120/208v	1.00	ea	33,207.61 /ea	33,208
2	50A 3w Feeder EMT copper	570.00	lf	20.20 /lf	11,514
2	100A 3w Feeder EMT copper	1,500.00	lf	49.91 /lf	74,865
2	100A 4w Feeder EMT copper	2,300.00	lf	57.15 /lf	131,445
2	125A 3w Feeder EMT copper	1,100.00	lf	55.77 /lf	61,347
2	150A 3w Feeder EMT copper	1,100.00	lf	59.77 /lf	65,747
2	150A 4w Feeder EMT copper	60.00	lf	70.22 /lf	4,213
2	225A 4w Feeder EMT copper	230.00	lf	124.46 /lf	28,626
2	250A 4w Feeder EMT copper	120.00	lf	147.110 /lf	17,653
2	400A 4w Feeder EMT copper	1,600.00	lf	185.89 /lf	297,424
2	100A 600V DSN SW Fusible	2.00	ea	1,075.71 /ea	2,151
2	Feeder Pri/sec 30KVA 3PH Transformer	3.00	ea	972.94 /ea	2,919
2	Feeder Pri/sec 45KVA 3PH Transformer	3.00	ea	1,293.04 /ea	3,879
2	Feeder Pri/sec 75KVA 3PH Transformer	4.00	ea	1,994.58 /ea	7,978
2	4" & 2" Empty raceways for future PV system	200.00	lf	75.00 /lf	15,000
2	PV Systems				

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	Based on 500kw (Future Design)				
2	Machine and Equipment Power				
2	ASHP-1 Air source heat pump 480v connection	1.00	ea	4,152.020 /ea	4,152
2	ASHP-2 Air source heat pump 480v connection	1.00	ea	4,152.020 /ea	4,152
2	BP-1 Boiler circ pump 20A 208v connection	1.00	ea	318.350 /ea	318
2	BP-2 Boiler circ pump 20A 208v connection	1.00	ea	318.350 /ea	318
2	CP-1 Condensate pump 20A 120v connection	5.00	ea	215.00 /ea	1,075
2	CUH-1**14 Hot water cabinet unit heaters 20A 120v connection	14.00	ea	711.11 /ea	9,956
2	DCUe/DCUc-1 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-2 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-3 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-4 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-5 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-6 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-7 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-8 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-9 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-10 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	EB-1 Electric boiler 800A 480v connection	1.00	ea	5,454.95 /ea	5,455
2	EB-2 Electric boiler 800A 480v connection	1.00	ea	5,454.95 /ea	5,455
2	EF-1 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	EF-2 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	EF-3 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	EF-4 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	Elevator controller connection	1.00	ea	6,700.00 /ea	6,700
2	Elevator cab power & lighting connection	1.00	ea	1,200.00 /ea	1,200
2	EWH-1 Electric water heater 30A 480v connection	1.00	ea	1,078.45 /ea	1,078
2	EWH-2 Electric water heater 30A 480v connection	1.00	ea	1,078.45 /ea	1,078
2	EWH-3 Electric water heater 30A 480v connection	1.00	ea	1,078.45 /ea	1,078
2	FCU-1**6 Fan coil units 20A 208v 2p connection	6.00	ea	670.94 /ea	4,026
2	GF-1 Glycol make up 20A 120v connection	1.00	ea	304.00 /ea	304
2	GF-2 Glycol make up 20A 120v connection	1.00	ea	304.00 /ea	304
2	KEF-1 Kitchen hood fan 30A 480v connection	1.00	ea	1,311.84 /ea	1,312
2	MV-1 Mixing valve 20A 10v connection	1.00	ea	494.46 /ea	494
2	MV-2 Mixing valve 20A 10v connection	1.00	ea	494.46 /ea	494
2	OMP-1 Oil monitoring panel 20A 120v connection	1.00	ea	1,200.00 /ea	1,200
2	P-1 HP-HHW Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-2 HP-HHW Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-3 HP-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-4 HP-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-5 BLDG HHW-Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-6 BLDG HHW-Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-7 BLDG-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-8 BLDG-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-9 -CCHW Condenser water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-10 -CCHW Condenser water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	RP-1 Circ pump 20A 120v connection	1.00	ea	298.24 /ea	298
2	RP-2 Circ pump 20A 120v connection	1.00	ea	298.24 /ea	298
2	RTU-A Roof top unit 17,000 CFM 480v connection	1.00	ea	6,127.04 /ea	6,127
2	RTU-B Roof top unit 20,000 CFM 480v connection	1.00	ea	6,127.04 /ea	6,127
2	RTU-C Roof top unit 17,000 CFM 480v connection	1.00	ea	6,127.04 /ea	6,127
2	RTU-D Roof top unit 13,000 CFM 480v connection	1.00	ea	4,332.50 /ea	4,333
2	RTU-E Roof top unit 3,255 CFM 480v connection	1.00	ea	1,577.97 /ea	1,578
2	RTU-F Roof top unit 10,000 CFM 480v connection	1.00	ea	4,332.50 /ea	4,333
2	RTU-G Roof top unit 3,000 CFM 480v connection	1.00	ea	2,058.240 /ea	2,058
2	RTU-H Roof top unit 4,000 CFM 480v connection	1.00	ea	1,926.52 /ea	1,927
2	RTU-I Roof top unit 2,000 CFM 480v connection	1.00	ea	1,926.52 /ea	1,927

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
?	SM-1**4 Water sub metering 20A 120v connection	4.00	ea	325.00 /ea	1,300
2	SP-1 Elevator sump pump 20A 208v 2p connection	1.00	ea	365.00 /ea	365
2	SPCP-1 Elevator sump pump control panel 20A 120v connection	1.00	ea	800.00 /ea	800
2	UH-1**5 Hot water unit heaters 20A 120v connection	5.00	ea	530.570 /ea	2,653
2	VAV-** Variable air volume 20A 120v connection	155.00	ea	322.24 /ea	49,947
2	#12/3C MC Cable	5,600.00	lf	5.13 /lf	28,728
2	3/4" - EMT 3#12	3,100.00	lf	11.98 /lf	37,138
2	3/4" - EMT 4#12	350.00	lf	12.92 /lf	4,522
2	3/4" - EMT 5#12	1,300.00	lf	13.85 /lf	18,005
2	3/4" - EMT 3#10	750.00	lf	12.82 /lf	9,615
2	3/4" - EMT 4#10	600.00	lf	13.85 /lf	8,310
2	1" EMT - 4 # 8	300.00	lf	17.09 /lf	5,127
2	60A 4w Feeder EMT copper	1,200.00	lf	27.43 /lf	32,916
2	150A 4w Feeder EMT copper	150.00	lf	70.22 /lf	10,533
2	175A 4w Feeder EMT copper	150.00	lf	75.30 /lf	11,295
2	225A 4w Feeder EMT copper	600.00	lf	124.46 /lf	74,676
2	800A 4w Feeder EMT copper	400.00	lf	393.78 /lf	157,512
2	Allowance for unidentified mechanical equipment	160,731.00	sf	0.35 /sf	56,256
2	Emergency Power and Distribution				
2	600KW Diesel genset , weather proof enclosure w/200KW load bank	1.00	ea	475,000.00 /ea	475,000
2	Type LR4 LED 2"x4' recessed linear	257.00	ea	144.00 /ea	37,008
2	Type LR6 LED 2"x6 recessed linear	106.00	ea	1,440.00 /ea	152,640
2	Type LR6T LED 2"x6 recessed linear	3.00	ea	144.00 /ea	432
2	Type LR8 LED 2"x8 recessed linear	63.00	ea	180.00 /ea	11,340
2	Type LR8T LED 2"x8 recessed linear	4.00	ea	180.00 /ea	720
2	Type LRS LED 2"x10' recessed linear	14.00	ea	180.00 /ea	2,520
2	Type LS2 LED 2' x 2" Utility strip	6.00	ea	216.00 /ea	1,296
2	Type PC2 LED architectural pendant	140.00	ea	360.00 /ea	50,400
2	Type PC3 LED architectural pendant	81.00	ea	360.00 /ea	29,160
2	Type RC1 LED 4" recessed down light	87.00	ea	198.00 /ea	17,226
2	Type RC2 LED 4" recessed down light	98.00	ea	198.00 /ea	19,404
2	Type RC4 LED 6" recessed down light	17.00	ea	216.00 /ea	3,672
2	Type SL3 LED 6" recessed down light wet location	43.00	ea	234.00 /ea	10,062
2	Type SL4 LED wall mount flood	3.00	ea	405.00 /ea	1,215
2	Type SL4 LED wall mount flood	2.00	ea	405.00 /ea	810
2	Type UC LEC 30" undercabinet	130.00	ea	135.00 /ea	17,550
2	Type X1 LED Exit edge lit single face	30.00	ea	180.00 /ea	5,400
2	Type X1W LED Exit edge lit single face wall mount	24.00	ea	216.00 /ea	5,184
2	(L) Slv Wall lighting control	292.00	ea	150.85 /ea	44,048
2	(OS] Ceiling occupancy senser	463.00	ea	186.25 /ea	86,234
2	[LTS] Wall scene controller	5.00	ea	314.82 /ea	1,574
2	[OS-HB] Hi-bay Ceiling occupancy senser	21.00	ea	186.25 /ea	3,911
2	[PS] Lighting photo control	59.00	ea	200.69 /ea	11,841
2	[PS] Partition senser lighting control	2.00	ea	436.35 /ea	873
2	[R] Emergency lighting relay	22.00	ea	529.34 /ea	11,645
2	[RC] Room controller	68.00	ea	790.36 /ea	53,744
2	20A 120-277V S/P Switch , box & plate	16.00	ea	101.52 /ea	1,624
2	25' CAT 6 Lighting control cable	840.00	ea	61.68 /ea	51,811
2	Lighting control wall box	308.00	ea	74.68 /ea	23,001
2	Luminary cable MC 12/2 & 14/2 1-10VDC	33,000.00	lf	6.07 /lf	200,310
2	3/4" - EMT 5#12-2#16 10vdc	2,000.00	lf	30.99 /lf	61,980
2	3/4" - EMT 5#12	150.00	lf	13.85 /lf	2,078
2	3/4" - EMT 5#10	700.00	lf	15.01 /lf	10,507
2	3/4" - EMT 7#12	1,900.00	lf	15.68 /lf	29,792
2	Lighting controls programming	160,731.00	sf	0.15 /sf	24,110

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
	Theater Lighting					
2	Theater lighting & dimming equipment , included in equipment section					
2	Theater lighting system circuits & installation	1.00	allow	125,000.00	/allow	125,000
2	General Power					
2	Device Branch					
2	20A 125V 3W Single recept, box & plate	133.00	ea	120.66	/ea	16,048
2	20A 125V Duplex receptacle, box & plate	803.00	ea	106.65	/ea	85,640
2	20A 125V Duplex GFCI receptacle, box & plate	128.00	ea	124.75	/ea	15,968
2	20A 125V Duplex GFCI receptacle, box & WP plate	9.00	ea	131.29	/ea	1,182
2	(2) 20A 125V Duplex receptacle, box & plate	212.00	ea	155.610	/ea	32,989
2	L5-30R 30A 125V 3Wire TL receptacle, box & plate IDF closet	24.00	ea	161.830	/ea	3,884
2	L5-30R 30A 125V 3Wire TL receptacle, box & plate MDF racks	24.00	ea	161.830	/ea	3,884
2	[ADO] Automatic door operator & connection	12.00	ea	627.02	/ea	7,524
2	[PP] Door push plate & circuit	24.00	ea	452.07	/ea	10,850
2	[FB1] 8 Gang floor box w/ branch & Telcom raceways	2.00	ea	1,937.68	/ea	3,875
2	15-50R 250V 4W Kiln receptacle, box & plate	2.00	ea	249.93	/ea	500
2	20A Cord reel w/ 25' cable	6.00	ea	1,447.97	/ea	8,688
2	30A 250/600V DSN SW NF Kiln disconnect	2.00	ea	414.93	/ea	830
2	Auto flush/faucet valve connection	118.00	ea	228.59	/ea	26,974
2	Emergency pull switch & light	4.00	ea	989.46	/ea	3,958
2	Gymnasium circuit 3/4" - EMT 4#12	580.00	ea	13.41	/ea	7,778
2	Hand Dryer connection	40.00	ea	215.14	/ea	8,606
2	Motorized shade connection	6.00	ea	246.14	/ea	1,477
2	Motorized shade control connection	2.00	ea	347.86	/ea	696
2	Overhead coiling door operator connection	1.00	ea	754.72	/ea	755
2	Backstop circuits 3/4" - EMT 5#12	925.00	ea	14.49	/ea	13,403
2	Basketball backstop receptacle & connection	6.00	ea	3,600.00	/ea	21,600
2	Bleacher driver motor connection	2.00	ls	2,200.00	/ls	4,400
2	Shot clock & scoreboard connection	2.00	ea	5,900.00	/ea	11,800
2	Kiln EPO shut down	1.00	ea	1,017.76	/ea	1,018
2	Kitchen equipment connections 20A 3w allowance	1.00	ls	30,000.00	/ls	30,000
2	3/4" - EMT 3#12	500.00	ea	11.98	/ea	5,990
2	3/4" - EMT 5#12	1,000.00	ea	13.85	/ea	13,850
2	3/4" - EMT 7#12	2,200.00	ea	15.68	/ea	34,496
2	3/4" - EMT 7#10	3,800.00	ea	17.37	/ea	66,006
2	#12/2C MC Cable	23,000.00	ea	4.28	/ea	98,440
2	General Power Reconciliation Balancing - added per RECON	-1.00	ls	72,316.00	/ls	(72,316)
2	100A 4p 480v Generator quick connect switch	1.00	inc			
2	ATS-LS 200A 4' ISO bypass transfer switch 277/480v	1.00	inc			
2	ATS-OS 1000A 4p 277/480v transfer switch	1.00	ea	3,321.85	/ea	3,322
2	Dist. Panel NEDP 1000A MLO 277/480v	1.00	ea	5,741.02	/ea	5,741
2	Panel EHP1B 100A MLO 277/480v 42p	1.00	ea	2,453.58	/ea	2,454
2	Panel EHP2B 100A MLO 277/480v 42p	1.00	ea	2,453.58	/ea	2,454
2	Panel EHP3B 100A MLO 277/480v 42p	1.00	ea	2,453.58	/ea	2,454
2	Panel ELP1A 100A MCB 277/480v 42p	1.00	ea	2,598.02	/ea	2,598
2	Panel ELP1B 225A MCB 277/480v 42p	1.00	ea	2,598.02	/ea	2,598
2	Panel ELP2A 100A MCB 277/480v 42p	1.00	ea	2,598.02	/ea	2,598
2	Panel ELP2B 100A MCB 277/480v 42p	1.00	ea	2,598.02	/ea	2,598
2	Panel ELP2C 100A MCB 277/480v 42p	1.00	ea	2,598.02	/ea	2,598
2	Panel ELP3A 100A MCB 277/480v 42p	1.00	ea	2,598.02	/ea	2,598
2	Panel ELP3B 100A MCB 277/480v 42p	1.00	ea	2,598.02	/ea	2,598
2	Panel EP1A 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68	/ea	3,936

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	Panel EP1B 100A MLO 120/208v 72p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP2A 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP2B 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP2C 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP3A 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP3B 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel MHP1B 400A MLO 277/480v 42p	1.00	ea	2,742.45 /ea	2,742
2	T-5 45KVA K-13 Transformer 480-120/208v	2.00	ea	14,069.12 /ea	28,138
2	Feeder Pri/sec 45KVA 3PH Transformer	2.00	ea	1,293.04 /ea	2,586
2	# 3 MI cable feeder	1,350.00	lf	162.76 /lf	219,726
2	100A 4w Feeder EMT copper	1,000.00	lf	57.15 /lf	57,150
2	125A 3w Feeder EMT copper	400.00	lf	55.77 /lf	22,308
2	225A 4w Feeder EMT copper	325.00	lf	124.46 /lf	40,450
2	Feeder Pri/sec 150A 3PH Transformer	1.00	lf	2,186.280 /lf	2,186
2	Lighting and Branch				
2	Lighting				
2	Lighting fixture budget allowance	1.00	ls	1,425,000.00 /ls	1,425,000
2	Lighting unit prices include installations & supports				
2	Type LC1 LED 50' Flexible tape under stair tread	2.00	ea	1,080.00 /ea	2,160
2	Type LCD LED Flexible tape in corner mounted channel	27.00	ea	1,440.00 /ea	38,880
2	Type LK22 LED 2x2 recessed food prep grade	40.00	ea	180.00 /ea	7,200
2	Type LP2 LED 4' pendant dir/ind	1.00	ea	225.00 /ea	225
2	Type LP4 LED 4' pendant dir/ind	42.00	ea	225.00 /ea	9,450
2	Type LP6 LED 6' pendant dir/ind	31.00	ea	261.00 /ea	8,091
2	Type LP8 LED 8' pendant dir/ind	367.00	ea	261.00 /ea	95,787
2	Type LP12 LED 12' pendant dir/ind	1.00	ea	297.00 /ea	297
2	Type LPG LED Gym high bay	30.00	ea	360.00 /ea	10,800
2	Type LR2 LED 2"x2' recessed linear	23.00	ea	108.00 /ea	2,484
2	Type LS4 LED 4' x 2" Utility strip	20.00	ea	180.00 /ea	3,600
2	Type LS6 LED 6' x 2" Utility strip	14.00	ea	216.00 /ea	3,024
2	Type LS8 LED 2' x 8" Utility strip	34.00	ea	252.00 /ea	8,568
2	Type PC1 LED architectural pendant	92.00	ea	360.00 /ea	33,120
2	#12/3C MC Cable	26,000.00	ea	5.28 /ea	137,280
2	#10/3C MC Cable	2,500.00	ea	5.57 /ea	13,925
2	60A 4w Feeder EMT copper	120.00	ea	27.43 /ea	3,292
2	Lightning and Power Specialties				
2	Building & service grounding	1.00	ls	30,000.00 /ls	30,000
2	Lighting protection	1.00	ls	125,000.00 /ls	125,000
2	Miscellaneous Systems				
2	Temporary power and lights	1.00	ls	225,000.00 /ls	225,000
2	Subcontractor general conditions	1.00	ls	287,000.00 /ls	287,000
2	BIM Coordination	1.00	ls	45,000.00 /ls	45,000
2	Bond excluded				
2	Testing and Commissioning				
2	Testing and commissioning	1.00	ls	50,000.00 /ls	50,000
2	Normal Power distribution reconciliation balancing	-1.00	ls	200,000.000 /ls	(200,000)
	ELECTRICAL			***44.653/sf***	***7,369,314***
	165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	ELECTRICAL			***44.653/sf***	***7,369,314***
	165,035.00 sf				
27-0000.000	***COMMUNICATIONS***				
)01	Telephone and Communications Systems				
001	Telecomm wall sleeve 1" - EMT	335.00	lf	165.00 /lf	55,275
001	Telcom backbone (2) 4" EMT w/hangers - adjusted per RECON	500.00	lf	118.05 /lf	59,025
001	Telcom closet ground 1/0 THHN 1" EMT	320.00	lf	18.79 /lf	6,013
001	1/4" x 4" x 3' Ccpper ground bar	4.00	ea	491.82 /ea	1,967
001	Telcom wall & floor sleeves 4" x 12"	33.00	ea	235.82 /ea	7,782
001	12" Wx 3" Dx 9" Spacing Alum cable tray	130.00	ea	68.91 /ea	8,958
001	12x 12x 6" BOX HNGD CVR - NEMA 3R	9.00	ea	378.39 /ea	3,406
001	IDF racks horizontal wire management	6.00	ea	763.93 /ea	4,584
001	IDF Closet 2-post rack, 45u	3.00	ea	601.560 /ea	1,805
001	48 Port 1-RMU FO Patch panel	2.00	ea	380.43 /ea	761
001	48 Port CAT6 UTP Patch panel	32.00	ea	339.13 /ea	10,852
001	(CAM) 1-CAT 6A Devices , termination & testing	104.00	ea	90.97 /ea	9,461
001	(W) 1-CAT 6A Devices , termination & testing	127.00	ea	90.97 /ea	11,553
001	1-CAT 6A Devices , termination & testing	6.00	ea	90.97 /ea	546
001	2-CAT 6A Devices , termination & testing	28.00	ea	159.360 /ea	4,462
001	2-CAT 6A Devices , termination & testing FP location	106.00	ea	159.360 /ea	16,892
001	3-CAT 6A Devices , termination & testing	160.00	ea	232.09 /ea	37,134
001	4-CAT 6A Devices , termination & testing	3.00	ea	300.48 /ea	901
001	(WAP) 2-CAT 6A Devices , termination & testing	192.00	ea	86.64 /ea	16,635
001	CORD - 10' 1F PATCH ST>SC MM	1,150.00	ea	46.59 /ea	53,579
001	CORD - 10' PATCH CMR CAT6A BLU	100.00	ea	36.79 /ea	3,679
001	CBL - CMP CAT6A UTP BLU	275,000.00	lf	1.45 /lf	398,750
001	FO Cable 24F MM OM4 Armored	350.00	lf	7.20 /lf	2,520
001	FO Cable 24F SM OS2 Armored	350.00	lf	4.65 /lf	1,628
001	FO Terminations	288.00	ea	68.65 /ea	19,771
001	Telecommunications - Network Switches and Telephone Equipment - added per RECON	1.00	ls	585,000.00 /ls	585,000
001	Electronic technology equipment by owner				
001	Av System				
001	AV Equipment & installation	1.00	Budget	450,000.00 /Budget	450,000
001	AV wall sleeve (1) 1" & (1) 1-1/4" - EMT & box	204.00	ea	557.080 /ea	113,644
001	[L1] ALS Antennae backbox & wall sleeve	1.00	ea	209.28 /ea	209
001	[S1] Gymnasium speaker backbox & wall sleeve	11.00	ea	260.220 /ea	2,862
001	AV Ceiling projector location box & 1" sleeve	2.00	ea	209.72 /ea	419
001	Cafeteria AV 1-1/4" wall sleeve	21.00	ea	341.39 /ea	7,169
001	AV raceway rough in for classrooms	59.00	ea	500.00 /ea	29,500
001	16" Wx 4" D Wire mesh cable tray	90.00	lf	45.00 /lf	4,050
001	Digital signs	1.00	ls	25,000.00 /ls	25,000
001	Public Address Systems				
001	(TB) Classroom talk back 8" Ceiling speaker	67.00	ea	315.00 /ea	21,105
001	[CB] classroom call station	59.00	ea	619.170 /ea	36,531
001	[SR] Classroom sound reinforcement speaker	75.00	ea	1,500.00 /ea	112,500
001	Paging 8" ceiling speaker	300.00	ea	260.00 /ea	78,000
001	PA speaker w/volume control	107.00	ea	185.73 /ea	19,873

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
)01	One way wall mounted Speaker	29.00	ea	215.13 /ea	6,239
001	One way exterior wall mounted Speaker	8.00	ea	325.00 /ea	2,600
001	Exterior wall mount speaker	1.00	ea	405.00 /ea	405
001	Gymnasium sound system raceways	660.00	lf	13.48 /lf	8,897
001	Gymnasium One way ceiling mounted box Speaker	12.00	ea	450.00 /ea	5,400
001	#18- 2P Twisted pr cable	30,000.00	lf	1.27 /lf	38,100
001	Gymnasium sound system	1.00	ls	25,000.00 /ls	25,000
001	Public address Systems equipment & installation	1.00	ls	75,000.00 /ls	75,000
001	Program Clock System				
001	Equipment & programming allowance	1.00	ls	20,000.00 /ls	20,000
001	12" Surface wireless clock	145.00	ea	410.00 /ea	59,450
001	16" Surface wireless clock w/wire guard	2.00	ea	600.00 /ea	1,200
001	DAS Radio Repeater System				
001	Radio Repeater system - Allowance	1.00	ls	125,000.00 /ls	125,000
001	Cell Booster System - Allowance - adjusted per RECON	1.00	ls	250,000.00 /ls	250,000
	COMMUNICATIONS			***17.215/sf***	***2,841,093***
	165,035.00 sf				

28-0000.000 ELECTRONIC SAFETY & SECURITY

10	Security Access Control &CCTV				
10	[CR] Car reader raceway, device	65.00	ea	720.13 /ea	46,808
10	Security door rough-in raceways & boxes	65.00	ea	439.91 /ea	28,594
10	[DC] Door contact	108.00	ea	124.85 /ea	13,484
10	[REX] Request to exit	65.00	ea	185.00 /ea	12,025
10	[DJ] 8x8x4 Door security junction box	65.00	ea	110.89 /ea	7,208
10	[EL] Electric door lock	65.00	ea	115.00 /ea	7,475
10	[DH] Door transfer hinge	65.00	ea	75.00 /ea	4,875
10	[KP] Digital key pad , raceway	2.00	ea	673.42 /ea	1,347
10	[LD] Local down em button	11.00	ea	388.42 /ea	4,273
10	[MO] Ceiling motion sensor & cable	52.00	ea	142.62 /ea	7,416
10	[MS] Master call station	1.00	ea	676.23 /ea	676
10	[IC] Voice intercom station	14.00	ea	489.24 /ea	6,849
10	[P] Panic call button, & raceway sleeve	14.00	ea	220.00 /ea	3,080
10	[CCTV] Ceiling mount dome camera	54.00	ea	460.00 /ea	24,840
10	[CCTV] Wall mount fixed camera	24.00	ea	460.00 /ea	11,040
10	[CCTV] Exterior wall mount camera	8.00	ea	2,480.00 /ea	19,840
10	[CCTV] Exterior wall mount 360d camera	18.00	ea	3,780.00 /ea	68,040
10	#18- 1P Communication cable	4,000.00	lf	1.33 /lf	5,320
10	#18- 2P Communication cable	100.00	lf	1.71 /lf	171
10	#18/6C Shielded communication cable	15,000.00	lf	3.76 /lf	56,400
10	#22- 2P Communication cable	1,000.00	lf	1.60 /lf	1,600
10	#22/2C Communication cable	2,000.00	lf	1.34 /lf	2,680
10	#22/4C Communication cable	3,000.00	lf	1.47 /lf	4,410
10	Access control & CCTV head end equipment , programming & commissioning	1.00	ea	225,000.00 /ea	225,000
10	Fire Alarm System				
10	Equipment ,devices and programming	1.00	ls	235,000.00 /ls	235,000
10	F/A Addressable control panels per section	1.00	ea	4,621.72 /ea	4,622

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
0	F/A Radio master box	1.00	ea	866.57 /ea	867
10	F/A Remote annunciator	3.00	ea	577.71 /ea	1,733
10	F/A Mass notification local control panel	8.00	ea	577.71 /ea	4,622
10	F/A Graphic display	1.00	ea	433.28 /ea	433
10	F/A Knox box	1.00	ea	554.35 /ea	554
10	F/A Terminal cabinet	5.00	ea	577.71 /ea	2,889
10	Fass notification message board	2.00	ea	577.71 /ea	1,155
10	F/A Exterior rotating beacon	1.00	ea	774.07 /ea	774
10	F/A Pull station installed w/back box	15.00	ea	279.02 /ea	4,185
10	F/A CO detector installed w/.back box	12.00	ea	206.74 /ea	2,481
10	F/A Smoke detector installed w/back box	160.00	ea	475.82 /ea	76,131
10	F/A Mass notification strobe ceiling mount installed w/back box	206.00	ea	239.91 /ea	49,421
10	F/A Mass notification strobe wall mount installed w/back box	34.00	ea	266.27 /ea	9,053
10	F/A Combo Mass Notification Speaker/strobe wall mount installed w/back box	45.00	ea	223.63 /ea	10,063
10	F/A Speaker/strobe ceiling mount installed w/back box	202.00	ea	326.05 /ea	65,862
10	F/A Strobe wall mount installed w/back box	33.00	ea	179.86 /ea	5,935
10	F/A Tamper switch & monitor module	16.00	ea	454.79 /ea	7,277
10	F/A Door holder installed w/back box	4.00	ea	546.87 /ea	2,187
10	F/A Flow switch & monitor module	5.00	ea	452.94 /ea	2,265
10	F/A Control/ monitor module relay	10.00	ea	353.70 /ea	3,537
10	F/A SLC/NAC 3/4" EMT & loop circuits	4,400.00	lf	11.39 /lf	50,116
10	F/A SLC/NAC RISER 1" EMT & loop circuits	1,500.00	lf	13.66 /lf	20,490
10	F/A 14/4 FPLP/MC cable	14,200.00	lf	4.16 /lf	59,072
10	F/A 16/2 FPLP/MC cable	6,500.00	lf	3.08 /lf	20,020
10	Area of refuge	1.00	ea	25,000.00 /ea	25,000
10	F/A 16/2 FPLP/MC cable	2,200.00	lf	3.26 /lf	7,172
	ELECTRONIC SAFETY & SECURITY			***7.492/sf***	***1,236,369***
	165,035.00 sf				

31-0000.000 EARTHWORK

0	SITE PREPARATION				
10	Mobilization	1.00	ls	10,738.64 /ls	10,739
10	Construction Stakeout	1.00	ls	37,585.25 /ls	37,585
10	Saw Cutting	700.00	lf	5.00 /lf	3,500
10	Soil Classification Costs	1.00	ls	25,000.00 /ls	25,000
10	Winter Conditions Allowance Plowing	2.00	seas	35,000.00 /seas	70,000
10	Soil Testing/Classification Costs - By others				
10	SITE DEMOLITION				
10	Site Utility Demolition	1.00	ls	250,000.00 /ls	250,000
10	Remove & Salvage				
10	Benches	1.00	ea	250.00 /ea	250
10	Soccer Plaque	1.00	ea	500.00 /ea	500
10	Playground Memorial Plaque	1.00	ea	500.00 /ea	500
10	Existing Curb, Salvage	940.00	lf	25.00 /lf	23,500
10	Remove & Dispose				
10	Existing Fence	980.00	lf	15.00 /lf	14,700

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
0	Existing Curb, Dispose	502.00	lf	15.00 /lf	7,530
10	Concrete Walks	7,202.00	sf	5.00 /sf	36,010
10	Strip & Remove Existing Asphalt Drives & Walkways	7,997.00	sf	3.75 /sf	29,989
10	Irrigation Systems & Pump House	1.00	ls	7,500.00 /ls	7,500
10	SITE ENABLING				
10	Temp Access Road E&B (Between Permanant)	400.00	cy	45.00 /cy	18,000
10	Temp Access Gravel Entrance	400.00	cy	55.00 /cy	22,000
10	Temp Access Remove	400.00	cy	15.00 /cy	6,000
10	Stone Construction Entrances	1.00	ls	15,000.00 /ls	15,000
10	Stone Construction Entrances, Relocate	1.00	ls	7,500.00 /ls	7,500
10	Contractor Parking / Trailer Base - E & B	1,970.00	cy	45.00 /cy	88,650
10	Contractor Parking / Trailer Base - 12" Thick	1,970.00	cy	55.00 /cy	108,350
10	Contractor Parking / Trailer Base - 12" Thick, Removals	1,970.00	cy	15.00 /cy	29,550
10	Trailer Utility Connections	2.00	ea	10,000.00 /ea	20,000
10	Site Phasing / Re-Mobilization	1.00	ls	25,000.00 /ls	25,000
10	UST Removal and Soil - Allowance - added per RECON	1.00	ls	50,000.00 /ls	50,000
10	Soil Disposal per UST - Allowance - added per RECON	100.00	cy	250.00 /cy	25,000
20	Remove Trees - Allowance (still in Progress per L0.01)	1.00	ls	250,000.00 /ls	250,000
20	Sitework 60%-100% Bridging Allowance	1.00	ls	350,000.00 /ls	350,000
20	Vibration Monitoring - Allowance - to be revisited during 60CD RECON	1.00	ls	175,000.00 /ls	175,000
20	Unforeseen Conditions - Allowance	1.00	ls	70,000.00 /ls	70,000
10	Phase 1				
10	Cut To Fill	5,345.00	cy	15.00 /cy	80,175
10	Building Pad Raise with onsite material prior to GI install	4,835.00	cy	15.00 /cy	72,525
10	Import for delta of building pad	160.00	cy	55.00 /cy	8,800
10	Subgrade	402,285.00	sf	0.25 /sf	100,571
10	Fill for remainder of site	9,950.00	cy	55.00 /cy	547,250
10	Phase 2				
10	Cut To Fill	3,000.00	cy	20.00 /cy	60,000
10	Export Surplus Soils	4,000.00	cy	20.00 /cy	80,000
10	Arsenic Soils Export Disposal Allowance - 4,000 CY	6,800.00	ton	15.00 /ton	102,000
10	Arsenic Soils Export Disposal Allowance - additional per RECON	1.00	ls	250,000.00 /ls	250,000
10	Building Excavation				
10	Building Excavation - Frost Walls and Piers	18,385.00	cy	15.00 /cy	275,775
10	Sand and Gravel Structural Base Under Slab - 12"	2,978.00	cy	55.00 /cy	163,790
10	Rock Removals from Building Footprint Allowance	200.00	cy	250.00 /cy	50,000
10	Building Backfilling, Imported Material	15,714.00	cy	45.00 /cy	707,130
10	Underslab Utility E&B	2,500.00	lf	42.00 /lf	105,000
10	Ground Improvements				
10	Rammed Aggregate Piers at Entire Building Footprint	1.00	ls	750,000.00 /ls	750,000
10	Prepare Bases				
10	Dense Grade Below Paving, 2 - 6" Lifts	5,241.00	cy	50.00 /cy	262,050
10	Gravel Base Below Basketball Courts, 8"	273.00	cy	50.00 /cy	13,650
10	Gravel Base Below Concrete Walks, 8"	1,125.00	cy	50.00 /cy	56,250
10	Gravel Base Below Concrete Pavers, 8"	240.00	cy	50.00 /cy	12,000
10	Gravel Base Below Synthetic Turf, 8"	216.00	sy	50.00 /sy	10,800
10	Washed Stone Below Turf Field, 8"	146.00	sy	50.00 /sy	7,300
10	Gravel Base Below Playground PIP, 12"	980.00	cy	50.00 /cy	49,000
10	Gravel Base Below Concrete Shed Pad, 36" Thick	28.00	cy	50.00 /cy	1,400
10	Gravel Base Below Concrete Pads, 12" Thick	36.00	cy	50.00 /cy	1,800

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
0	Gravel Base Below Granite Bench, 2' width x 2'-8"	38.00	cy	50.00	/cy	1,900
10	Radon Mitigation					
10	Radon Mitigation Piping E&B	3,687.00	lf	55.00	/lf	202,785
10	Dewatering	1.00	ls	30,000.00	/ls	30,000
10	Interior Utility Earthwork					
10	Trench Excavation & Backfill - UG Plumbing	1,292.00	cy	45.00	/cy	58,140
10	Pipe Bedding	575.00	cy	60.00	/cy	34,500
10	Dispose of Excess (Assumed Clean)	575.00	cy	15.00	/cy	8,625
10	Foundation Perimeter Drains - Not Shown, Not Included					
10	Formed Openings Thru Foundation Walls (Predominantly at Kitchen) - Allowance added per RECON	1.00	ls	25,000.00	/ls	25,000
003	SWPPP Plan & Monitoring	1.00	ls	15,000.00	/ls	15,000
003	Silt Fence - Install	2,770.00	lf	10.00	/lf	27,700
003	Erosion Controls - Maintain	32.00	mnth	300.00	/mnth	9,600
003	Erosion Controls - Remove	2,770.00	lf	5.00	/lf	13,850
003	12" Straw Wattle	2,770.00	lf	7.50	/lf	20,775
003	Street Sweeping	250.00	hrs	200.00	/hrs	50,000
003	Misc. Erosion Control Measures	2,770.00	lf	17.18	/lf	47,589
003	Inlet Protection	27.00	ea	104.16	/ea	2,812
003	Construction Fence	2,770.00	lf	75.00	/lf	207,750
003	Jersey Barriers	1.00	ls	35,000.00	/ls	35,000
	EARTHWORK			***38.390/sf***		***6,335,645***
	165,035.00 sf					
32-0000.000	***EXTERIOR IMPROVEMENTS***					
25	E4, Bituminous Concrete Paving, Sport Court Paving	1,272.73	sy	8.054	/sy	10,251
25	A6, Concrete Unit Pavers - Pedestrian w pattern (A7)	9,510.00	sf	1.289	/sf	12,255
25	Concrete Pads	1,367.33	sf	1.289	/sf	1,762
25	Loading Dock - part of Building Concrete					
25	HMA, Parking and Drives	15,686.61	sy	35.00	/sy	549,031
25	Fine Grading - Driveway/Parking	15,686.61	sy	1.50	/sy	23,530
25	HMA, Basketball Courts	1,272.73	sy	25.773	/sy	32,802
25	Fine Grading - Basketball	1,320.00	sy	2.00	/sy	2,640
6	Site Concrete, Foundations	3,250.00	sf	40.00	/sf	130,000
6	Site Concrete - Flatwork					
6	Site Concrete, Flatwork, P&F - Sidewalks, 6" Thickness - adjusted per RECON	45,565.00	sf	12.00	/sf	546,780
6	Site Concrete, Flatwork, P&F - Paver Base, 4" Thickness - adjusted per RECON	9,720.00	sf	12.00	/sf	116,640
6	Site Concrete, Flatwork Materials	964.00	cy	155.00	/cy	149,420
6	Site Concrete					
6	Granite Slab Bench Footings, 1' thick x 2' width, F&P	190.00	lf	80.00	/lf	15,200
6	Granite Slab Bench Footings, Material	13.00	cy	155.00	/cy	2,015

Item	Description	Takeoff Qty		Total Unit Cost	Amount
6	Bench Footings	10.00	ea	1,500.00 /ea	15,000
6	Trash / Recycling Footings	11.00	ea	250.00 /ea	2,750
6	Table Footings	5.00	ea	2,500.00 /ea	12,500
6	Circular Bench Footings	2.00	ea	2,500.00 /ea	5,000
6	Free Form Bench Footings	4.00	ea	2,500.00 /ea	10,000
6	Shed Footing Mat Slab 1' Thick, 10'x20'	200.00	sf	11.00 /sf	2,200
6	Shed Footing Mat Slab , Material	8.00	cy	171.00 /cy	1,368
6	Raised Garden Bed 6" Thick, 4'x4'	6.00	ea	500.00 /ea	3,000
6	Main Entry Sign (AG0.04) - Form And Place, Footings & Wall	191.00	sfca	20.00 /sfca	3,820
6	Main Entry Sign (AG0.04) - Material	5.50	cy	171.00 /cy	941
6	Main Entry Sign (AG0.04) - Rigid Insulation, 3"	78.00	sf	3.00 /sf	234
2	Veritcal Granite Curb - Straight	3,435.00	lf	58.00 /lf	199,230
2	Veritcal Granite Curb - Radius	2,012.00	lf	62.00 /lf	124,744
2	Precast Concrete Curbing	900.00	lf	50.00 /lf	45,000
2	Precast Concrete Curbing - Turf Edger	360.00	lf	50.00 /lf	18,000
2	CIP Concrete Curbing - Fence Strip	310.00	lf	65.00 /lf	20,150
6	Line Painting	1.00	ls	45,000.00 /ls	45,000
6	Painted Courts	3.00	ea	27,276.15 /ea	81,828
6	Painted 4-Square	3.00	ea	2,416.193 /ea	7,249
6	Temp Line Striping	1.00	ls	15,000.00 /ls	15,000
001	Exterior Score Board Allowance				
001	Basketball Goals	4.00	ea	9,000.00 /ea	36,000
001	Soccer Goals	2.00	ea	8,500.00 /ea	17,000
001	E9, Player Benches	2.00	ea	2,500.00 /ea	5,000
20	Synthetic Lawn Areas	8,842.00	sf	20.00 /sf	176,840
20	Rubber Play Surfacing @ Playground	26,433.00	sf	36.90 /sf	975,378
20	Synthetic Turf Prep				
20	Concrete Edger, Excavate & Backfill Edging	360.00	lf	50.00 /lf	18,000
20	Finegrading	7,880.00	sf	2.00 /sf	15,760
20	Synthetic Turf				
20	A10, Synthetic Turf, Play Shock Pad	4,805.00	sf	6.90 /sf	33,155
20	A11, Synthetic Turf, Play Mound Shock Pad	2,642.00	sf	6.90 /sf	18,230
001	Traffic Signs, Allow	1.00	ls	10,738.64 /ls	10,739
001	Entry Signs, Allow	1.00	ea	16,107.97 /ea	16,108
001	D1, 6' Long Benches w Arms	7.00	ea	8,000.00 /ea	56,000
001	D2, 6' Long Backless Benches - None Shown				
001	D3, Table w Integral Seats	2.00	ea	7,725.00 /ea	15,450
001	D4, Table w Integral Seats & ADA Seat	3.00	ea	7,000.00 /ea	21,000
001	D5, Litter Receptacles	11.00	ea	5,000.00 /ea	55,000
001	D6, Bicycle Racks	23.00	ea	977.00 /ea	22,471
001	D7, Aluminum Flagpole, Internal Halyard	2.00	ea	15,000.00 /ea	30,000
001	D8, 10' x 20' Prefabricated Shed	1.00	ea	25,000.00 /ea	25,000
001	D9, Raised Garden Beds, ADA Compliant	6.00	ea	1,835.00 /ea	11,010
001	D10, Free-Form Benches	4.00	ea	7,425.00 /ea	29,700
001	D11, Sculptural Benches	2.00	ea	13,275.00 /ea	26,550
001	D12, Backless Curved Benches	4.00	ea	1,700.00 /ea	6,800
001	D13, Movable Cube Seats, Free-Standing	17.00	ea	175.00 /ea	2,975
001	D14, Circular Benches	2.00	ea	1,500.00 /ea	3,000
001	D15, Shade Structure	6.00	ea	48,767.00 /ea	292,602
001	D16, Drinking Fountain w Bottle Filler, ADA Compliant	2.00	ea	225.00 /ea	450
001	B1, Masonry Panel System Seatwall, Self-Capping - adjusted per RECON	140.00	lf	1,200.00 /lf	168,000
001	B2, Granite Slab Monolithic Benches - adjusted per RECON	70.00	lf	350.00 /lf	24,500
001	B2/B3, Assumed Seating - Not Tagged	520.080	lf	350.00 /lf	182,028
001	B3, Granite Slab Monolithic Bench Layout	187.31	lf	350.00 /lf	65,559
001	C1, Vehicular Bollards, Stainless Steel w LED Light	16.00	ea	725.00 /ea	11,600

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
)01	C2, Vehicular Bollards, Stainless Steel nonlit	16.00	ea	650.00	/ea	10,400
001	Playground Equipment - Pre-K	1.00	allow	283,500.00	/allow	283,500
001	Playground Equipment - K -> 2nd	1.00	allow	331,380.00	/allow	331,380
001	Playground Equipment - 3 -> 5	1.00	allow	409,500.00	/allow	409,500
001	Playground Underdrainage	1.00	ls	100,000.000	/ls	100,000
001	Existing Playground to be Reinstalled & Salvaged - added per RECON (in place of Alt)	1.00	allow	150,000.00	/allow	150,000
20	Fencing					
20	C4, Metal Fencing, 4' height	300.00	lf	140.00	/lf	42,000
20	C5, Self-Closing Latch Metal Double Gate, 6' width	2.00	ea	850.00	/ea	1,700
20	C6, Self-Closing Latch Metal Single Gate, 4' width	1.00	ea	525.00	/ea	525
20	C7, Chain Link Fencing, 4' height	622.00	lf	110.00	/lf	68,420
20	C8, Self-Closing Latch Pedestrian Chain Link Single Gate, 4' width - None Shown					
20	C9, Self-Closing Latch Pedestrian Chain Link Double Gate, 6' width	3.00	ea	725.00	/ea	2,175
20	C10, Self-Closing Magnetic Childproof Gate Lock - None Shown					
20	C11, Chain Link Sport Court Fencing, 10' height	1,230.00	lf	200.00	/lf	246,000
20	C12, Chain Link Sport Court Double Gate, 10' width	4.00	ea	1,200.00	/ea	4,800
20	C13, Wood Privacy Fencing, 6' height	895.00	lf	135.00	/lf	120,825
20	C14, Utility Screen Fencing, 6' height	185.00	lf	150.00	/lf	27,750
20	C14, Utility Screen Double Gate, 5' width	3.00	ea	435.00	/ea	1,305
20	C15, Vehicular Barrier Double Swing Gate, 24' width	4.00	ea	12,000.00	/ea	48,000
20	C16, Vehicular Barrier Double Swing Gate, 22' width - None Shown					
2	Retaining Wall - Block Wall, 4' Height	175.00	lf	1,250.00	/lf	218,750
2	Planted Underdrainage Area to receive Sprinkler Irrigation	13,751.00	sf	3.00	/sf	41,253
2	Underdrainage Area	36,393.00	sf	2.25	/sf	81,884
2	Schematic Irrigation Controller Power Conduit from Building - w Electrical	647.700	lf			
2	Schematic Irrigation Water Supply Pipe from Building - w Civil	630.39	lf			
2	Two-Wire, Internet Based Irrigation Controller	1.00	ea	150.00	/ea	150
2	Quick Coupling Valve	4.00	ea	225.00	/ea	900
2	2" Isolation Valve	3.00	ea	200.00	/ea	600
2	2" Master Valve	1.00	ea	200.00	/ea	200
2	Irrigation Mainline 2" PVC class 200	453.66	lf	35.00	/lf	15,878
2	1.5" Flow Sensor	1.00	ea	1,500.00	/ea	1,500
2	2" Irrigation Point of Connection in Landscape	1.00	ls	2,500.00	/ls	2,500
2	6" Pop-Up Gear-Driven Rotor w 3/4" Inlet (Stainless Steel Riser)	24.00	ea	175.00	/ea	4,200
25	Mulching	45.00	cy	165.00	/cy	7,425
10	Strip Topsoil	15,200.00	cy	10.00	/cy	152,000
10	Import and Place Topsoil - Lawn Areas, 6"	3,700.00	cy	45.00	/cy	166,500
10	Export Topsoil - Assumed Clean	15,200.00	cy	10.00	/cy	152,000
10	Arsenic Topsoil Disposal Allowance - 7,500 CY	12,750.00	tons	15.00	/tons	191,250
10	Planting Soils - 12"	230.00	cy	85.00	/cy	19,550
5	Lawn and Planting Maintenance	1.00	ls	15,000.00	/ls	15,000
5	Fine Rake And Seed	178,214.00	sf	0.45	/sf	80,196
120	Trees and Plantings - Allowance	1.00	ls	450,000.00	/ls	450,000
120	Deciduous Screening Trees					
120	Acer Freeman "Freeman Maple" 2"-2.5" cal. 30' oc	13.00	ea			
120	Acer Rubrum "Red Sunset" 3"-3.5" cal. 30' oc	9.00	ea			
120	Acer Saccharum "Green Mountaint" 2.5"-3" cal. 30' oc	4.00	ea			

Item	Description	Takeoff Qty		Total Unit Cost	Amount
20	Amelanchier Canadensis 6'-7' ht 15' oc	14.00	ea		
120	Betula Nigra "Heritage" 14'-16' ht 20' oc	17.00	ea		
120	Carpinus Caroliniana 2.5"-3" cal. 20' oc	7.00	ea		
120	Gleditsia Tria. Inermis "Halka" 3"-3.5" cal. 30' oc	11.00	ea		
120	Liquidambar Styraciflua 2.5"-3" cal. 30' oc	8.00	ea		
120	Liriodendron Tulipifera 3"-3.5" cal. 30' oc	3.00	ea		
120	Magnolia Virginiana 8'-10' ht 12' oc	11.00	ea		
120	Malus "Spring Snow" 2"-2.5" cal. 20' oc	2.00	ea		
120	Nyssa Sylvatica 2"-2.5" cal. 30' oc	15.00	ea		
120	Platanus x Acerifolia "Exclamation" 2"-2.5" cal. 30' oc	10.00	ea		
120	Prunus Subhirtela "Autumnalis" 2.5"-3" cal. 20' oc	3.00	ea		
120	Quercus Bicolor 2.5"-3" cal. 30' oc	6.00	ea		
120	Evergreen Screening Trees				
120	Abies Balsamea 12'-14' ht 15' oc	12.00	ea		
120	Abies Concolor 8'-10' ht 15' oc	3.00	ea		
120	Larix Larcina 10'-12' ht 15' oc	12.00	ea		
120	Picea Glauca 8'-10' ht 15' oc	4.00	ea		
120	Thuja Occidentalis "Nigra" 10'-12' ht 10' oc	39.00	ea		
120	Thuja Plicata "Green Giant" 10'-12' ht 15' oc	21.00	ea		
120	Deciduous Screening Shrubs				
120	Calycanthus Floridus 36"-48" ht 6' oc	43.00	ea		
120	Clethra Alnifolia "Hummingbird" 24"-30" ht 6' oc	30.00	ea		
120	Cornus Swida Serice Sericea "Arctic Fire" 18"-24" ht 5' oc	60.00	ea		
120	Hamamelis Virginiana 4'-5' ht 8' oc	25.00	ea		
120	Viburnum Dentatum "Christom" 24"-30" ht 5' oc	40.00	ea		
120	Evergreen Screening Shrubs				
120	Ilex Verticillata "Red Sprite" 18"-24" ht 5' oc	50.00	ea		
120	Ilex Verticillata "Jim Dandy" 24"-30" ht 5' oc	3.00	ea		
120	Screening Understory Seed Mixes				
120	Non-Irrigated Ernmx-132-1 Shade Right-of-Way Native Woods Mix w Annual Ryegrass	9,869.00	sf		
120	Non-Irrigated Ernmx-156 Low-Growing Wildflower and Grass Mix	13,471.00	sf		
120	Turfgrass				
120	Irrigated Multi-Use Athletic Field Seed Mix	13,553.00	sf		
120	Non-Irrigated General Lawn Seed Mix	99,161.00	sf		
120	Non-Irrigated Multi-Use Athletic Field Seed Mix	36,221.00	sf		
120	Non-Irrigated Shade Lawn Seed Mix	5,939.00	sf		
120	Deciduous Shrubs				
120	Fothergilla Gardenii 18"-24" ht 3' oc	39.00	ea		
120	Ithea Virginica "Henry's Garnet" 24"-30" cont. 3' oc	25.00	ea		
120	Spiraea Japonica "Little Princess" 18"-24" ht 3' oc	13.00	ea		
120	Syringa Patula "Miss Kim" 30"-36" ht 4' oc	12.00	ea		
120	Evergreen Shrubs				
120	Ilex Glabra "Compacta" 24"-30" ht 4' oc	20.00	ea		
120	Juniperus Horizontalis "Bar Harbor" 15"-18" sp. 3' oc	93.00	ea		
120	Pinus Mugo "Pumilio" 18"-24" ht 3' oc	33.00	ea		
120	Rhododendron Yakushimanum 24"-30" ht 4' oc	15.00	ea		
120	Perennials				
120	Allium "Globemaster" #1 gal. 18" oc	33.00	ea		
120	Aster Novae-Angliae "Purple Dome" #1 gal. 18" oc	31.00	ea		
120	Astilbe Japonica "Deutschland" #1 gal. 18" oc	148.00	ea		
120	Athyrium Filix-Femina 2 qt. cont. 18" oc	57.00	ea		
120	Chrysanthemum Weyrichii "White Bomb" #1 gal. 24" oc	37.00	ea		
120	Hemerocallis x "Joan Senior" #1 gal. 24" oc	86.00	ea		
120	Liriope Spicata #1 qt 12" oc	446.00	ea		

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
	20	Rudbeckia Fulgia Var. "Goldsturm" 1 gal. 24" oc	55.00	ea			
	120	Salvia Nemorosa "Carodonna" 1 gal. 12" oc	137.00	ea			
	120	Sedum Rupestre "Silver" #1 qt 12" oc	90.00	ea			
	120	Thymus Praecox "Elfin" 2 qt. cont. 18" cont.	32.00	ea			
	120	Grasses					
	120	Festuca Glauca "Elijah Blue" 10"-18" ht. 18" oc	159.00	ea			
	120	Miscanthus Sinensis "Little Kitten" #2 gal. 48" oc	22.00	ea			
	120	Penninsetum Alop. "Hamlen" #2 gal. 36" oc	33.00	ea			
		EXTERIOR IMPROVEMENTS			***48.640/sf***		***8,027,259***
		165,035.00 sf					
33-0000.000		***UTILITIES***					
:	4	Domestic & Fire Protection Water Supply					
c	4	Permits	1.00	ls	1,000.00	/ls	1,000
c	4	Test Pits	12.00	ea	1,500.00	/ea	18,000
c	4	Trench Protection	1.00	ls	2,500.00	/ls	2,500
c	4	Trench Excavate & Backfill (Typical Trench 7'-10"h x 3'-8"w)	1,735.00	cy	35.00	/cy	60,725
c	4	Pipe Bedding	322.00	cy	50.00	/cy	16,100
c	4	Utility Crossing	12.00	ea	500.00	/ea	6,000
c	4	Interior Building Connection	2.00	ea	750.00	/ea	1,500
c	4	8" D.I. Pipe (Zinc Coated)	1,481.00	lf	100.00	/lf	148,100
c	4	8" D.I. Fittings	16.00	ea	800.00	/ea	12,800
c	4	8" Gate Valve & Box	9.00	ea	4,000.00	/ea	36,000
c	4	8" Tapping Sleeve & Valve	2.00	ea	10,000.00	/ea	20,000
c	4	6" D.I. Pipe (Zinc Coated)	147.00	lf	95.00	/lf	13,965
c	4	6" D.I. Fittings	20.00	ea	800.00	/ea	16,000
c	4	6" Gate Valve & Box	7.00	ea	2,500.00	/ea	17,500
c	4	Hydrants & Tees	4.00	ea	9,500.00	/ea	38,000
c	4	Steel Sleeves Through New Foundation	2.00	ea	500.00	/ea	1,000
c	4	Connect to Existing	3.00	loc	500.00	/loc	1,500
c	4	Restrained Joints	15.00	ea	75.00	/ea	1,125
c	4	Poly Wrap	1,630.00	lf	3.00	/lf	4,890
c	4	Thrust Blocks	15.00	ea	175.00	/ea	2,625
c	4	Warning Tape	1,630.00	lf	0.15	/lf	245
c	4	Clean, Test, Disinfect	1.00	ls	5,000.00	/ls	5,000
c	4	As-Builts	1.00	ls	500.00	/ls	500
c	4	Dispose of Excess (Assumed Clean)	322.00	cy	15.00	/cy	4,830
	8	Sewer Pipe and Trenching					
	8	Trench Protection	1.00	ea	2,500.00	/ea	2,500
	8	Trench Excavate & Backfill (Typical Trench 7'-10"h x 3'-8"w)	1,022.00	cy	35.00	/cy	35,770
	8	Pipe Bedding	260.00	cy	60.00	/cy	15,600
	8	Utility Crossing	8.00	ea	500.00	/ea	4,000
	8	8" SDR 35 PVC Pipe	995.00	lf	30.00	/lf	29,850
	8	8" Fittings	36.00	ea	200.00	/ea	7,200
	8	Clean Out	5.00	ea	750.00	/ea	3,750
	8	Grease Trap	1.00	ea	15,000.00	/ea	15,000
	8	Connect to Existing Sewer MH	1.00	ea	500.00	/ea	500
	8	Sewer Manhole	11.00	ea	5,000.00	/ea	55,000

Item		Description	Takeoff Qty		Total Unit Cost	Amount
	8	Warning Tape	960.00	ea	0.15 /ea	144
	8	Clean, Test	1.00	ea	7,500.00 /ea	7,500
	8	As-Builts	1.00	ea	500.00 /ea	500
	8	Dispose of Excess (Assumed Clean)	260.00	cy	15.00 /cy	3,900
04-06		Storm Drainage Systems				
04-06		Trench Excavate & Backfill, Storm Piping	1,374.00	cy	35.00 /cy	48,090
04-06		Stone Bedding	179.00	cy	60.00 /cy	10,740
04-06		Building Connection	4.00	ea	250.00 /ea	1,000
04-06		Warning Tape	2,877.00	lf	0.15 /lf	432
04-06		Permits	1.00	ls	1,000.00 /ls	1,000
04-06		Clean & Video Inspect Existing	1.00	ls	2,500.00 /ls	2,500
04-06		Utility Crossings	10.00	ea	500.00 /ea	5,000
04-06		12" HDPE Pipe	2,000.00	lf	22.00 /lf	44,000
04-06		15" HDPE Pipe	694.00	lf	40.00 /lf	27,760
04-06		18" HDPE Pipe	183.00	lf	50.00 /lf	9,150
04-06		12" HDPE Fittings	65.00	ea	350.00 /ea	22,750
04-06		15" HDPE Fittings	28.00	ea	400.00 /ea	11,200
04-06		18" HDPE Fittings	10.00	ea	500.00 /ea	5,000
04-06		Connect to Existing MH	2.00	ea	500.00 /ea	1,000
04-06		Catch Basins	24.00	ea	4,800.00 /ea	115,200
04-06		Drain Manholes	30.00	ea	4,500.00 /ea	135,000
04-06		Water Quality Units	2.00	ea	20,000.00 /ea	40,000
04-06		Clean, Test	1.00	ls	5,000.00 /ls	5,000
04-06		As-Builts	1.00	ls	500.00 /ls	500
04-06		Dispose of Excess (Assumed Clean)	180.00	cy	15.00 /cy	2,700
04-06		Field Under Drain - Not Yet Designed				
04-06		Underdrain Allowance	50,270.00	sf	2.25 /sf	113,108
04-06		Infiltration Systems - Pipe 1, 180' x 28' - 7' Depth				
04-06		Bulk Excavate	1,307.00	cy	15.00 /cy	19,605
04-06		36" HDPE	1,260.00	lf	110.00 /lf	138,600
04-06		Filter Fabric	11,460.00	sf	0.60 /sf	6,876
04-06		Stone Bedding, Minus Pipe Volume	302.00	cy	60.00 /cy	18,120
04-06		Pipe End Caps	14.00	ea	300.00 /ea	4,200
04-06		Clean Outs	7.00	ea	1,000.00 /ea	7,000
04-06		Backfill w/ Insitu Material	676.00	cy	15.00 /cy	10,140
04-06		Dispose of Excess (Assumed Clean)	631.00	cy	15.00 /cy	9,465
04-06		Infiltration Systems - Pipe 2, 140' x 50' - 7' Depth				
04-06		Bulk Excavate	1,815.00	cy	15.00 /cy	27,225
04-06		36" HDPE	1,680.00	lf	110.00 /lf	184,800
04-06		Filter Fabric	15,266.00	sf	0.60 /sf	9,160
04-06		Stone Bedding, Minus Pipe Volume	424.00	cy	60.00 /cy	25,440
04-06		Pipe End Caps	24.00	ea	300.00 /ea	7,200
04-06		Clean Outs	12.00	ea	1,000.00 /ea	12,000
04-06		Backfill w/ Insitu Material	951.00	cy	15.00 /cy	14,265
04-06		Dispose of Excess (Assumed Clean)	864.00	cy	15.00 /cy	12,960
04-06		Infiltration Systems # 3 - Cultec R300HD, 202' x 135' - 6.5' Depth				
04-06		Bulk Excavate - adjusted per RECON	3,119.00	cy	15.00 /cy	46,785
04-06		Filter Fabric	56,225.00	sf	0.60 /sf	33,735
04-06		Stone Bedding	2,854.00	cy	60.00 /cy	171,240
04-06		Storm-Tech Chambers, 45 Cu/Ft per chamber	400.00	ea	750.00 /ea	300,000
04-06		Storm-Tech End Caps	40.00	ea	300.00 /ea	12,000
04-06		Clean Outs	2.00	ea	1,000.00 /ea	2,000
04-06		Backfill w/ Insitu Material	3,030.00	cy	15.00 /cy	45,450
04-06		Dispose of Excess (Assumed Clean)	3,535.00	cy	15.00 /cy	53,025
	008	Electrical Site Distribution - Site Contractor Scope				
	008	Trench Excavate & Backfill	645.00	cy	35.00 /cy	22,575
	008	Site Lighting Conduit Trench	4,600.00	lf	15.00 /lf	69,000
	008	Utility Crossings	16.00	ea	500.00 /ea	8,000
	008	Concrete Encasement - 255 Yards Total				

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
)08	UG Electric Duct Bank - AA - 10 - 4" PVC Conduits, 18" x 41"	726.00	lf	57.00 /lf	41,382
008	UG Electric Duct Bank - BB - 4 - 4" PVC Conduits, 18" x 18"	105.00	lf	25.00 /lf	2,625
008	UG Electric Duct Bank - CC - 6 - 4" PVC Conduits, 18" x 26"	337.00	lf	36.00 /lf	12,132
008	UG Electric Duct Bank - DD - 6 - 4" PVC Conduits, 18" x 26"	35.00	lf	36.00 /lf	1,260
008	UG Electric Duct Bank - EE - 12 - 4" PVC Conduits, 26" x 33"	75.00	lf	66.00 /lf	4,950
008	UG Electric Duct Bank - FF - 18 - 4" PVC Conduits, 26" x 48"	145.00	lf	97.00 /lf	14,065
008	Warning Tape	6,023.00	lf	0.15 /lf	903
008	Prepare for Equipment Pads	2.00	ea	1,000.00 /ea	2,000
008	Transformer Pad, Precast	2.00	ea	2,750.00 /ea	5,500
008	E&B for Generator Pads	1.00	ls	5,400.00 /ls	5,400
008	Light Pole Bases	60.00	ea	355.00 /ea	21,300
008	Electrical Manhole	6.00	ea	1,250.00 /ea	7,500
008	Dispose of Excess (Assumed Clean)	255.00	cy	15.00 /cy	3,825
001	Electrical Site Distribution				
001	Primary service riser pole (2) 4" GRC	1.00	ea	2,800.00 /ea	2,800
001	Primary service duct bank 4x 4" PVC	615.00	lf	100.00 /lf	61,500
001	Service pad grounding	2.00	ea	1,722.00 /ea	3,444
001	Secondary service #1 (6) 4" PVC	224.00	ea	850.56 /ea	190,525
001	Secondary service #2 (6) 4" PVC	209.00	ea	841.81 /ea	175,938
001	Electric utility manhole grounding & racks	2.00	ea	4,772.38 /ea	9,545
001	Generator pad grounding	2.00	lf	3,177.32 /lf	6,355
001	Generator feeder (4) 4" PVC 1200A	191.00	ea	568.24 /ea	108,534
001	Generator feeder (2) 1 1/2" PVC 100A	57.00	ea	66.25 /ea	3,776
001	Generator -quick connect feeder (2) 1 1/2" PVC 100A	144.00	ea	42.56 /ea	6,129
001	EV Provision In-grade pull box	10.00	ea	890.50 /ea	8,905
001	EV Feeder 100A 3w PVC copper	3,600.00	ea	20.82 /ea	74,952
001	Site sign connection	2.00	lf	347.86 /lf	696
001	Site sign circuits 1" PVC 4#6	1,305.00	lf	23.05 /lf	30,080
001	Electrical Site Lighting				
001	Site Lighting fixture budget	1.00	ls	175,000.00 /ls	175,000
001	Lighting unit prices include installations & supports				
001	Type SL1 LED single head on 12.5 pole	57.00	ea	865.00 /ea	49,305
001	Type SL2 LED single head on 12.5 pole	4.00	ea	865.00 /ea	3,460
001	Type SL6 LED In grade flood	6.00	ea	347.41 /ea	2,084
001	Type SL3 LED bollard	16.00	ea	361.07 /ea	5,777
001	Type SL3B LED bollard	16.00	ea	361.07 /ea	5,777
001	24" precast concrete pole base	61.00	ea	1,159.51 /ea	70,730
001	Bollard precast support base	32.00	ea	951.91 /ea	30,461
001	Site lighting branch 1" PVC 4 #8	4,400.00	lf	11.45 /lf	50,380
001	Site lighting branch 1 1/4" PVC - 4 # 4	1,236.00	lf	17.55 /lf	21,692
001	In grade oull box	4.00	ea	890.50 /ea	3,562
001	Site Communications				
001	Telecomm service pole riser (2) 4" GRC	1.00	lf	3,394.81 /lf	3,395
001	Telcom duct bank 5x 4" PVC 1-w/3 inner ducts	820.00	lf	125.00 /lf	102,500
001	4'x 4'x 6' Telcom manhole grounding & racks	2.00	lf	2,035.00 /lf	4,070

UTILITIES ***23.130/sf*** ***3,817,328***

165,035.00 sf

Item	Description	Takeoff Qty	Total Unit Cost	Total Amount
	UTILITIES		***23.130/sf***	***3,817,328***
	165,035.00 sf			

Estimate Totals

Description	Amount	Totals	Rate
Direct Cost	**107,224,898**	**107,224,898**	
Design Contingency	5,361,245		5.000 %
Escalation	4,664,283		4.350 %
Construction Contingency	2,680,622		2.500 %
Subtotal	**12,706,150**	**119,931,048**	
Sub Default Insurance	767,810		
General Requirements	5,681,683		
General Conditions	5,733,391		
Preconstruction Services			
	12,182,884	**132,113,932**	
General Liability Insurance	1,507,040		1.095 %
Performance Bond	956,523		0.695 %
Builder's Risk Insurance	265,624		0.193 %
Pollution Insurance	66,062		0.048 %
General Building Permit - Waived			
Subtotal	**2,795,249**	**134,909,181**	
CM Fee	2,720,000		
Subtotal	**2,720,000**	**137,629,181**	
Project GSF 165,035			
Total		**137,629,181**	



Fontaine Bros. UNI Summary - Combined

Division		Cost/SF		Total Amount
A10 FOUNDATIONS				
A1010 Standard Foundations	165,035 sf	12.71 /sf	$	2,098,203
A1030 Slab on Grade	165,035 sf	21.99 /sf	$	3,628,850
B10 SUPERSTRUCTURE				
B1010 Floor Construction	165,035 sf	34.71 /sf	$	5,728,652
B1020 Roof Construction	165,035 sf	37.06 /sf	$	6,115,404
B20 EXTERIOR VERTICAL ENCLOSURES				
B2010 Exterior Walls	165,035 sf	77.51 /sf	$	12,791,739
B2020 Exterior Windows	165,035 sf	17.18 /sf	$	2,836,075
B2030 Exterior Doors	165,035 sf	1.38 /sf	$	227,200
B30 EXTERIOR HORIZONTAL ENCLOSURES				
B3010 Roof Coverings	165,035 sf	16.68 /sf	$	2,752,476
B3020 Roof Openings	165,035 sf	2.03 /sf	$	334,706
C10 INTERIOR CONSTRUCTION				
C1010 Interior Partitions	165,035 sf	41.51 /sf	$	6,850,191
C1020 Interior Doors	165,035 sf	8.41 /sf	$	1,387,356
C1030 Fittings	165,035 sf	11.35 /sf	$	1,873,748
C20 STAIRS				
C2010 Stair Construction	165,035 sf	4.08 /sf	$	673,695
C2020 Stair Finishes	165,035 sf	1.65 /sf	$	272,770
C30 INTERIOR FINISHES				
C3010 Wall Finishes	165,035 sf	11.65 /sf	$	1,921,894
C3020 Floor Finishes	165,035 sf	15.77 /sf	$	2,603,106
C3030 Ceiling Finishes	165,035 sf	12.48 /sf	$	2,060,328
D10 CONVEYING				
D1010 Vertical Conveying Systems	165,035 sf	1.65 /sf	$	273,100
D20 PLUMBING				
D20 PLUMBING	165,035 sf	21.98 /sf	$	3,628,243
D30 HVAC				
D30 HVAC	165,035 sf	85.90 /sf	$	14,176,380
D40 FIRE PROTECTION				
D40 FIRE PROTECTION	165,035 sf	7.31 /sf	$	1,206,770
D50 ELECTRICAL				
D50 ELECTRICAL	165,035 sf	69.36 /sf	$	11,446,775
E10 EQUIPMENT				
E1010 Commercial Equipment	165,035 sf	5.31 /sf	$	876,120
E1060 Residential Equipment	165,035 sf	0.21 /sf	$	34,100
E1090 Other Equipment	165,035 sf	2.91 /sf	$	480,450
E20 FURNISHINGS				
E2010 Fixed Furnishings	165,035 sf	19.04 /sf	$	3,142,205
F20 DEMOLITION				
F20 Demolition & Abatement	165,035 sf	12.12 /sf	$	2,000,000
G10 SITE WORK				
G10 Site Preparation	165,035 sf	24.26 /sf	$	4,004,000
G20 Site Improvements	165,035 sf	48.37 /sf	$	7,983,035
G30 Site Utilities	165,035 sf	14.44 /sf	$	2,383,538
G40 Site Electrical	165,035 sf	8.69 /sf	$	1,433,790
		Total Direct Cost	**$**	**107,224,898**
		Design Contingency	$	5,361,245
		Escalation	$	4,664,283
		Construction Contingency	$	2,680,622
		Sub Default Insurance	$	767,810
		General Requirements	$	5,681,683
		General Conditions	$	5,733,391
		Preconstruction Services	NIC	
		General Liability Insurance	$	1,507,040
		Performance Bonds	$	956,523
		Builder's Risk Insurance	$	265,624
		Pollution Insurance	$	66,062
		Building Permit	NIC	
		CM Fee (OH&P)	$	2,720,000
		Project Total	**$**	**137,629,181**

BREAKOUTS (INCLUDED IN BASE BID)		
Temporary Playground	**$**	**150,000.00**
Exterior Level 1 Ballistic Glazing (Curtainwall & Window bottom sash)	**$**	**420,000.00**
Classroom Door Sidelight Ballistic Glazing at All Levels	**$**	**237,000.00**
Level 1 Interior Entrance Ballistic Glazing	**$**	**225,000.00**
ALTERNATES		
Basketball Court	**$**	**(103,591.00)**
Salvage Existing Curbs	**$**	**63,708.00**
Building Over-Excavation Alternate	**$**	**1,692,623.00**

3

Item	Description	Takeoff Qty		Unit Cost		Total Amount
A						
A10	**FOUNDATIONS**					
A1010	*Standard Foundations*					
03-0000.000	*CONCRETE*					
25	Concrete Form & Place - Footings	3,586.00	sfca	20.00	/sfca	71,720
125	Concrete Form & Place - Spread Footings	13,145.00	sfca	20.00	/sfca	262,900
125	Concrete Form & Place - Frost Walls	13,020.00	sfca	20.00	/sfca	260,400
125	Concrete Form & Place - Masonry Stub Walls	3,100.00	sfca	20.00	/sfca	62,000
125	Concrete Form & Place - Brick Shelf (three sides)	3,100.00	sfca	20.00	/sfca	62,000
125	General Concrete - Winter Conditions	1.00	ls	300,000.00	/ls	300,000
125	Concrete 90%-100 CD Bridging Allowance	1.00	ls	100,000.000	/ls	100,000
20	2" Rigid Foundation Insulation - Vertical	6,510.00	sf	3.00	/sf	19,530
14	Re-Bar, Footings, Piers, Walls	101.00	tons	2,500.00	/tons	252,500
20	Concrete - Footings, Includes Mat / Spread Footings	1,308.00	cy	171.00	/cy	223,668
20	Concrete - Walls, Frost	322.00	cy	171.00	/cy	55,062
20	Concrete - Walls, Masonry Stub	58.00	cy	171.00	/cy	9,918
20	Concrete - Brick Shelf, 6" Tall x 8" Width	23.00	cy	171.00	/cy	3,933
	CONCRETE			*10.202/sf*		*1,683,631*
	165,035.00 sf					
07-0000.000	*THERMAL & MOIST PROTECT*					
?	Elevator Pit Crystalline Waterproofing	1.00	ea	8,500.00	/ea	8,500
2	Foundation Sheet Waterproofing	7,926.00	sf	9.50	/sf	75,297
	THERMAL & MOIST PROTECT			*0.508/sf*		*83,797*
	165,035.00 sf					
31-0000.000	*EARTHWORK*					
0	Building Excavation					
10	Building Excavation - Frost Walls and Piers	18,385.00	cy	15.00	/cy	275,775
10	Dewatering	1.00	ls	30,000.00	/ls	30,000
10	Formed Openings Thru Foundation Walls (Predominantly at Kitchen) - Allowance added per RECON	1.00	ls	25,000.00	/ls	25,000

Item		Description	Takeoff Qty		Unit Cost		Total Amount
		EARTHWORK			*2.004/sf*		*330,775*
		165,035.00 sf					
		A1010 Standard Foundations			*12.714/sf*		*2,098,203*
		165,035.00 sf					
A1030		*Slab on Grade*					
03-0000.000		*CONCRETE*					
	05	Stage Ramp	1.00	ls	25,000.00	/ls	25,000
	12	15 mil Vapor Barrier	76,300.00	sf	1.50	/sf	114,450
	120	2" Rigid Insulation Under Slab, Full Coverage	76,300.00	sf	4.50	/sf	343,350
	14	Re-Bar, SOG	10.00	tons	2,500.00	/tons	25,000
	20	Concrete - SOG 5", (Includes Thickened & Haunched)	1,180.00	cy	171.00	/cy	201,780
	10	Place & Finish SOG - 5"	76,300.00	sf	11.00	/sf	839,300
		CONCRETE			*9.385/sf*		*1,548,880*
		165,035.00 sf					
31-0000.000		*EARTHWORK*					
	0	Sand and Gravel Structural Base Under Slab - 12"	2,978.00	cy	55.00	/cy	163,790
	10	Rock Removals from Building Footprint Allowance	200.00	cy	250.00	/cy	50,000
	10	Building Backfilling, Imported Material	15,714.00	cy	45.00	/cy	707,130
	10	Underslab Utility E&B	2,500.00	lf	42.00	/lf	105,000
	10	Ground Improvements					
	10	Rammed Aggregate Piers at Entire Building Footprint	1.00	ls	750,000.00	/ls	750,000
	10	Prepare Bases					
	10	Radon Mitigation					
	10	Radon Mitigation Piping E&B	3,687.00	lf	55.00	/lf	202,785
	10	Interior Utility Earthwork					
	10	Trench Excavation & Backfill - UG Plumbing	1,292.00	cy	45.00	/cy	58,140
	10	Pipe Bedding	575.00	cy	60.00	/cy	34,500
	10	Dispose of Excess (Assumed Clean)	575.00	cy	15.00	/cy	8,625
	10	Foundation Perimeter Drains - Not Shown, Not Included					

Item	Description	Takeoff Qty		Unit Cost	Total Amount
	EARTHWORK			*12.603/sf*	*2,079,970*
	165,035.00 sf				
	A1030 Slab on Grade			*21.988/sf*	*3,628,850*
	165,035.00 sf				
	A10 FOUNDATIONS			**34.702/sf**	**5,727,053**
	165,035.00 sf				
	A SUBSTRUCTURE			***34.702/sf***	***5,727,053***
	165,035.00 sf				

B

B10 **SUPERSTRUCTURE**

B1010 *Floor Construction*

03-0000.000 *CONCRETE*

00	Place & Finish - SOD, 5-1/4" Light Weight	87,000.00	sf	13.00	/sf	1,131,000
100	Place & Finish - SODs - House Keeping Pads, Allow	250.00	sf	30.00	/sf	7,500
100	Building Wrap and Weather Protection - For SOD Heating					
14	Re-Bar, SOD	22.00	tons	2,500.00	/tons	55,000
20	Concrete - SOD, Light Weight	1,780.00	cy	180.00	/cy	320,400
	CONCRETE			*9.173/sf*		*1,513,900*
	165,035.00 sf					

05-0000.000 *METALS*

ı 01	Structural Steel - Floor Structure, 15 PSF	615.00	tn	5,100.00	/tn	3,136,500
a 01	Structural Steel - Braced Frames (HSS 8x8x1/2 Assumed)					
a 01	Structural Steel - Coordination Allowance, Floors	1.00	ls	100,000.000	/ls	100,000

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
ı 01		Structural Steel - 90%-100% CD Bridging Allowance	1.00	ls	150,000.00 /ls	150,000
	618	Metal Floor Deck - 5-1/4"	97,281.45	sf	8.00 /sf	778,252
	618	Metal Floor Deck - Acoustical				
	140	Curtainwall Support Angle - Allowance added per RECON	1.00	ls	50,000.00 /ls	50,000
		METALS			*25.539/sf*	*4,214,752*
		165,035.00 sf				
		B1010 Floor Construction			*34.712/sf*	*5,728,652*
		165,035.00 sf				
B1020		*Roof Construction*				
03-0000.000		*CONCRETE*				
	00	Place & Finish - SOD, RTU Pads, 7" Normal Weight	4,450.00	sf	13.00 /sf	57,850
	100	Place & Finish - SOD, RTU Pads, 5- 1/4" Normal Weight - added per RECON	7,000.00	sf	13.00 /sf	91,000
	14	Re-Bar, SOD, RTU Pads	6.00	tons	2,500.00 /tons	15,000
	20	Concrete - SOD Roof Top Units	96.00	cy	171.00 /cy	16,416
		CONCRETE			*1.092/sf*	*180,266*
		165,035.00 sf				
05-0000.000		*METALS*				
ı 01		Structural Steel - 12' Equipment Screen Wall, Allowance	100.00	tn	5,100.00 /tn	510,000
a 01		Structural Steel - Roof Structure, 20 PSF - Gym	127.00	tn	5,100.00 /tn	647,700
a 01		Structural Steel - Roof Structure, 15 PSF	497.00	tn	5,100.00 /tn	2,534,700
a 01		Structural Steel - Coordination Allowance, Roof	1.00	ls	50,000.00 /ls	50,000
	320	Metal Roof Decking -3" - 20 Gage	65,988.30	sf	6.50 /sf	428,924
	320	Metal Roof Decking -3" - 16 Gage at Roof Equipment	3,450.30	sf	8.00 /sf	27,602
	320	Metal Roof Decking - Acoustic - NIC				
		METALS			*25.443/sf*	*4,198,926*
		165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost	Amount
	METALS			*25.443/sf*	*4,198,926*
	165,035.00 sf				
06-0000.000	*ROUGH CARPENTRY*				
50-11	Glu-Lam Timber Beams	720.00	lf	285.00 /lf	205,200
50-11	Glu-Lam Timber Beams per Addendum 1	370.00	lf	265.00 /lf	98,050
50-11	Glu-Lam 16" x 16" x 28' - Columns	252.00	lf	300.00 /lf	75,600
50-11	Glu-Lam 16" x 16" x 13'6" - Columns per Addendum 1	81.00	lf	285.00 /lf	23,085
50-11	Dowel-Laminated Timber Paneling w 3/4" APA-Rated Sturd-I-Floor Tongue & Groove Sheathing	4,800.00	sf	45.00 /sf	216,000
50-11	Dowel-Laminated Timber Paneling w 3/4" APA-Rated Sturd-I-Floor Tongue & Groove Sheathing per Addendum 1	1,900.00	sf	45.00 /sf	85,500
50-11	Glu-Lam Installation	6,700.00	sf	35.00 /sf	234,500
50-11	Glu-Lam Connections Allowance	1.00	ls	50,000.00 /ls	50,000
50-11	Glu-Lam Temp Protection	1.00	ls	30,000.00 /ls	30,000
	ROUGH CARPENTRY			*6.168/sf*	*1,017,935*
	165,035.00 sf				
07-8000.000	*FIREPROOFING / CAULKING*				
2	Fireproofing - Columns, Beams, Floor Decking, Roofing Decking, Braced Framing - 1 Hr.	165,035.00	sf	2.25 /sf	371,329
2	Fireproofing, Low -> Medium Density - Premium	165,035.00	sf	0.80 /sf	132,028
2	Gymnasium, Intumescent Paint - Allowance	1.00	ls	100,000.000 /ls	100,000
2	Building Wrap and Weather Protection, for Fireproofing Work	1.00	ls	75,000.00 /ls	75,000
2	Fireproofing - Structural Steel in hatched areas only per A0.11 - A0.32 - 2 Hr.	2,640.00	sf	3.00 /sf	7,920
2	Patch Days	10.00	cds	3,200.00 /cds	32,000
	FIREPROOFING / CAULKING			*4.352/sf*	*718,277*
	165,035.00 sf				
	B1020 Roof Construction			*37.055/sf*	*6,115,404*
	165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	B10 SUPERSTRUCTURE			**71.767/sf**	**11,844,056**
	165,035.00 sf				
B20	**EXTERIOR VERTICAL ENCLOSURES**				
B2010	*Exterior Walls*				
04-0000.000	*MASONRY*				
?	Cast Stone Lintels	1,065.00	lf	135.00 /lf	143,775
2	Cast Stone Veneer & Banding	5,965.00	lf	200.00 /lf	1,193,000
2	Cast Stone Panels	6,761.00	sf	160.00 /sf	1,081,760
110	Brick Veneer Types 1 & 2 - Belden Brick, Smoky Gray Velour & Belcrest 550	40,505.00	sf	46.00 /sf	1,863,230
110	Brick Veneer Type 3 - Glen Gery, Bermuda Blue Glazed	3,215.00	sf	48.00 /sf	154,320
110	Exterior Mock up - Masonry Allowance	1.00	ls	50,000.00 /ls	50,000
102	Wall Type X3 - Exterior 8" CMU	6,254.00	sf	38.00 /sf	237,652
102	Wall Type X4 - Exterior 12" CMU	497.00	sf	42.00 /sf	20,874
102	Exterior CUVM Veneer - Custom Cast Stone, Light Buff	8,170.00	sf	70.00 /sf	571,900
5	Masonry Staging - Exterior	44,000.00	sf	6.25 /sf	275,000
5	Winter Conditions - Masonry	1.00	ls	200,000.000 /ls	200,000
	MASONRY			*35.093/sf*	*5,791,511*
	165,035.00 sf				
05-0000.000	*METALS*				
40	Loose Lintels - Masonry	1,580.00	lf	35.00 /lf	55,300
140	Misc Metals - Exterior Walls	165,035.00	sf	0.50 /sf	82,518
140	Galvanized Steel Posts at PFN Metal Siding - Roof	8.00	ea	950.00 /ea	7,600
	METALS			*0.881/sf*	*145,418*
	165,035.00 sf				
07-0000.000	*THERMAL & MOIST PROTECT*				
2	4" Rigid insulation at MCM Panel Roof edge	6,300.00	sf	6.00 /sf	37,800
2	4" Rigid insulation at MCM Panel Roof edge - additional per RECON	9,700.00	sf	6.00 /sf	58,200
2	4" Rigid Cavity Wall Insulation (Brick Veneer)	58,651.00	sf	6.00 /sf	351,906
10	Air Vapor Barrier - Exterior Walls	81,282.00	sf	7.00 /sf	568,974
10	Air Vapor Barrier - Roof - w Roofing Assembly	83,243.00	sf		

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
	0	Air Vapor Barrier at roof edge / Overhang	8,775.00	sf	4.50 /sf	39,488
	10	Air Vapor Barrier at canopy columns and soffits	2,300.00	sf	4.50 /sf	10,350
	10	Air Vapor Barrier / Flashing at windows	8,410.00	lf	1.25 /lf	10,513
	2	MCM Composite Panels - Allucabond - None Shown				
	2	MCM Composite Panels @ Roof Edges & Flats	9,685.00	sf	98.00 /sf	949,130
	2	MCM Composite Panels @ Roof Edges & Flats - additional per RECON	7,500.00	sf	98.00 /sf	735,000
	2	MLT Springlock/ Counter Flashing	1,300.00	sf	25.00 /sf	32,500
	2	Roof Screen w/Acoustic Metal Panel - 12' Height	13,400.00	sf	110.00 /sf	1,474,000
	2	Linear Metal Ceilings at Canopies	4,271.00	sf	95.00 /sf	405,745
	2	PFN Metal Siding on 4" CFMF Duct Enclosures	491.00	sf	100.00 /sf	49,100
		THERMAL & MOIST PROTECT			*28.616/sf*	*4,722,705*
		165,035.00 sf				
07-8000.000		*FIREPROOFING / CAULKING*				
	!	Exterior Joint/Control & Caulking	165,035.00	sf	0.50 /sf	82,518
		FIREPROOFING / CAULKING			*0.50 /sf*	*82,518*
		165,035.00 sf				
09-0000.000		*FINISHES*				
	00	Exterior Walls				
	100	EXT WALL Back Up, 8" or 6" LGMF, GWB interior Face, Batt Insul	66,875.00	sf	24.50 /sf	1,638,438
	100	Exterior Wall - Densglass Sheathing	66,875.00	sf	6.00 /sf	401,250
	2499	GWB Ceilings, Exterior Canopy Soffits	660.00	sf	15.00 /sf	9,900
		FINISHES			*12.419/sf*	*2,049,588*
		165,035.00 sf				
		B2010 Exterior Walls			*77.509/sf*	*12,791,739*
		165,035.00 sf				
B2020		*Exterior Windows*				
05-0000.000		*METALS*				
	40	Exterior Louvers, Allowance	1.00	ls	85,000.00 /ls	85,000

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
		METALS			*0.515/sf*		*85,000*
		165,035.00 sf					
06-0000.000		*ROUGH CARPENTRY*					
	?	Window Blocking	5,530.00	lf	15.00	/lf	82,950
		ROUGH CARPENTRY			*0.503/sf*		*82,950*
		165,035.00 sf					
08-0000.000		*DOORS & WINDOWS*					
	1000	Level 1 Ballistic Glazing premium - adjusted for only bottom sash of windows per RECON	1,400.00	sf	300.00	/sf	420,000
	1000	Sunshades	370.00	lf	250.00	/lf	92,500
	1000	Exterior Aluminum Windows					
	1000	W1 Windows	1,825.00	sf	175.00	/sf	319,375
	1000	W1a Windows	240.00	sf	175.00	/sf	42,000
	1000	W2 Windows	3,840.00	sf	175.00	/sf	672,000
	1000	Exterior Aluminum Curtainwall, Triple Glazed	4,850.00	sf	185.00	/sf	897,250
	1000	Includes additional Ballistic Glazing for designated openings per RECON:	9.00	lf	25,000.00	/lf	225,000
	1000	CW-13	165.00	sf			
	1000	SF-1	79.00	sf			
	1000	SF-2	160.00	sf			
	1000	167B	46.00	sf			
		DOORS & WINDOWS			*16.167/sf*		*2,668,125*
		165,035.00 sf					
		B2020 Exterior Windows			*17.185/sf*		*2,836,075*
		165,035.00 sf					
B2030		*Exterior Doors*					
08-0000.000		*DOORS & WINDOWS*					
	?20	EXTERIOR DOORS					
	220	Type - F HM, 3' - 0"x7' - 0"	4.00	lfs	850.00	/lfs	3,400
	220	Type - FG HM, 6' - 0"x7' - 0"	4.00	pair	1,650.00	/pair	6,600
	50	OHD - Overhead Sectional Door 10' x 10' - Receiving/General Supply 155	1.00	ea	15,000.00	/ea	15,000

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
	000	Exterior Aluminum Doors				
	1000	ALUMINUM, Single Door	1.00	lfs	12,500.00 /lfs	12,500
	1000	ALUMINUM, Double Door	10.00	lfs	12,500.00 /lfs	125,000
	1000	ALUMINUM, Double Door - Exterior Ballistic	4.00	lfs	25,000.00 /lfs	100,000
	1000	Includes CW-9	152.00	sf		
	1000	Includes 167A	46.00	sf		
	10	Door and Hardware Install - Exterior	8.00	lfs	550.00 /lfs	4,400
	10	Exterior Finish Hardware - Allowance	8.00	lfs	1,500.00 /lfs	12,000
	10	Exterior Finish Hardware - Auto Openers	9.00	lfs	4,500.00 /lfs	40,500
		DOORS & WINDOWS			*1.935/sf*	*319,400*
		165,035.00 sf				
09-0000.000		*FINISHES*				
	30	Paint Exterior HM Door Frames	13.00	ea	250.00 /ea	3,250
	30	Paint Exterior HM Doors	13.00	lfs	350.00 /lfs	4,550
		FINISHES			*0.047/sf*	*7,800*
		165,035.00 sf				
		B2030 Exterior Doors			*1.983/sf*	*327,200*
		165,035.00 sf				
		B20 EXTERIOR VERTICAL ENCLOSURES			**96.677/sf**	**15,955,014**
		165,035.00 sf				
B30		**EXTERIOR HORIZONTAL ENCLOSURES**				
B3010		*Roof Coverings*				
06-0000.000		*ROUGH CARPENTRY*				
	2	General Roof Blocking - adjusted per RECON	87,222.00	sf	1.25 /sf	109,028
	2	Roof Blocking Perimeter	2,800.00	lf	18.00 /lf	50,400
		ROUGH CARPENTRY			*0.966/sf*	*159,428*
		165,035.00 sf				
07-5000.000		*ROOFING*				

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
	2	TPO Roofing, 9" Rigid Insulation, Deck Sheathing	87,222.00	sf	28.00 /sf	2,442,216
	2	9" Tapered insulation for roofing - included above	29,368.00	sf		
	2	Flash Roofing to Curbs	1,166.00	lf	2.00 /lf	2,332
	2	Premium for Fire Rated Deck Sheathing at Roof type R1.1	66,000.00	sf	2.25 /sf	148,500
		ROOFING			*15.712/sf*	*2,593,048*
		165,035.00 sf				
		B3010 Roof Coverings			*16.678/sf*	*2,752,476*
		165,035.00 sf				
B3020		*Roof Openings & Accessories*				
03-0000.000		*CONCRETE*				
---		6" Roof MEP Pad	3,939.00	sf	6.30 /sf	24,816
----		6" Roof MEP Pad - removed per RECON	-3,939.00	sf	6.30 /sf	(24,816)
		CONCRETE				*0*
		165,035.00 sf				
07-7000.000		*ROOF & WALL ACCESSORIES*				
	0	Elevator Vents - None Shown				
	10	Roof Stair gate and landing	2.00	ea	8,460.83 /ea	16,922
	10	Roof Ladders	1.00	ea	8,460.83 /ea	8,461
	20	Roof Walkway pads (24" width)	3,388.00	sf	15.00 /sf	50,820
	20	MEP Curbs with 6" ACED Mineral Wool insulation	284.00	sf	6.00 /sf	1,704
	20	Roof Hatch	0.00	ea		
	20	Rooftop Disconnect (Electrical)	5.00	ea	1,000.00 /ea	5,000
	20	Stair for Roof Access	1.00	ea	1,000.00 /ea	1,000
	20	PFN Roof Scupper	1.00	ea	800.00 /ea	800
	20	Roof Proteciton/Railing System - Allowance	1.00	ls	250,000.00 /ls	250,000
		ROOF & WALL ACCESSORIES			*2.028/sf*	*334,706*
		165,035.00 sf				
		B3020 Roof Openings & Accessories			*2.028/sf*	*334,706*
		165,035.00 sf				

Item	Description	Takeoff Qty		Unit Cost	Total Amount
	B3020 Roof Openings & Accessories			*2.028/sf*	*334,706*
	165,035.00 sf				
	B30 EXTERIOR HORIZONTAL ENCLOSURES			**18.706/sf**	**3,087,182**
	165,035.00 sf				
	B SHELL			***187.150/sf***	***30,886,251***
	165,035.00 sf				
C					
C10	**INTERIOR CONSTRUCTION**				
C1010	*Interior Partitions*				
04-0000.000	*MASONRY*				
	02 Interior CMU Walls				
	102 Wall Type D - Interior 4" CMU - None Shown				
	102 Wall Type E - Interior 8" CMU	13,483.00	sf	38.00 /sf	512,354
	102 Wall Type G - Interior 12" CMU	14,395.00	sf	42.00 /sf	604,590
	102 Wall Type G - Interior 12" CMU Acoustical "SoundCell" - NIC				
	102 Wall Type H - Interior 6" CMU	1,387.00	sf	34.00 /sf	47,158
	102 Exterior CMU Backup Walls				
	5 Masonry Staging - Interior	29,265.00	sf	6.25 /sf	182,906
	MASONRY			*8.162/sf*	*1,347,008*
	165,035.00 sf				
06-0000.000	*ROUGH CARPENTRY*				
	Interior Borrowed Light Blocking	892.00	lf	15.00 /lf	13,380
	2 In-Wall Blocking	165,035.00	sf	0.85 /sf	140,280
	2 Misc. Blocking	1.00	ls	50,000.00 /ls	50,000
	2 Temporary Safety and Railings	1.00	ls	25,000.00 /ls	25,000

Item	Description	Takeoff Qty		Total Unit Cost	Amount
	ROUGH CARPENTRY			*1.386/sf*	*228,660*
	165,035.00 sf				
07-8000.000	*FIREPROOFING / CAULKING*				
)02	Misc. Fire Stopping w/ Trades				
40	Misc. Interior Caulking	165,035.00	sf	0.50 /sf	82,518
	FIREPROOFING / CAULKING			*0.50 /sf*	*82,518*
	165,035.00 sf				
08-0000.000	*DOORS & WINDOWS*				
10	Interior Storefront Assemblies	980.00	sf	150.00 /sf	147,000
10	1 Hour Fire Rated Premium at Interior Storefronts	450.00	sf	300.00 /sf	135,000
10	Borrowed Lites - BL-1	290.00	sf	85.00 /sf	24,650
10	Borrowed Lites - BL-2	45.00	sf	85.00 /sf	3,825
10	Borrowed Lites - BL-3 - None Shown				
10	Borrowed Lites - BL-4	500.00	sf	85.00 /sf	42,500
10	Borrowed Lites - BL-5, Bullet Resistant	11.00	sf	450.00 /sf	4,950
10	Borrowed Lites - BL-6, Transaction Window - 24 SF	1.00	ea	5,000.00 /ea	5,000
10	Ballistic Glazing at all Classroom door side lights	790.00	sf	300.00 /sf	237,000
1000	Interior Curtainwall Assembly	165.00	sf	150.00 /sf	24,750
1000	Interior Curtainwall Double Doors	4.00	lfs	8,000.00 /lfs	32,000
	DOORS & WINDOWS			*3.979/sf*	*656,675*
	165,035.00 sf				
09-0000.000	*FINISHES*				
)00	Interior Walls				
100	A, 1 Layer GWB ea Face, Acoustical Insul, 6" Studs	27,970.00	sf	18.00 /sf	503,460
100	A1, 1 Layer GWB ea Face, Acoustical Insul, 6" Studs - 1 HR	5,359.00	sf	20.50 /sf	109,860
100	A2, 2 Layer GWB ea Face, Acoustical Insul, 6" Studs - 2 HR	7,208.00	sf	20.00 /sf	144,160
100	A2A, 2 Layer GWB ea Face, Acoustical Insul, 6" Studs - Non-Rated Acoustic Barrier	49,833.00	sf	25.00 /sf	1,245,825
100	B, 1 Layer GWB ea Face, Acoustical Insul, 3-5/8" Studs - None Shown				
100	B1, 1 Layer GWB ea Face, Acoustical Insul, 3-5/8" Studs - 1 HR - None Shown				

Item		Description	Takeoff Qty		Total Unit Cost		Amount
	00	BR, 1 Layer GWB ea Face, 1 Side Bullet Resistant Fiberglass, Acoustical Insul, 6" Studs - 1 HR	505.00	sf	75.00	/sf	37,875
	100	C, 1 Layer GWB ea Face, Acoustical Insul, 8" Studs - None Shown					
	100	C1, 1 Layer GWB ea Face, Acoustical Insul, 8" Studs - 1 HR - None Shown					
	100	F, 1 Side GWB, Acoustical Insul, 2-1/2" Studs	1,318.00	sf	12.00	/sf	15,816
	100	F2, 1 Side 2 Layers GWB, Acoustical Insul, 2-1/2" Studs - None Shown					
	100	F4, 1 Side GWB, Acoustical Insul, 3-5/8" Studs	49,369.00	sf	12.50	/sf	617,113
	100	F4A, 1 Side GWB, Acoustical Insul, 3-5/8" Studs - Non-Rated Acoustic Barrier - None Shown					
	100	F5, 1 Side 2 Layers GWB, Acoustical Insul, 3-5/8" Studs	4,221.00	sf	15.00	/sf	63,315
	100	F6, 1 Side 1 Layer GWB, Acoustical Insul, 6" Studs	20,588.00	sf	13.00	/sf	267,644
	100	F6A, 1 Side 1 Layer GWB, Acoustical Insul, 6" Studs - Non-Rated Acoustic Barrier - None Shown					
	100	F7 - Not Shown on AGO.02	543.00	sf	15.00	/sf	8,145
	100	F8, 1 Side 1 Layer GWB, 7/8" Hat Channel	1,830.00	sf	11.00	/sf	20,130
	100	HF8, 6" CMU, 1 Side 1 Layer GWB, 7/8" Hat Channel	6,628.00	sf	35.00	/sf	231,980
	100	M, 2 Layers GWB ea Face, Acoustical Insul, 6" Studs - None Shown					
	100	M1, 2 Layers GWB ea Face, Acoustical Insul, 6" Studs - 1 HR - None Shown					
	100	N, 8" CMU, 1 Side 1 Layer GWB, Acoustical Insul, 3-5/8" Studs - None Shown					
	100	N1, 8" CMU, 1 Side 1 Layer GWB, Acoustical Insul, 3-5/8" Studs - 1 HR - None Shown					
	100	S1, 1 Side 1 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 2-1/2" Studs - 1 HR - None Shown					
	100	S2, 1 Side 2 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 2-1/2" Studs - 2 HR - None Shown					
	100	S6, 1 Side 2 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 6" Studs - 2 HR - None Shown					
	100	S7, 1 Side 1 Layer GWB, 1 Side 1 Layer GYP Coreboard, Acoustical Insul, 6" Studs - 1 HR	3,279.00	sf	22.00	/sf	72,138
	100	S10, 2 Layers GYP Coreboard, 2" Channel Framing Brace - 2 HR - None Shown					
	100	Unknown Wall Type(s)	18,512.00	sf	25.00	/sf	462,800
	100	FRP - Allowance	1.00	ls	5,000.00	/ls	5,000
	100	Drywall General Conditions					
	100	General Carp / Labor	165,035.00	sf	2.00	/sf	330,070
	100	Lifts & Staging	1.00	ls	45,000.00	/ls	45,000
	100	Mock ups	1.00	ls	20,000.00	/ls	20,000
	100	Miscellaneous					
	100	Wall and Soffit Coordination	1.00	ls	50,000.00	/ls	50,000
	100	Misc. Touchup and Patching Allowance	1.00	ls	50,000.00	/ls	50,000
	100	Misc. Engineering & Associated Work	1.00	ls	25,000.00	/ls	25,000
		FINISHES			*26.209/sf*		*4,325,330*
		165,035.00 sf					

Item	Description	Takeoff Qty		Unit Cost	Total Amount
	FINISHES			*26.209/sf*	*4,325,330*
	165,035.00 sf				
10-0000.000	*SPECIALTIES*				
?	Operable Partition - 35' x 10' Height - 155 per Door Schedule; 252 per Dwgs	1.00	ea	70,000.00 /ea	70,000
2	Operable Partition - 23' x 8' Height	3.00	ea	40,000.00 /ea	120,000
2	Operable Partition - 12' x 8' Height - adjusted per RECON	1.00	ea	20,000.00 /ea	20,000
	SPECIALTIES			*1.272/sf*	*210,000*
	165,035.00 sf				
	C1010 Interior Partitions			*41.508/sf*	*6,850,191*
	165,035.00 sf				
C1020	*Interior Doors*				
08-0000.000	*DOORS & WINDOWS*				
0	Interior Doors				
10	Type - F HM, 3' - 0"x7' - 0"	1.00	lfs	850.00 /lfs	850
10	Type - F WOOD, 3' - 0"x7' - 0" 45 MIN	2.00	lfs	850.00 /lfs	1,700
10	Type - F WOOD, 3' - 0"x7' - 0"	186.00	lfs	750.00 /lfs	139,500
10	Type - F WOOD, 3' - 0"x7' - 0" 90 MIN	6.00	lfs	750.00 /lfs	4,500
10	Type - FG WOOD, 3' - 0"x7' - 0"	2.00	lfs	675.00 /lfs	1,350
10	Type - G WOOD, 3' - 0"x7' - 0"	52.00	lfs	600.00 /lfs	31,200
10	Type - F WOOD, 4' - 0"x7' - 0"	2.00	lfs	850.00 /lfs	1,700
10	Type - F WOOD, 6' - 0"x7' - 0" 60 MIN	9.00	pair	1,500.00 /pair	13,500
10	Type - F WOOD, 6' - 0"x7' - 0" 90 MIN	2.00	pair	1,500.00 /pair	3,000
10	Type - F WOOD, 6' - 0"x7' - 0" 45 MIN	1.00	pair	1,500.00 /pair	1,500
10	Type - F WOOD, 6' - 0"x7' - 0"	12.00	pair	850.00 /pair	10,200
10	Type - FG WOOD, 6' - 0"x7' - 0"	3.00	pair	1,500.00 /pair	4,500
10	Type - FG HM, 6' - 0"x7' - 0"	2.00	pair	1,350.00 /pair	2,700
10	Type - G WOOD, 6' - 0"x7' - 0"	8.00	pair	1,200.00 /pair	9,600
100	Interior Frames				
100	Frame Install - Installed w/ GWB				
100	Type 1 - HM 3' - 0" x 7' - 0"	120.00	ea	350.00 /ea	42,000
100	Type 1 - HM 3' - 0" x 7' - 0", 45 minutes	2.00	ea	350.00 /ea	700
100	Type 1 - HM 3' - 0" x 7' - 0", 60 minutes	1.00	ea	350.00 /ea	350
100	Type 1 - HM 3' - 0" x 7' - 0", 90 minutes	5.00	ea	350.00 /ea	1,750
100	Type 1A - HM 3' - 0" x 7' - 0"	1.00	ea	400.00 /ea	400
100	Type 1B - HM 3' - 0" x 7' - 0"	1.00	ea	350.00 /ea	350
100	Type 2 - HM 6' - 0" x 7' - 0"	17.00	ea	400.00 /ea	6,800
100	Type 2 - HM 6' - 0" x 7' - 0", 45 minutes	1.00	ea	400.00 /ea	400
100	Type 2 - HM 6' - 0" x 7' - 0", 90 minutes	2.00	ea	400.00 /ea	800
100	Type 2A - HM 6' - 0" x 7' - 0"	9.00	ea	400.00 /ea	3,600
100	Type 2A - HM 6' - 0" x 7' - 0", 60 minutes	9.00	ea	400.00 /ea	3,600

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
	00	Type 3 - HM 3' - 0" x 7' - 0" w/ sidelite	56.00	ea	450.00	/ea	25,200
	100	Type 3A - HM 3' - 0" x 7' - 0" w/ sidelite	62.00	ea	450.00	/ea	27,900
	100	Type 4 - HM 3' - 0" x 7' - 0"	2.00	ea	450.00	/ea	900
	100	Type 5 - HM 3' - 0" x 7' - 0" w/ sidelite	2.00	ea	600.00	/ea	1,200
	100	Fire Rating Premium	20.00	ea	200.00	/ea	4,000
	100	Borrowed Lite Frames	61.00	ea	450.00	/ea	27,450
	50	OHG - Overhead Coiling Door 20'-4" x 11'-5" - Kitchen 162	2.00	ea	25,000.00	/ea	50,000
	10	PT Mirrors, Allow	1.00	ls	5,000.00	/ls	5,000
	10	Transom & Sidelite Glazing	1,690.00	sf	85.00	/sf	143,650
	10	Narrow Lite Glazing	13.25	sf	85.00	/sf	1,126
	1000	Interior Aluminum Doors					
	1000	ALUMINUM, Single Door	1.00	lfs	8,000.00	/lfs	8,000
	1000	ALUMINUM, Double Door	8.00	lfs	8,000.00	/lfs	64,000
	10	Door and Hardware Install	333.00	ea	550.00	/ea	183,150
	10	Finish Hardware - Allowance	369.00	lfs	750.00	/lfs	276,750
	10	Interior Finish Hardware - Auto Openers	8.00	lfs	4,500.00	/lfs	36,000
		DOORS & WINDOWS			*6.913/sf*		*1,140,876*
		165,035.00 sf					
09-0000.000		*FINISHES*					
	0	Paint Doors And Frames	376.00	lfs	230.00	/lfs	86,480
	40	Painting Sequencing Allowance	1.00	ls	30,000.00	/ls	30,000
	40	Painting MEP Allowance	1.00	ls	30,000.00	/ls	30,000
		FINISHES			*0.888/sf*		*146,480*
		165,035.00 sf					
		C1020 Interior Doors			*7.801/sf*		*1,287,356*
		165,035.00 sf					
C1030		*Fittings*					
05-0000.000		*METALS*					
	0	Misc. Metals Allowance	165,035.00	sf	2.00	/sf	330,070
	10	Misc. Metals Coordination - adjusted per RECON	1.00	ls	125,000.00	/ls	125,000
	10	Catwalk, Railings & Ladder Allowance - None Shown - NIC					
	140	Overhead Door supports	3.00	ea	5,000.00	/ea	15,000
	140	Misc. Folding Door Support	6.00	ea	3,500.00	/ea	21,000
	140	Patient Lift Support - Assume Nurses office / PT	2.00	ea	2,500.00	/ea	5,000
	140	Misc Metals - Roof	165,035.00	sf	0.75	/sf	123,776
	140	Misc Metals - Floor Construction	165,035.00	sf	0.75	/sf	123,776
	140	Unistrut Ceiling Systems - None Shown					

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	METALS			*4.506/sf*	*743,623*
	165,035.00 sf				
06-2000.000	*FINISH CARPENTRY*				
2	Interior Finish Carpentry	1.00	ITEM		
2	Bookcases - heights vary - adjusted per RECON, including wood veneer	156.75	lf	350.00 /lf	54,863
2	Short Bookcases	16.00	ea		
2	Tall Bookcases	25.00	ea		
2	Bookcases on Casters, Freestanding	20.00	ea		
2	Wood Trim at LEGO Walls - Corridors	55.00	lf	55.00 /lf	3,025
2	Admin Office Desk	1.00	ls	15,000.00 /ls	15,000
2	Library Circulation Desk per A5/A10.80	1.00	ls	20,000.00 /ls	20,000
2	Custom Mailbox	17.00	lf	550.00 /lf	9,350
2	Wood Wall Paneling	51.50	lf	70.00 /lf	3,605
2	Wood Stage Risers	150.00	lf	25.00 /lf	3,750
2	Includes LED Strip Lighting - w Electrical	150.00	lf		
2	Library Built-in Bench per A23/A10.80	33.09	lf	625.00 /lf	20,681
2	Window Seating - included above	33.09	lf		
2	Extended Learning Built-in Benches w Storage per Q26/A10.80	63.47	lf	125.00 /lf	7,934
2	Gym Corridor Wood Benches per Q21/A10.80	46.75	lf	250.00 /lf	11,688
2	Stair 5 Seating - Allowance	14.00	lf	250.00 /lf	3,500
2	Custom Trash / Recycle Stations	35.00	lf	650.00 /lf	22,750
2	Solid Surface Window Sills	1,005.50	lf	45.00 /lf	45,248
2	Millwork and FF&E Protection	1.00	ls	65,000.00 /ls	65,000
2	Millwork not yet shown	165,035.00	sf	1.50 /sf	247,553
	FINISH CARPENTRY			*3.235/sf*	*533,945*
	165,035.00 sf				
09-0000.000	*FINISHES*				
2	Digitally Printed Wallcoverings (3,380 SF)	1.00	ls	42,250.00 /ls	42,250
2	DPW-1 - Extended Learning 105C				
2	DPW-2 - Extended Learning 105E				
2	DPW-3 - Extended Learning 131E				
2	DPW-4 - Extended Learning 131C				
2	DPW-5 - Office 182				
2	DPW-6 - Corridor 102				
2	DPW-7 - Extended Learning 205C				
2	DPW-8 - Extended Learning 230C				
2	DPW-9 - Extended Learning 205E				
2	DPW-10 - Extended Learning 230F				
2	DPW-11 - Extended Learning 230E				
2	DPW-12 - Cafeteria 168 - w Acoustical Panels				
2	DPW-13 - Extended Learning 301A				
2	DPW-14 - Extended Learning 301B				

Item		Description	Takeoff Qty		Unit Cost		Total Amount
	!	DPW-15 - Extended Learning 350A					
	2	DPW-16 - Extended Learning 333E					
	2	DPW-17 - Extended Learning 333F					
	2	DPW-18 - Extended Learning 333C					
	2	DPW-19 - Extended Learning 302C					
	2	DPW-20 - Corridor 170					
	2	Stainless Steel Wall Panels - STE Classroom	117.00	sf	15.00	/sf	1,755
		FINISHES			*0.267/sf*		*44,005*
		165,035.00 sf					
10-0000.000		*SPECIALTIES*					
	2	Magnetic White Boards 6' x 5'	31.00	ea	475.00	/ea	14,725
	2	Magnetic White Boards 3'6" x 3'6"	53.00	ea	400.00	/ea	21,200
	2	Tackboards 8' x 2'	38.00	ea	500.00	/ea	19,000
	2	Tackboards 6'x6'-6"	75.00	ea	625.00	/ea	46,875
	2	Tackboards 5'8" x 1"	52.00	ea	500.00	/ea	26,000
	2	Tackboards 4'x5'	1.00	ea	445.00	/ea	445
	2	Tackboards 4'x4'	110.00	ea	345.00	/ea	37,950
	2	Tackboards 3'6" x 3'6"	55.00	ea	250.00	/ea	13,750
	2	Tackboards 3'6 x 1'	110.00	ea	200.00	/ea	22,000
	2	Wall Hung TV - By Others - NIC					
	110	Signage, TYPE-A (Typical Room)	58.00	ea	60.00	/ea	3,480
	110	Signage, TYPE-B (Classroom/Office)	78.00	ea	100.00	/ea	7,800
	110	Signage, TYPE-C (Entrance to Suite of Rooms)	58.00	ea	60.00	/ea	3,480
	110	Signage, TYPE-D.1 (Male Toilet)	7.00	ea	55.00	/ea	385
	110	Signage, TYPE-D.2 (Female Toilet)	7.00	ea	55.00	/ea	385
	110	Signage, TYPE-E (Unisex Toilet)	36.00	ea	60.00	/ea	2,160
	110	Signage, TYPE-F (Electric, Emergency Electric, IDF/MDF, & Elevator Machine Rooms)	12.00	ea	60.00	/ea	720
	110	Signage, TYPE-G (Use at Elevators)	3.00	ea	70.00	/ea	210
	110	Signage, TYPE-H (Use at Stair Landing)	12.00	ea	150.00	/ea	1,800
	110	Signage, TYPE-J (Use at all Corridor Side of All Stair Doors)	12.00	ea	55.00	/ea	660
	110	Signage, TYPE-K (Use at all communicating doors)	2.00	ea	60.00	/ea	120
	110	Signage, TYPE-T (Use at all Elevator Machine Rooms)	1.00	ea	100.00	/ea	100
	110	LEED Plaques	3.00	ea	850.00	/ea	2,550
	110	10x8 ADA Elevator	3.00	ea	75.00	/ea	225
	110	12x16 Wayfinding	6.00	ea	215.00	/ea	1,290
	110	14x10 Stair Signage	5.00	ea	425.00	/ea	2,125
	110	Time Capsule Plaque	1.00	ea	800.00	/ea	800
	110	36x42 Dedication Plaque	3.00	ea	8,000.00	/ea	24,000
	110	Vinyl Door Numbering	319.00	ea	50.00	/ea	15,950
	110	Misc. Signage	1.00	ls	15,000.00	/ls	15,000
	110	6" Aluminum Lettering	54.00	letter	70.00	/letter	3,780
	110	18" Aluminum Lettering, Face Lit - 'Wilmington Elementary School'	26.00	letter	240.00	/letter	6,240
	2	Plastic Toilet Partitions - Standard Height, 55"	34.00	ea	1,200.00	/ea	40,800
	2	Plastic Toilet Partitions - ADA	15.00	ea	1,800.00	/ea	27,000
	2	Urinal Screen	1.00	ea	500.00	/ea	500
	2	Toilet Partition Installation	1.00	ls	45,000.00	/ls	45,000
	2	42" Grab Bars	100.00	ea	100.00	/ea	10,000

Item		Description	Takeoff Qty		Total Unit Cost		Amount
	!	Toilet Paper Dispensers	78.00	ea	65.00	/ea	5,070
	2	Paper Towel Dispensers	62.00	ea	100.00	/ea	6,200
	2	Mirror, framed 18' x 30'	74.00	ea	350.00	/ea	25,900
	2	Janitor Mop Racks	7.00	ea	250.00	/ea	1,750
	2	Changing Table - Prek / K Toilets	13.00	ea	850.00	/ea	11,050
	2	Sanitary Napkin Disposal, Single Bathrooms	6.00	ea	100.00	/ea	600
	2	Toilet Accessories - Installation	1.00	ls	20,000.00	/ls	20,000
	2	Sharps Container	1.00	ea	250.00	/ea	250
	2	Hand Sanitizer Stations	72.00	ea	80.00	/ea	5,760
	30	Extinguishers & Recessed Cabinets	1.00	allow	30,000.00	/allow	30,000
	30	AED and Cabinet Allowance	1.00	ls	15,000.00	/ls	15,000
	10	Lockers, 15x15 Cares Storage 154	8.00	ea	530.00	/ea	4,240
	10	Lockers, 18x15 Custodial/Storage 155B	10.00	ea	550.00	/ea	5,500
	10	Lockers, 12x12 Kitchen 162	5.00	ea	470.00	/ea	2,350
	50	Metal Storage Shelving - NIC					
		SPECIALTIES			*3.346/sf*		*552,175*
		165,035.00 sf					
11-0000.000		*EQUIPMENT*					
	001	Smart Board & Short Throw Projectors					
	001	Smart Board & Short Throw Projectors - Prek / K Classrooms					
	001	Smart Board & Short Throw Projectors - Classrooms					
	001	Smart Board & Short Throw Projectors - Art Classrooms					
	001	Smart Board & Short Throw Projectors - Music Classrooms					
	001	Smart Board & Short Throw Projectors - Staff					
	001	Smart Board & Short Throw Projectors - Media / Library					
		EQUIPMENT					*0*
		165,035.00 sf					
		C1030 Fittings			*11.354/sf*		*1,873,748*
		165,035.00 sf					
		C10 INTERIOR CONSTRUCTION			**60.662/sf**		**10,011,294**
		165,035.00 sf					
C20		**STAIRS**					
C2010		*Stair Construction*					
03-0000.000		*CONCRETE*					

Item		Description	Takeoff Qty		Total Unit Cost	Amount
	05	Stairs and Landings, Stair 1	2.00	Flt	4,500.00 /Flt	9,000
	105	Stairs and Landings, Stair 2	2.00	Flt	4,500.00 /Flt	9,000
	105	Stairs and Landings, Stair 3	2.00	Flt	4,500.00 /Flt	9,000
	105	Stairs and Landings, Stair 4	3.00	Flt	4,500.00 /Flt	13,500
	105	Stairs and Landings, Cafeteria, Stair 5	1.00	Flt	4,500.00 /Flt	4,500
	105	Stairs and Landings, Stage Stair, Corridor & Stair 6	1.25	Flt	4,500.00 /Flt	5,625
		CONCRETE			*0.307/sf*	*50,625*
		165,035.00 sf				
05-0000.000		*METALS*				
	0	Stair 1 - Stair and Railings	2.00	Flt	40,000.00 /Flt	80,000
	10	Stair 2 - Stair and Railings	2.00	Flt	40,000.00 /Flt	80,000
	10	Stair 3 - Stair and Railings	2.00	Flt	40,000.00 /Flt	80,000
	10	Stair 4 - Stair and Railings	3.00	Flt	75,000.00 /Flt	225,000
	10	Stair 5 - Feature Stair and Railings, Cafeteria	1.00	Flt	85,000.00 /Flt	85,000
	10	Stair 6 - Stage Stair and Ramp Rails	1.00	Flt	12,500.00 /Flt	12,500
	10	Roof Access Stair and Platform at Mechanical Pump Room	1.00	ls	18,000.00 /ls	18,000
	10	Stair 4 - Roof Landing and Stair	1.00	ls	10,000.00 /ls	10,000
	10	Stair 4 - Wire Mesh Panels	122.00	sf	185.00 /sf	22,570
	10	Roof Ladder	1.00	ea	10,000.00 /ea	10,000
		METALS			*3.775/sf*	*623,070*
		165,035.00 sf				
		C2010 Stair Construction			*4.082/sf*	*673,695*
		165,035.00 sf				
C2020		*Stair Finishes*				
09-0000.000		*FINISHES*				
	2	Terrazzo Treads - Cafeteria Stair	26.00	ea	720.00 /ea	18,720
	2	Terrazzo Treads - Stair 2	50.00	ea	720.00 /ea	36,000
	2	Terrazzo Treads - Stair 4	82.00	ea	900.00 /ea	73,800
	2	Terrazzo Landings	1,925.00	sf	50.00 /sf	96,250
	2	Rubber Tile Landings & Treads	4.00	flt	4,500.00 /flt	18,000
	30	Paint Pan Stairs & Rails	12.00	Flt	2,500.00 /Flt	30,000

Item	Description	Takeoff Qty		Unit Cost	Total Amount
	FINISHES			*1.653/sf*	*272,770*
	165,035.00 sf				
	C2020 Stair Finishes			*1.653/sf*	*272,770*
	165,035.00 sf				
	C20 STAIRS			**5.735/sf**	**946,465**
	165,035.00 sf				
C30	**INTERIOR FINISHES**				
C3010	*Wall Finishes*				
09-0000.000	*FINISHES*				
50	Wall Tile - Painted Mosaic Tile Mural				
50	Wall Tile - Restrooms- 9' AFF	18,000.00	sf	32.00 /sf	576,000
50	Wall Tile - Corridors - 4'6" AFF, 18" x 36"	17,525.00	sf	32.00 /sf	560,800
50	Wall Tile - Cafeteria/Stage 4'3" AFF	1,400.00	sf	32.00 /sf	44,800
50	Wall Tile - Custodial - 4'3" AFF	1,016.00	sf	32.00 /sf	32,512
50	Wall Tile - Cafeteria/Stage 2'10" AFF	100.00	sf	32.00 /sf	3,200
2	Acoustical Wall Panels, Custom Colors	2,220.00	sf	75.00 /sf	166,500
2	Wood Slat Panels w Acoustical Felt Backing	2,130.00	sf	85.00 /sf	181,050
2	Tectum Panels w/Custom Images	436.00	sf	65.00 /sf	28,340
2	Acoustical Wall Panels, Allowance for Locations Not Shown	1.00	ls	25,000.00 /ls	25,000
10	Paint Walls	278,692.00	sf	1.00 /sf	278,692
10	Paint Touch up Allowance	1.00	ls	25,000.00 /ls	25,000
	FINISHES			*11.645/sf*	*1,921,894*
	165,035.00 sf				
	C3010 Wall Finishes			*11.645/sf*	*1,921,894*
	165,035.00 sf				
C3020	*Floor Finishes*				
09-0000.000	*FINISHES*				
0	Ceramic Floor Tile				
10	Ceramic Floor Tile, 12" x 24"				
10	Waterproofing Membrane / Crack Suppression Membrane				
10	Floor Protection				
2	Terrazzo	18,425.00	sf	42.00 /sf	773,850

Item		Description	Takeoff Qty		Total Unit Cost		Amount
	!	Terrazzo inlays, Allowance	1.00	ls	12,000.00	/ls	12,000
	2	Floor Protection	18,425.00	sf	1.50	/sf	27,638
	2	QZT-1 Quartz Tile	3,535.00	sf	6.50	/sf	22,978
	2	Wax and Seal Quartz Tile	3,535.00	sf	1.50	/sf	5,303
	2	Floor Protection	3,535.00	sf	0.75	/sf	2,651
	2	Floors Moisture Mitigation Testing	10.00	loc	400.00	/loc	4,000
	2	Floors Moisture Mitigation - Epoxy & Gym	19,500.00	sf	5.00	/sf	97,500
	2	Floors Moisture Mitigation Testing - removed per RECON	-10.00	loc	400.00	/loc	(4,000)
	2	Floors Moisture Mitigation - Epoxy & Gym - removed per RECON	-19,500.00	sf	5.00	/sf	(97,500)
	2	Common Work Results for Flooring	165,035.00	sf	0.65	/sf	107,273
	40	Epoxy Flooring (Custodial) - Dur-a-Flex	7,915.00	sf	25.00	/sf	197,875
	40	Floor Protection	7,915.00	sf	1.50	/sf	11,873
	145	2-1/2" Wood Athletic Flooring System - Gymnasium	11,585.00	sf	28.00	/sf	324,380
	145	Wood Flooring, Stage, Allowance	1,345.00	sf	27.00	/sf	36,315
	145	Floor Protection	12,930.00	sf	1.50	/sf	19,395
	2	LIN - Linoleum Flooring, BOD = Forbo	81,735.00	sf	8.00	/sf	653,880
	2	ESD Static Control Tile (SDT-1)	375.00	sf	15.00	/sf	5,625
	2	RAF-1 - Rubber Athletic Flooring, 6mm Thick	4,130.00	sf	24.00	/sf	99,120
	2	RSF-1 Resilient Sheet Flooring, BOD = Nora Systems Norament	3,435.00	sf	8.00	/sf	27,480
	2	Resilient Base	15,440.00	lf	3.50	/lf	54,040
	2	Floor Protection	89,675.00	sf	0.75	/sf	67,256
	2	RAF - Rubber Stair Landings	1,135.00	sf	24.00	/sf	27,240
	002	Seal concrete	3,480.00	sf	4.00	/sf	13,920
	002	Floor Protection	3,480.00	sf	0.75	/sf	2,610
	002	Paint Concrete Floors, Epoxy Paint					
f 10		Carpet Tile, BOD = Interface, Aerial	949.56	sy	60.00	/sy	56,974
f 10		Floor Protection	8,550.00	sf	0.75	/sf	6,413
	20	Metal Grating Frames, Vestibule	955.00	sf	29.00	/sf	27,695
	20	Walk Off Mats	955.00	sf	15.00	/sf	14,325
	20	1/4" Floor Prep	1.00	ls	5,000.00	/ls	5,000
		FINISHES			*15.773/sf*		*2,603,106*
		165,035.00 sf					
		C3020 Floor Finishes			*15.773/sf*		*2,603,106*
		165,035.00 sf					
C3030		*Ceiling Finishes*					
09-0000.000		*FINISHES*					
	!499	GWB Ceilings	10,085.00	sf	15.00	/sf	151,275
	2499	GWB Ceilings - Rated	1,400.00	sf	20.00	/sf	28,000
	2499	GWB Soffiting Allowance	165,035.00	sf	1.50	/sf	247,553
	2499	GWB Ceiling Clouds					

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
?	ACP-1A, Ultima High NRC by Armstrong	96,195.00	sf	8.00 /sf	769,560
2	ACP-2, now ACP-1A per 2/19 email				
2	ACP-2A, now ACP-1A per 2/19 email				
2	ACP-3 - None Shown				
2	ACP-4 - None Shown				
2	ACP-5A, Ceramaguard Fine Fissured by Armstrong	5,625.00	sf	9.00 /sf	50,625
2	ACP-6A, now ACP-1A per 2/19 email				
2	WD-1, Armstrong Woodworks Linear Closed	6,850.00	sf	60.00 /sf	411,000
2	WD-2, Armstrong Woodworks Linear Tegular	1,685.00	sf	60.00 /sf	101,100
2	2" Tectum Ceiling Panels	440.00	sf	30.00 /sf	13,200
2	2" Tectum Ceiling Panels - Gym - added per RECON	5,000.00	sf	30.00 /sf	150,000
20	Paint Exposed Ceilings	27,980.00	sf	3.50 /sf	97,930
20	Paint GWB Ceilings	11,453.00	sf	3.50 /sf	40,086
	FINISHES			*12.484/sf*	*2,060,328*
	165,035.00 sf				
	C3030 Ceiling Finishes			*12.484/sf*	*2,060,328*
	165,035.00 sf				
	C30 INTERIOR FINISHES			**39.903/sf**	**6,585,328**
	165,035.00 sf				
	C INTERIORS			***106.299/sf***	***17,543,088***
	165,035.00 sf				

D

D10 **CONVEYING**

D1010 *Vertical Conveying Systems*

03-0000.000 *CONCRETE*

500	Grout Elevator Sill Angles	3.00	ea	500.00 /ea	1,500
	CONCRETE			*0.009/sf*	*1,500*
	165,035.00 sf				

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
		CONCRETE			*0.009/sf*	*1,500*
		165,035.00 sf				
05-0000.000		*METALS*				
	22	Sill Angles	3.00	ea	1,750.00 /ea	5,250
	22	Sump Pit Frame Grate	1.00	ea	1,200.00 /ea	1,200
	22	Hoist Beam & Lifeline Beam	2.00	ea	1,800.00 /ea	3,600
	22	Pit Ladders	1.00	ea	2,800.00 /ea	2,800
		METALS			*0.078/sf*	*12,850*
		165,035.00 sf				
14-0000.000		*CONVEYING SYSTEMS*				
	2	Elevator Usage - Operator Time	15.00	Day	1,250.00 /Day	18,750
	2	Elevator, Holeless Hydraulic, 4,000lbs	3.00	stop	80,000.00 /stop	240,000
	2	Elevator, Cab Flooring - See Div 09 65 00, Resilient Flooring				
	2	Elevator, Cab Walls - MFG Full Line of PLAM on plywood				
		CONVEYING SYSTEMS			*1.568/sf*	*258,750*
		165,035.00 sf				
		D1010 Vertical Conveying Systems			*1.655/sf*	*273,100*
		165,035.00 sf				
		D10 CONVEYING			**1.655/sf**	**273,100**
		165,035.00 sf				
D20		**PLUMBING**				
D2010		*Plumbing Fixtures*				
22-0000.000		*PLUMBING*				
		Plumbing Fixtures				
	1	P-1 - Water Closet (Wall Hung)	36.00	ea	1,325.00 /ea	47,700
	1	P-1A - ADA Water Closet (Wall Hung)	29.00	ea	1,400.00 /ea	40,600
	1	P-1B - ADA Water Closet (Wall Hung)	18.00	ea	1,400.00 /ea	25,200

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
		P-2 - Urinal	1.00	ea	1,380.00 /ea	1,380
	1	P-2A - Urinal	7.00	ea	1,550.00 /ea	10,850
	1	P-3 - Lavatory (Wall Hung)	40.00	ea	1,750.00 /ea	70,000
	1	P-3A - ADA Lavatory (Wall Hung)	18.00	ea	1,925.00 /ea	34,650
	1	P-3B - ADA Lavatory (Wall Hung)	18.00	ea	1,950.00 /ea	35,100
	1	P-5 - Sink w/ Integral Bubbler / Faucet (Recessed)	57.00	ea	2,100.00 /ea	119,700
	1	P-5A - ADA Sink w/ Integral Bubbler / Faucet (Recessed)	79.00	ea	1,100.00 /ea	86,900
	1	P-6 - Water Cooler / Bottle Fill	7.00	ea	2,280.00 /ea	15,960
	1	P-6A - Large Sink	1.00	ea	2,280.00 /ea	2,280
	1	P-7 - Mop Sink	8.00	ea	1,550.00 /ea	12,400
	1	P-8A - Art Room Sink Faucet / Drain (Sink By Others) Solid Interceptor Art Room Sink	1.00	ea	1,900.00 /ea	1,900
	1	Emergency Shower / Eyewash Station (Kitchen)	2.00	ea	3,650.00 /ea	7,300
	1	Wall Carrier	167.00	ea	625.00 /ea	104,375
		PLUMBING			*3.734/sf*	*616,295*
		165,035.00 sf				
		D2010 Plumbing Fixtures			*3.734/sf*	*616,295*
		165,035.00 sf				
D2020		*Domestic Water Distribution*				
22-0000.000		*PLUMBING*				
		Domestic Water Distribution				
	1	4" Domestic Water Pipe - Mains	300.00	lf	78.80 /lf	23,640
	1	3" Domestic Water Pipe - Mains	260.00	lf	68.45 /lf	17,797
	1	2-1/2" Domestic Water Pipe - Mains	180.00	lf	52.20 /lf	9,396
	1	2" Domestic Water Pipe - Mains	1,240.00	lf	46.40 /lf	57,536
	1	1-1/2" Domestic Water Pipe - Mains	890.00	lf	36.45 /lf	32,441
	1	1-1/4" Domestic Water Pipe - Mains	290.00	lf	33.30 /lf	9,657
	1	1" Domestic Water Pipe - Mains	1,260.00	lf	29.90 /lf	37,674
	1	3/4" Domestic Water Pipe - Mains	1,680.00	lf	28.80 /lf	48,384
	1	1/2" Domestic Water Pipe - Mains	1,560.00	lf	26.60 /lf	41,496
	1	3/4" Domestic Water Pipe - Branch	4,200.00	lf	28.80 /lf	120,960
	1	1/2" Domestic Water Pipe - Branch (Type "L" Cu.)	8,880.00	lf	26.60 /lf	236,208
	1	Misc. Valves, Tags & Fittings	1.00	ls	158,797.00 /ls	158,797
	1	Pipe Insulation - (1/2" - 1-1/4")	17,870.00	lf	9.90 /lf	176,913
	1	Pipe Insulation - (1-1/2" - 4")	2,870.00	lf	14.20 /lf	40,754
	1	Domestic Water Equipment				
	1	BFP-1 - 4" Backflow Preventer	1.00	ea	7,250.00 /ea	7,250
	1	1-1/2" RPBP - Reverse Backflow Preventer	1.00	ea	1,400.00 /ea	1,400
	1	Triplex Water Booster Pump Station (5 HP /___Gallon)				
	1	TM-1 - Thermostatic Mixing Valve	1.00	ea	5,500.00 /ea	5,500
	1	TM-2 - Thermostatic Mixing Valve	1.00	ea	5,500.00 /ea	5,500
	1	RP-1 - In-Line Recirc Pump (16 GPM / 1/4 HP)	1.00	ea	1,650.00 /ea	1,650
	1	RP-2 - In-Line Recirc Pump (5 GPM / 1/8 HP)	1.00	ea	1,650.00 /ea	1,650
	1	HB - Hose Bib	14.00	ea	390.00 /ea	5,460
	1	FPHB - Frostproof Hose Bib	12.00	ea	480.00 /ea	5,760

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
		EWH-1 - Electric Water Heater (120 Gallon)	1.00	ea	38,250.00	/ea	38,250
	1	EWH-2 - Electric Water Heater (120 Gallon)	1.00	ea	38,250.00	/ea	38,250
	1	EWH-3 - Electric Water Heater (120 Gal /15 KW)	1.00	ea	29,650.00	/ea	29,650
	1	ET-1 - Expansion Tank	1.00	ea	4,800.00	/ea	4,800
	1	ET-2 - Expansion Tank	1.00	ea	4,800.00	/ea	4,800
	1	Elevator Sump Pump / Oil Separator	1.00	ea	4,800.00	/ea	4,800
	1	SM-1 - 4" Domestic Water Meter	1.00	ea	4,800.00	/ea	4,800
	1	SM-2 - 2-1/2" Domestic Water Meter	1.00	ea	2,850.00	/ea	2,850
	1	SM-4 - 1-1/2" Irrigation Water Meter	1.00	ea	2,400.00	/ea	2,400
	1	4" Water Meter	1.00	ea	8,500.00	/ea	8,500
	1	Water Softening System - Allowance added per RECON	1.00	ls	15,000.00	/ls	15,000
		PLUMBING			*7.271/sf*		*1,199,923*
		165,035.00 sf					
		D2020 Domestic Water Distribution			*7.271/sf*		*1,199,923*
		165,035.00 sf					
D2030		*Sanitary Waste*					
22-0000.000		*PLUMBING*					
		Sanitary Waste & Vent Piping (Under Ground)					
	1	4" Sanitary Waste & Vent Pipe (U)	1,990.00	lf	58.85	/lf	117,112
	1	4" Kitchen Waste & Vent Pipe (U)	360.00	lf	58.85	/lf	21,186
	1	3" Sanitary Waste & Vent Pipe (U)	280.00	lf	49.75	/lf	13,930
	1	2" Kitchen Waste & Vent Pipe (U)	320.00	lf	36.60	/lf	11,712
	1	Cleanout	29.00	ea	395.00	/ea	11,455
	1	Sanitary Waste & Vent Piping (Above Ground)					
	1	4" Sanitary Waste & Vent Pipe (A)	2,560.00	lf	58.85	/lf	150,656
	1	3" Sanitary Waste & Vent Pipe (A)	330.00	lf	49.75	/lf	16,418
	1	2" Sanitary Waste & Vent Pipe (A)	1,485.00	lf	36.60	/lf	54,351
	1	1-1/2" Sanitary Waste & Vent Pipe (A)	7,620.00	lf	28.80	/lf	219,456
	1	4" Kitchen Waste & Vent Pipe (A)	880.00	lf	46.80	/lf	41,184
	1	2" Kitchen Waste & Vent Pipe (A)	1,390.00	lf	29.60	/lf	41,144
	1	1-1/2" Kitchen Waste & Vent Pipe (A)	480.00	lf	28.80	/lf	13,824
	1	Floor / Wall Cleanout	16.00	ea	425.00	/ea	6,800
	1	Sanitary and Vent Equipment					
	1	GI-1 - Grease Interceptor - Exterior					
	1	Recessed Grease Interceptor 150 Lbs. / 75 Gallon)	2.00	ls	8,800.00	/ls	17,600
	1	Oil Interceptor - 50 GPM (Zurn 1186)	1.00	ea	7,600.00	/ea	7,600
	1	FS-1 - Floor Sink	6.00	ea	1,290.00	/ea	7,740
	1	FD1- 2" Floor Drain	16.00	ea	440.00	/ea	7,040
	1	FD2- 3" Floor Drain	8.00	ea	545.00	/ea	4,360
	1	Trap Primer	30.00	ea	885.00	/ea	26,550

Item	Description	Takeoff Qty		Total Unit Cost	Amount
	PLUMBING			*4.788/sf*	*790,117*
	165,035.00 sf				
	D2030 Sanitary Waste			*4.788/sf*	*790,117*
	165,035.00 sf				
D2040	*Rain Water Drainage*				
22-0000.000	*PLUMBING*				
	Storm Drainage Piping				
1	RD-1 - 15" Round Roof Drain / 6" Hub	20.00	ea	1,685.00 /ea	33,700
1	OD-1 - 15" Round Roof Overflow Drain / 6" Hub	20.00	ea	1,685.00 /ea	33,700
1	DN-1 - Downspout Outlet	14.00	ea	950.00 /ea	13,300
1	12" Storm Pipe (U)	290.00	lf	92.45 /lf	26,811
1	10" Storm Pipe (U)	590.00	lf	86.25 /lf	50,888
1	10" Storm Pipe (A)	80.00	lf	94.60 /lf	7,568
1	8" Storm Pipe (U)	360.00	lf	73.55 /lf	26,478
1	8" Storm Pipe (A)	120.00	lf	82.40 /lf	9,888
1	6" Storm Pipe (U)	390.00	lf	72.15 /lf	28,139
1	6" Storm Pipe (A)	2,180.00	lf	72.15 /lf	157,287
1	4" Storm Pipe (A)	280.00	lf	58.85 /lf	16,478
1	Drain Pipe Insulation	2,160.00	lf	18.75 /lf	40,500
	PLUMBING			*2.695/sf*	*444,736*
	165,035.00 sf				
	D2040 Rain Water Drainage			*2.695/sf*	*444,736*
	165,035.00 sf				
D2090	*Other Plumbing Systems*				
22-0000.000	*PLUMBING*				
	Gas Piping				
1	Gas Piping, Devices and Equipment - Excluded				
1	Kitchen Plumbing Connections				
1	3-Compartment Sink - C&HW & Indirect Waste Connection Only	1.00	ea	1,210.00 /ea	1,210
1	Hose Reel CW/HW Connections Only	1.00	ea	880.00 /ea	880
1	Convection Steamer CW Connection	1.00	ea	650.00 /ea	650
1	Cooks Table w/ Sink - Connection Only	1.00	ea	880.00 /ea	880
1	Walk-in Cooler Indirect Waste Connection	1.00	ea	450.00 /ea	450
1	Disposer - CW & Waste Connection Only	1.00	ea	880.00 /ea	880
1	Fill Faucet - HW Connection Only	2.00	ea	585.00 /ea	1,170
1	Freezer Indirect Waste Connection	1.00	ea	250.00 /ea	250
1	Hand Sink - Connection Only	4.00	ea	625.00 /ea	2,500

Item		Description	Takeoff Qty		Total Unit Cost	Amount
		Hand Sprayer - C&HW Connection Only	2.00	ea	950.00 /ea	1,900
	1	Hot Food Well - H&CW & Indirect Waste Connection	2.00	ea	600.00 /ea	1,200
	1	Cold Food Well - H&CW & Indirect Waste Connection	4.00	ea	600.00 /ea	2,400
	1	Prep Table w/ Double Sink - Connection Only	1.00	ea	650.00 /ea	650
	1	Steamer Unit, CW & Indirect Waste Connection	1.00	ea	950.00 /ea	950
	1	Warewasher Conveyor - H&CW & Indirect Waste Connection	1.00	ea	1,400.00 /ea	1,400
	1	Washing Machine Valve Box and Connection	1.00	ea	880.00 /ea	880
	1	Water Filter Assembly (FBO) 3/4" CW Connection	2.00	ea	245.00 /ea	490
	1	Misc. Kitchen Equipment Connections	1.00	ls	25,000.00 /ls	25,000
	1	Radon Mitigation System				
	1	Radon In-Line Exhaust Fan	16.00	ea	560.00 /ea	8,960
	1	4" PVC (Sched 40) - Perforated Pipe	3,830.00	lf	38.80 /lf	148,604
	1	4" PVC (Sched 40) - Risers	660.00	lf	38.80 /lf	25,608
	1	Riser Supports	184.00	ea	55.00 /ea	10,120
	1	Crushed Stone - w/ Civil				
	1	Labeling	1.00	ls	800.00 /ls	800
	1	Fireproof Roof Seal / Boot	16.00	ea	240.00 /ea	3,840
	1	Plumbing General Conditions				
	1	Testing & Disinfection	1.00	ls	18,000.00 /ls	18,000
	1	Coordination & Management	1.00	ls	90,000.00 /ls	90,000
	1	Commissioning	1.00	ls	45,000.00 /ls	45,000
	1	Coordination Drawings / BIM	1.00	ls	75,000.00 /ls	75,000
	1	Seismic Restraints / Bracing	1.00	ls	35,000.00 /ls	35,000
	1	Coring & Patching / Firestopping	1.00	ls	22,500.00 /ls	22,500
	1	Hoisting & Rigging / Floor Loading	1.00	ls	15,000.00 /ls	15,000
	1	Equipment start up and inspection	1.00	ls	25,000.80 /ls	25,001
	1	Access Panels - Furnish Only	1.00	ls	10,000.00 /ls	10,000
		PLUMBING			*3.497/sf*	*577,173*
		165,035.00 sf				
		D2090 Other Plumbing Systems			*3.497/sf*	*577,173*
		165,035.00 sf				
		D20 PLUMBING			**21.985/sf**	**3,628,243**
		165,035.00 sf				
D30		**HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)**				
D3020		*Heating and Cooling Generating Systems*				
23-0000.000		*HVAC*				
		Heating Generating Equipment				
	1	EB-1 - Electric Hot Water Boiler (1,633 MBH)	1.00	ea	65,000.00 /ea	65,000
	1	EB-2 - Electric Hot Water Boiler (1,633 MBH)	1.00	ea	65,000.00 /ea	65,000
	1	HX-1 - Plate & Frame Heat Exchanger	1.00	ea	20,000.00 /ea	20,000

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
		AS-1 - Air Separator	1.00	ea	6,500.00 /ea	6,500
	1	AS-3 - Air Separator	1.00	ea	6,500.00 /ea	6,500
	1	AS-6 - Air Separator	1.00	ea	6,500.00 /ea	6,500
	1	BT-1 - Heating Hot Water Buffer Tank (500 Gallon)	1.00	ea	9,800.00 /ea	9,800
	1	BT-2 - Heating Hot Water Buffer Tank (500 Gallon)	1.00	ea	9,800.00 /ea	9,800
	1	CSF-1 - Chemical Shot Feeder	1.00	ea	3,200.00 /ea	3,200
	1	ET-1 - Heating Hot Water Expansion Tank	1.00	ea	6,800.00 /ea	6,800
	1	ET-2 - Heating Hot Water Expansion Tank	1.00	ea	6,800.00 /ea	6,800
	1	GF-1 - Glycol Make -Up Unit	1.00	ea	7,900.00 /ea	7,900
	1	30% Glycol System Fill (Heating)	1.00	ls	18,000.00 /ls	18,000
	1					
		HVAC			*1.405/sf*	*231,800*
		165,035.00 sf				
		D3020 Heating and Cooling Generating Systems			*1.405/sf*	*231,800*
		165,035.00 sf				
D3030		*Heating and Cooling Systems*				
23-0000.000		*HVAC*				
		Chilled Water Systems				
	1	ASHP-1 - Air Source Heat Pump Chiller (8 - 30 Tons)	1.00	ls	816,000.00 /ls	816,000
	1	ASHP-2 - Air Source Heat Pump Chiller (8 - 30 Tons)	1.00	ls	816,000.00 /ls	816,000
	1	HX-2 - Plate & Frame Heat Exchanger	1.00	ea	20,000.00 /ea	20,000
	1	AS-2 - Air Separator	1.00	ea	6,500.00 /ea	6,500
	1	AS-4 - Air Separator	1.00	ea	6,500.00 /ea	6,500
	1	AS-5 - Air Separator	1.00	ea	6,500.00 /ea	6,500
	1	BT-3 - Chilled Water Buffer Tank (500 Gallon)	1.00	ea	9,500.00 /ea	9,500
	1	BT-4 - Chilled Water Buffer Tank (500 Gallon)	1.00	ea	9,800.00 /ea	9,800
	1	CSF-2 - Chemical Shot Feeder	1.00	ea	3,200.00 /ea	3,200
	1	ET-3 - Chilled Water Expansion Tank	1.00	ea	6,800.00 /ea	6,800
	1	ET-4 - Chilled Water Expansion Tank	1.00	ea	6,800.00 /ea	6,800
	1	GF-2 - Glycol Make -Up Unit	1.00	ea	7,900.00 /ea	7,900
	1	30% Glycol System Fill (Cooling)	1.00	ea	18,000.00 /ea	18,000
		HVAC			*10.504/sf*	*1,733,500*
		165,035.00 sf				
		D3030 Heating and Cooling Systems			*10.504/sf*	*1,733,500*
		165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
	D3030 Heating and Cooling Systems			*10.504/sf*		*1,733,500*
	165,035.00 sf					
D3040	*Distribution Systems*					
23-0000.000	*HVAC*					
	HVAC Air Distribution					
1	Ductwork Galvanized	158,122.00	lbs	18.00	/lbs	2,846,196
1	Kitchen Grease Duct	1.00	ls	75,000.00	/ls	75,000
1	Kitchen Dishwasher Aluminum Duct	1.00	ls	18,000.00	/ls	18,000
1	Displacement Diffuser	178.00	ea	345.00	/ea	61,410
1	RGD's	330.00	sf	215.00	/sf	70,950
1	Constant Volume Damper	8.00	ea	650.00	/ea	5,200
1	Kitchen Dishwasher Aluminum Duct	1.00	ls	18,000.00	/ls	18,000
1	Displacement Diffuser	178.00	ea	345.00	/ea	61,410
1	RGD's	330.00	sf	215.00	/sf	70,950
1	Constant Volume Damper	8.00	ea	650.00	/ea	5,200
1	Misc. Ductwork Accessories - Volume Dampers, Fire Dampers, Volume Dampers etc.	165,035.00	sf	0.45	/sf	74,266
1	Refrigerant Piping (Includes Hangers & Supports)					
1	Refrigerant Piping -	1,800.00	lf	42.65	/lf	76,770
1	Misc. Valves, Tags & Fittings	1.00	ls	7,677.00	/ls	7,677
1	Condensate Piping					
1	Condensate Drain Pipe (Type "L" Cu.)	580.00	lf	28.50	/lf	16,530
1	Hydronic Piping & Pumps (Includes Hangers & Supports)					
1	Hydronic CW/HW Piping - Mains (Blk Stl. Welded)	11,520.00	lf	71.65	/lf	825,408
1	Hydronic CW/HW Piping - Branch (Type "L" Cu.)	21,180.00	lf	38.85	/lf	822,843
1	6-Way Hydronic Control Valve	156.00	ea	490.00	/ea	76,440
1	BP-1 - ECOCIRC Pump (165 GPM)	1.00	ea	12,500.00	/ea	12,500
1	BP-2 - ECOCIRC Pump (165 GPM)	1.00	ea	12,500.00	/ea	12,500
1	CP-1 - Condensate Pump (6 GPH)	1.00	ea	850.00	/ea	850
1	CP-2 - Condensate Pump (25 GPH)	1.00	ea	1,400.00	/ea	1,400
1	P-1 - Heat Pump Heating Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-2 - Heat Pump Heating Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-3 - Heat Pump Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-4 - Heat Pump Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-5 - Building Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-6 - Building Hot Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-7 - Building Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-8 - Building Chilled Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-9 -CCHW Water Pump	1.00	ea	16,150.00	/ea	16,150
1	P-10 -CCHW Water Pump	1.00	ea	16,150.00	/ea	16,150
1	VFD-1 thru 10 - Variable Frequency Drive	10.00	ea	2,400.00	/ea	24,000
1	Pump Housekeeping Pads	12.00	ea	1,100.00	/ea	13,200
1	Insulation					
1	Duct wrap insulation	126,498.00	sf	5.75	/sf	727,364
1	Duct Liner	1.00	ls	45,000.00	/ls	45,000
1	Grease Duct Fire Wrap	1.00	ls	18,000.00	/ls	18,000
1	Hydronic Pipe Insulation - Mains	11,520.00	lf	16.00	/lf	184,320
1	Hydronic Pipe Insulation - Branch	32,700.00	lf	10.20	/lf	333,540
1	Refrigerant Pipe Insulation	1,800.00	lf	8.25	/lf	14,850
1	Exhaust Fans					
1	EF-1 - Receiving Exhaust Fan	1.00	ea	3,000.00	/ea	3,000
1	EF-2 - Toilet Exhaust Fan - Roof Mounted	1.00	ea	3,000.00	/ea	3,000
1	EF-3 - Toilet Exhaust Fan - Roof Mounted	1.00	ea	3,000.00	/ea	3,000

Item		Description	Takeoff Qty		Total Unit Cost	Amount
		EF-4 - Toilet Exhaust Fan - Roof Mounted	1.00	ea	3,000.00 /ea	3,000
	1	KEF-1 - Kitchen Exhaust	1.00	ea	9,500.00 /ea	9,500
	1	PEV-1 - Penthouse Elevator Vent	1.00	ea	1,800.00 /ea	1,800
	1	Central Air Handling Equipment				
	1	RTU-A - Custom Air Handler Unit (CW/HW Coils - 17,000 Cfm)	1.00	ea	408,000.00 /ea	408,000
	1	RTU-B - Custom Air Handler Unit (CW/HW Coils - 20,000 Cfm)	1.00	ea	480,000.00 /ea	480,000
	1	RTU-C - Custom Air Handler Unit (CW/HW Coils - 17,000 Cfm)	1.00	ea	408,000.00 /ea	408,000
	1	RTU-D - Custom Air Handler Unit (CW/HW Coils - 13,000 Cfm)	1.00	ea	312,000.00 /ea	312,000
	1	RTU-E - Custom Air Handler Unit (CW/HW Coils - 3,255 Cfm)	1.00	ea	78,120.00 /ea	78,120
	1	RTU-F - Custom Air Handler Unit (CW/HW Coils - 10,000 Cfm)	1.00	ea	240,000.00 /ea	240,000
	1	RTU-G - Custom Air Handler Unit (CW/HW Coils - 3,000 Cfm)	1.00	ea	72,000.00 /ea	72,000
	1	RTU-H - Custom Air Handler Unit (CW/HW Coils - 4,000 Cfm)	1.00	ea	96,000.00 /ea	96,000
	1	RTU-I - Custom Air Handler Unit (CW/HW Coils - 2,000 Cfm)	1.00	ea	48,000.00 /ea	48,000
	1	MAU-1 - Make-up Air Unit (CW/HW Coils - 4,500 Cfm)	1.00	ls	99,000.00 /ls	99,000
	1	Roof Curbs and Dunnage	10.00	ea	5,500.00 /ea	55,000
	1	Sound Attenuation	1.00	ls	75,000.00 /ls	75,000
		HVAC			*54.993/sf*	*9,075,693*
		165,035.00 sf				
		D3040 Distribution Systems			*54.993/sf*	*9,075,693*
		165,035.00 sf				
D3050		*Terminal And Package Units*				
23-0000.000		*HVAC*				
		Heating & Cooling Terminal Equipment				
	1	CUH-01 - thru CUH-14 - HW Cabinet Unit Heater	14.00	ea	2,850.00 /ea	39,900
	1	DCUe-1 thru DCUe-10 - Ductless Cooling Unit (Indoor Fan Coil Unit)	10.00	ea	16,500.00 /ea	165,000
	1	DCUe-1 thru DCUe-10 - Ductless Cooling Unit (Outdoor Condensing Unit)	10.00	ea	7,400.00 /ea	74,000
	1	FCU-1-1 - thru FCU-1-6 - Fan Coil	6.00	ea	3,200.00 /ea	19,200
	1	RP-1 - HW Radiant Ceiling Panel - 24" - adjusted by 400lf per RECON	4,800.00	lf	145.00 /lf	696,000
	1	UH-01 - thru UH-05 - Unit Heater	5.00	ea	2,150.00 /ea	10,750
	1	VAV-1-1 Thru VAV-1-43	144.00	ea	1,685.00 /ea	242,640
	1	WRU-1 - Wall Radiation Unit (Runttal)	96.00	lf	165.00 /lf	15,840

Item	Description	Takeoff Qty	Unit Cost	Total Amount
	HVAC		*7.655/sf*	*1,263,330*
	165,035.00 sf			
	D3050 Terminal And Package Units		*7.655/sf*	*1,263,330*
	165,035.00 sf			
D3060	*Controls And Instrumentation*			
23-0000.000	*HVAC*			
	:0 Building Management System			
	20 Building Management System	165,035.00 sf	8.00 /sf	1,320,280
	HVAC		*8.00 /sf*	*1,320,280*
	165,035.00 sf			
	D3060 Controls And Instrumentation		*8.00 /sf*	*1,320,280*
	165,035.00 sf			
D3070	*Systems Testing And Balancing*			
23-0000.000	*HVAC*			
	Testing & Balancing			
	1 Testing & balancing	165,035.00 sf	0.75 /sf	123,776
	HVAC		*0.75 /sf*	*123,776*
	165,035.00 sf			
	D3070 Systems Testing And Balancing		*0.75 /sf*	*123,776*
	165,035.00 sf			
D3090	*Other HVAC Systems And Equipment*			
23-0000.000	*HVAC*			
	HVAC General Requirements			

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
		Commissioning Support	1.00	ls	45,000.00 /ls	45,000
	1	Coordination & management	1.00	ls	210,000.00 /ls	210,000
	1	Coordination / BIM	1.00	ls	80,000.00 /ls	80,000
	1	Seismic restraints / bracing	1.00	ls	28,000.00 /ls	28,000
	1	Coring & patching / firestopping	1.00	ls	20,000.00 /ls	20,000
	1	Hoisting & rigging / floor loading	1.00	ls	25,000.00 /ls	25,000
	1	Equipment start up and inspection	1.00	ls	15,000.00 /ls	15,000
	1	Access panels - furnish only	1.00	ls	5,000.00 /ls	5,000
		HVAC			*2.593/sf*	*428,000*
		165,035.00 sf				
		D3090 Other HVAC Systems And Equipment			*2.593/sf*	*428,000*
		165,035.00 sf				
		D30 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)			**85.899/sf**	**14,176,380**
		165,035.00 sf				
D40		**FIRE PROTECTION**				
D4020		*Fire Suppression Water Supply And Equipment*				
21-0000.000		*FIRE SUPRESSION*				
		Fire Suppression Water Supply and Equipment				
	1	8" Fire Sprinkler Pipe - Incoming Service Main	30.00	lf	106.60 /lf	3,198
	1	8" Backflow Preventer	1.00	ea	18,250.00 /ea	18,250
		FIRE SUPRESSION			*0.130/sf*	*21,448*
		165,035.00 sf				
		D4020 Fire Suppression Water Supply And Equipment			*0.130/sf*	*21,448*
		165,035.00 sf				
D4030		*Standpipe Systems*				
21-0000.000		*FIRE SUPRESSION*				
		Fire Protection Standpipe				
	1	2-1/2" Dry Alarm Check Valve w/ Compressor	1.00	ea	6,300.00 /ea	6,300

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
		6" Fire Sprinkler Pipe w/ Fittings & Hangers	810.00	lf	73.25 /lf	59,333
	1	6" Fire Standpipe Riser	280.00	lf	75.85 /lf	21,238
	1	6" Alarm Riser Check Valve Assembly	1.00	ea	7,200.00 /ea	7,200
	1	4" Sprinkler Horizontal Standpipe w/ Fittings & Hangers	320.00	lf	56.60 /lf	18,112
	1	2-1/2" Sprinkler Drain Pipe w/ Fittings & Hangers	440.00	lf	37.25 /lf	16,390
	1	FDC-1 - Fire Department Connection Valve	1.00	ea	3,200.00 /ea	3,200
	1	4" Zone Control Valve Assembly	4.00	ea	3,650.00 /ea	14,600
	1	2-1/2" FDV in Recessed Cabinet	16.00	ea	1,120.00 /ea	17,920
	1	2-1/2" FDV - Riser Fire Department Valve	12.00	ea	325.00 /ea	3,900
	1	Fire Hose Cabinet (Stage Area)	1.00	ea	3,000.00 /ea	3,000
	1	Fire Hose Cabinet (Stage Area) - removed per RECON	-1.00	ea	3,000.00 /ea	(3,000)
	1	Combination Test Connection and Drain Valve	4.00	ea	525.00 /ea	2,100
	1	6" Butterfly Valve w/ Tamper Switch	2.00	ea	1,250.00 /ea	2,500
	1	4" Butterfly Valve w/ Tamper Switch	4.00	ea	1,050.00 /ea	4,200
	1	6" Water alarm check valve	1.00	ea	2,600.00 /ea	2,600
	1	6" OS&Y Gate Valve	4.00	ea	1,085.00 /ea	4,340
	1	4" OS&Y Gate Valve	4.00	ea	775.00 /ea	3,100
	1	4" Check Valve	4.00	ea	1,250.00 /ea	5,000
	1	4"Storz Connection	1.00	ea	560.00 /ea	560
	1	4" PRV Valve	4.00	ea	330.00 /ea	1,320
	1	4" PRV Valve - removed per RECON	-4.00	ea	330.00 /ea	(1,320)
	1	EB-1 - Electric Bell	1.00	ea	525.00 /ea	525
	1	Tamper Switch	12.00	ea	485.00 /ea	5,820
	1	Flow Switch	4.00	ea	380.00 /ea	1,520
		FIRE SUPRESSION			*1.215/sf*	*200,458*
		165,035.00 sf				
		D4030 Standpipe Systems			*1.215/sf*	*200,458*
		165,035.00 sf				
D4040		*Sprinklers*				
21-0000.000		*FIRE SUPRESSION*				
		Fire Protection Sprinkler System				
	1	Sprinkler Head - Upright Pendent	288.00	ea	105.00 /ea	30,240
	1	Sprinkler Head - Sidewall Under Bleachers	10.00	ea	115.00 /ea	1,150
	1	Sprinkler Head - Concealed Pendent	1,096.00	ea	100.00 /ea	109,600
	1	Dry Sprinkler Head - Concealed Pendent	22.00	ea	110.00 /ea	2,420
	1	4" Wet Sprinkler Main Piping w/ Fittings & Hangers	2,680.00	lf	56.60 /lf	151,688
	1	2-1/2" Wet Sprinkler Pipe	920.00	lf	37.25 /lf	34,270
	1	2" Wet Sprinkler Pipe	4,182.00	lf	26.25 /lf	109,778
	1	1-1/2" Wet Sprinkler Pipe	5,576.00	lf	22.40 /lf	124,902
	1	1-1/4" Wet Sprinkler Pipe	6,970.00	lf	18.60 /lf	129,642
	1	2-1/2" Dry Sprinkler Pipe	220.00	lf	58.85 /lf	12,947
	1	2" Dry Sprinkler Pipe	190.00	lf	48.45 /lf	9,206
	1	1-1/2" Dry Sprinkler Pipe	120.00	lf	42.10 /lf	5,052
	1	1-1/4" Dry Sprinkler Pipe	310.00	lf	37.65 /lf	11,672

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
		Misc. Valves, Tags & Fittings	1.00	ls	70,698.710 /ls	70,699
		FIRE SUPRESSION			*4.867/sf*	*803,265*
		165,035.00 sf				
		D4040 Sprinklers			*4.867/sf*	*803,265*
		165,035.00 sf				
D4090		*Other Fire Protection Systems*				
21-0000.000		*FIRE SUPRESSION*				
		Fire Protection General Conditions				
	1	Hydraulic Calculations	1.00	ls	2,600.00 /ls	2,600
	1	Testing & Inspection	1.00	ls	2,200.00 /ls	2,200
	1	Drain & Fill System	1.00	ls	2,800.00 /ls	2,800
	1	Coordination and Management	1.00	ls	92,500.00 /ls	92,500
	1	Commissioning Assistance	1.00	ls	15,000.00 /ls	15,000
	1	Coordination Drawings / BIM	1.00	ls	25,000.00 /ls	25,000
	1	Seismic Restraints / Bracing - includes design	1.00	ls	12,000.00 /ls	12,000
	1	Coring & Patching / Firestopping	1.00	ls	4,500.00 /ls	4,500
	1	Hoisting & Rigging / Floor Loading	1.00	ls	25,000.00 /ls	25,000
		FIRE SUPRESSION			*1.100/sf*	*181,600*
		165,035.00 sf				
		D4090 Other Fire Protection Systems			*1.100/sf*	*181,600*
		165,035.00 sf				
		D40 FIRE PROTECTION			**7.312/sf**	**1,206,770**
		165,035.00 sf				
D50		**ELECTRICAL**				
D5005		*Electrical Demolition*				
26-0000.000		*ELECTRICAL*				
	2	BP-2 Boiler circ pump 20A 208v connection	1.00	ea	318.350 /ea	318
	2	Type SL4 LED wall mount flood	2.00	ea	405.00 /ea	810

Item	Description	Takeoff Qty		Unit Cost	Total Amount
	ELECTRICAL			*0.007/sf*	*1,128*
	165,035.00 sf				
	D5005 Electrical Demolition			*0.007/sf*	*1,128*
	165,035.00 sf				
D5010	*Electrical Service And Distribution*				
26-0000.000	*ELECTRICAL*				
2	Electrical Demolition				
2	Disconnect , cut & make safe electric service in footprint of new building	1.00	ls	20,000.00 /ls	20,000
2	Normal Power and Distribution				
2	Switchboard MSB 2500/2000A MCB 277/480v 3-section	1.00	ea	238,790.00 /ea	238,790
2	Switchboard MSB2 2500/2000A MCB 277/480v 3-section	1.00	ea	238,790.00 /ea	238,790
2	Check metering modules	1.00	ea	20,000.00 /ea	20,000
2	Panel EV 600A MLO 120/208v 60p	1.00	ea	15,100.00 /ea	15,100
2	Panel KPP 250A MLO 120/208v 60p	1.00	ea	9,920.15 /ea	9,920
2	Panel LP1A 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP1B 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP2A 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP2B 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP2C 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP3A 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel LP3B 100A MLO 277/480v 30p	1.00	ea	3,793.11 /ea	3,793
2	Panel MHP1A 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP2A 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP2B 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	Panel MHP2C 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
2	100A 3w Feeder EMT copper	1,500.00	lf	49.91 /lf	74,865
2	100A 4w Feeder EMT copper	2,300.00	lf	57.15 /lf	131,445
2	125A 3w Feeder EMT copper	1,100.00	lf	55.77 /lf	61,347
2	150A 3w Feeder EMT copper	1,100.00	lf	59.77 /lf	65,747
2	150A 4w Feeder EMT copper	60.00	lf	70.22 /lf	4,213
2	225A 4w Feeder EMT copper	230.00	lf	124.46 /lf	28,626
2	250A 4w Feeder EMT copper	120.00	lf	147.110 /lf	17,653
2	400A 4w Feeder EMT copper	1,600.00	lf	185.89 /lf	297,424
2	100A 600V DSN SW Fusible	2.00	ea	1,075.71 /ea	2,151
2	Feeder Pri/sec 30KVA 3PH Transformer	3.00	ea	972.94 /ea	2,919
2	Feeder Pri/sec 45KVA 3PH Transformer	3.00	ea	1,293.04 /ea	3,879
2	Feeder Pri/sec 75KVA 3PH Transformer	4.00	ea	1,994.58 /ea	7,978
2	4" & 2" Empty raceways for future PV system	200.00	lf	75.00 /lf	15,000
2	PV Systems				
2	Based on 500kw (Future Design)				
2	Machine and Equipment Power				
2	ASHP-1 Air source heat pump 480v connection	1.00	ea	4,152.020 /ea	4,152
2	ASHP-2 Air source heat pump 480v connection	1.00	ea	4,152.020 /ea	4,152
2	BP-1 Boiler circ pump 20A 208v connection	1.00	ea	318.350 /ea	318
2	CP-1 Condensate pump 20A 120v connection	5.00	ea	215.00 /ea	1,075

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
?	CUH-1**14 Hot water cabinet unit heaters 20A 120v connection	14.00	ea	711.11 /ea	9,956
2	DCUe/DCUc-1 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-2 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-3 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-4 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-5 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-6 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-7 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-8 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-9 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	DCUe/DCUc-10 Split unit 30A 208v 2p connection	1.00	ea	1,625.57 /ea	1,626
2	EB-1 Electric boiler 800A 480v connection	1.00	ea	5,454.95 /ea	5,455
2	EB-2 Electric boiler 800A 480v connection	1.00	ea	5,454.95 /ea	5,455
2	EF-1 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	EF-2 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	EF-3 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	EF-4 Exhaust fan 20A 480v connection	1.00	ea	1,372.02 /ea	1,372
2	Elevator controller connection	1.00	ea	6,700.00 /ea	6,700
2	Elevator cab power & lighting connection	1.00	ea	1,200.00 /ea	1,200
2	EWH-1 Electric water heater 30A 480v connection	1.00	ea	1,078.45 /ea	1,078
2	EWH-2 Electric water heater 30A 480v connection	1.00	ea	1,078.45 /ea	1,078
2	EWH-3 Electric water heater 30A 480v connection	1.00	ea	1,078.45 /ea	1,078
2	FCU-1**6 Fan coil units 20A 208v 2p connection	6.00	ea	670.94 /ea	4,026
2	GF-1 Glycol make up 20A 120v connection	1.00	ea	304.00 /ea	304
2	GF-2 Glycol make up 20A 120v connection	1.00	ea	304.00 /ea	304
2	KEF-1 Kitchen hood fan 30A 480v connection	1.00	ea	1,311.84 /ea	1,312
2	MV-1 Mixing valve 20A 10v connection	1.00	ea	494.46 /ea	494
2	MV-2 Mixing valve 20A 10v connection	1.00	ea	494.46 /ea	494
2	OMP-1 Oil monitoring panel 20A 120v connection	1.00	ea	1,200.00 /ea	1,200
2	P-1 HP-HHW Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-2 HP-HHW Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-3 HP-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-4 HP-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-5 BLDG HHW-Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-6 BLDG HHW-Heating hot water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-7 BLDG-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-8 BLDG-CHW Chilled water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-9 -CCHW Condenser water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	P-10 -CCHW Condenser water 480v connection	1.00	ea	3,347.17 /ea	3,347
2	RP-1 Circ pump 20A 120v connection	1.00	ea	298.24 /ea	298
2	RP-2 Circ pump 20A 120v connection	1.00	ea	298.24 /ea	298
2	RTU-A Roof top unit 17,000 CFM 480v connection	1.00	ea	6,127.04 /ea	6,127
2	RTU-B Roof top unit 20,000 CFM 480v connection	1.00	ea	6,127.04 /ea	6,127
2	RTU-C Roof top unit 17,000 CFM 480v connection	1.00	ea	6,127.04 /ea	6,127
2	RTU-D Roof top unit 13,000 CFM 480v connection	1.00	ea	4,332.50 /ea	4,333
2	RTU-E Roof top unit 3,255 CFM 480v connection	1.00	ea	1,577.97 /ea	1,578
2	RTU-F Roof top unit 10,000 CFM 480v connection	1.00	ea	4,332.50 /ea	4,333
2	RTU-G Roof top unit 3,000 CFM 480v connection	1.00	ea	2,058.240 /ea	2,058
2	RTU-H Roof top unit 4,000 CFM 480v connection	1.00	ea	1,926.52 /ea	1,927
2	RTU-I Roof top unit 2,000 CFM 480v connection	1.00	ea	1,926.52 /ea	1,927
2	SM-1**4 Water sub metering 20A 120v connection	4.00	ea	325.00 /ea	1,300
2	SP-1 Elevator sump pump 20A 208v 2p connection	1.00	ea	365.00 /ea	365
2	SPCP-1 Elevator sump pump control panel 20A 120v connection	1.00	ea	800.00 /ea	800
2	UH-1**5 Hot water unit heaters 20A 120v connection	5.00	ea	530.570 /ea	2,653

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
?	VAV-** Variable air volume 20A 120v connection	155.00	ea	322.24 /ea	49,947
2	Type PC2 LED architectural pendant	140.00	ea	360.00 /ea	50,400
2	Type PC3 LED architectural pendant	81.00	ea	360.00 /ea	29,160
2	Type RC1 LED 4" recessed down light	87.00	ea	198.00 /ea	17,226
2	Type RC2 LED 4" recessed down light	98.00	ea	198.00 /ea	19,404
2	Type RC4 LED 6" recessed down light	17.00	ea	216.00 /ea	3,672
2	Type SL3 LED 6" recessed down light wet location	43.00	ea	234.00 /ea	10,062
2	Type SL4 LED wall mount flood	3.00	ea	405.00 /ea	1,215
2	Type UC LEC 30" undercabinet	130.00	ea	135.00 /ea	17,550
2	Type X1 LED Exit edge lit single face	30.00	ea	180.00 /ea	5,400
2	Type X1W LED Exit edge lit single face wall mount	24.00	ea	216.00 /ea	5,184
2	(L) Slv Wall lighting control	292.00	ea	150.85 /ea	44,048
2	(OS] Ceiling occupancy senser	463.00	ea	186.25 /ea	86,234
2	[LTS] Wall scene controller	5.00	ea	314.82 /ea	1,574
2	[OS-HB] Hi-bay Ceiling occupancy senser	21.00	ea	186.25 /ea	3,911
2	[PS] Lighting photo control	59.00	ea	200.69 /ea	11,841
2	[PS] Partition senser lighting control	2.00	ea	436.35 /ea	873
2	[R] Emergency lighting relay	22.00	ea	529.34 /ea	11,645
2	[RC] Room controller	68.00	ea	790.36 /ea	53,744
2	20A 120-277V S/P Switch , box & plate	16.00	ea	101.52 /ea	1,624
2	25' CAT 6 Lighting control cable	840.00	ea	61.68 /ea	51,811
2	Lighting control wall box	308.00	ea	74.68 /ea	23,001
2	Luminary cable MC 12/2 & 14/2 1-10VDC	33,000.00	lf	6.07 /lf	200,310
2	3/4" - EMT 5#12-2#16 10vdc	2,000.00	lf	30.99 /lf	61,980
2	3/4" - EMT 5#12	150.00	lf	13.85 /lf	2,078
2	3/4" - EMT 5#10	700.00	lf	15.01 /lf	10,507
2	3/4" - EMT 7#12	1,900.00	lf	15.68 /lf	29,792
2	Lighting controls programming	160,731.00	sf	0.15 /sf	24,110
2	Theater Lighting				
2	Theater lighting & dimming equipment , included in equipment section				
2	Theater lighting system circuits & installation	1.00	allow	125,000.00 /allow	125,000
2	General Power				
2	Device Branch				
2	20A 125V 3W Single recept, box & plate	133.00	ea	120.66 /ea	16,048
2	20A 125V Duplex receptacle, box & plate	803.00	ea	106.65 /ea	85,640
2	20A 125V Duplex GFCI receptacle, box & plate	128.00	ea	124.75 /ea	15,968
2	20A 125V Duplex GFCI receptacle, box & WP plate	9.00	ea	131.29 /ea	1,182
2	(2) 20A 125V Duplex receptacle, box & plate	212.00	ea	155.610 /ea	32,989
2	L5-30R 30A 125V 3Wire TL receptacle, box & plate IDF closet	24.00	ea	161.830 /ea	3,884
2	L5-30R 30A 125V 3Wire TL receptacle, box & plate MDF racks	24.00	ea	161.830 /ea	3,884
2	[ADO] Automatic door operator & connection	12.00	ea	627.02 /ea	7,524
2	[PP] Door push plate & circuit	24.00	ea	452.07 /ea	10,850
2	[FB1] 8 Gang floor box w/ branch & Telcom raceways	2.00	ea	1,937.68 /ea	3,875
2	15-50R 250V 4W Kiln receptacle, box & plate	2.00	ea	249.93 /ea	500
2	20A Cord reel w/ 25' cable	6.00	ea	1,447.97 /ea	8,688
2	30A 250/600V DSN SW NF Kiln disconnect	2.00	ea	414.93 /ea	830
2	Auto flush/faucet valve connection	118.00	ea	228.59 /ea	26,974
2	Emergency pull switch & light	4.00	ea	989.46 /ea	3,958
2	Gymnasium circuit 3/4" - EMT 4#12	580.00	ea	13.41 /ea	7,778
2	Hand Dryer connection	40.00	ea	215.14 /ea	8,606
2	Motorized shade connection	6.00	ea	246.14 /ea	1,477
2	Motorized shade control connection	2.00	ea	347.86 /ea	696
2	Overhead coiling door operator connection	1.00	ea	754.72 /ea	755
2	Backstop circuits 3/4" - EMT 5#12	925.00	ea	14.49 /ea	13,403

Item		Description	Takeoff Qty		Unit Cost	Total Amount
	?	Basketball backstop receptacle & connection	6.00	ea	3,600.00 /ea	21,600
	2	Bleacher driver motor connection	2.00	ls	2,200.00 /ls	4,400
	2	Shot clock & scoreboard connection	2.00	ea	5,900.00 /ea	11,800
	2	Kiln EPO shut down	1.00	ea	1,017.76 /ea	1,018
	2	Kitchen equipment connections 20A 3w allowance	1.00	ls	30,000.00 /ls	30,000
	2	3/4" - EMT 3#12	500.00	ea	11.98 /ea	5,990
	2	3/4" - EMT 5#12	1,000.00	ea	13.85 /ea	13,850
	2	3/4" - EMT 7#12	2,200.00	ea	15.68 /ea	34,496
	2	3/4" - EMT 7#10	3,800.00	ea	17.37 /ea	66,006
	2	#12/2C MC Cable	23,000.00	ea	4.28 /ea	98,440
	2	Normal Power distribution reconciliation balancing	-1.00	ls	200,000.000 /ls	(200,000)
		ELECTRICAL			*16.704/sf*	*2,756,678*
		165,035.00 sf				
		D5010 Electrical Service And Distribution			*16.704/sf*	*2,756,678*
		165,035.00 sf				
D5020		*Lighting & Branch Wiring*				
26-0000.000		*ELECTRICAL*				
	?	Panel MHP3A 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
	2	Panel MHP3B 400A MLO 277/480v 42p	1.00	ea	8,142.45 /ea	8,142
	2	Panel MP1A 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
	2	Panel MP1B 250A MLO 120/208v 60p	1.00	ea	10,824.53 /ea	10,825
	2	Panel MP2A 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
	2	Panel MP2B 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
	2	Panel MP2C 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
	2	Panel MP3A 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
	2	Panel MP3B 225A MLO 120/208v 60p	1.00	ea	10,535.68 /ea	10,536
	2	Panel OLP 100A MLO 277/480v 30p	1.00	ea	4,273.110 /ea	4,273
	2	Panel PP1A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel PP1B 100A MLO 120/208v 60p 200% Neutral	1.00	ea	7,295.68 /ea	7,296
	2	Panel PP1S 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel PP2A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel PP2B 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel PP2C 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel PP3A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel PP3B 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel TEP1A 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536
	2	Panel TEP1B 225A MLO 120/208v 60p 200% Neutral	1.00	ea	10,535.68 /ea	10,536

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
?	Panel TEP2A2 100A MLO 120/208v 60p 200% Neutral	1.00	ea	7,295.68 /ea	7,296
2	Panel TEPA2 100A MLO 120/208v 60p 200% Neutral	1.00	ea	7,295.68 /ea	7,296
2	30KVA UPS MDF Room	1.00	ea	49,510.85 /ea	49,511
2	T-4 30KVA K-13 Transformer 480-120/208v	2.00	ea	11,094.78 /ea	22,190
2	T-5 45KVA K-13 Transformer 480-120/208v	9.00	ea	14,069.12 /ea	126,622
2	T-6 75KVA K-13 Transformer 480-120/208v	5.00	ea	18,251.43 /ea	91,257
2	T-9 225KVA K-13 Transformer 480-120/208v	1.00	ea	33,207.61 /ea	33,208
2	50A 3w Feeder EMT copper	570.00	lf	20.20 /lf	11,514
2	#12/3C MC Cable	5,600.00	lf	5.13 /lf	28,728
2	3/4" - EMT 3#12	3,100.00	lf	11.98 /lf	37,138
2	3/4" - EMT 4#12	350.00	lf	12.92 /lf	4,522
2	3/4" - EMT 5#12	1,300.00	lf	13.85 /lf	18,005
2	3/4" - EMT 3#10	750.00	lf	12.82 /lf	9,615
2	3/4" - EMT 4#10	600.00	lf	13.85 /lf	8,310
2	1" EMT - 4 # 8	300.00	lf	17.09 /lf	5,127
2	60A 4w Feeder EMT copper	1,200.00	lf	27.43 /lf	32,916
2	150A 4w Feeder EMT copper	150.00	lf	70.22 /lf	10,533
2	175A 4w Feeder EMT copper	150.00	lf	75.30 /lf	11,295
2	225A 4w Feeder EMT copper	600.00	lf	124.46 /lf	74,676
2	800A 4w Feeder EMT copper	400.00	lf	393.78 /lf	157,512
2	Allowance for unidentified mechanical equipment	160,731.00	sf	0.35 /sf	56,256
2	Emergency Power and Distribution				
2	600KW Diesel genset , weather proof enclosure w/200KW load bank	1.00	ea	475,000.00 /ea	475,000
2	General Power Reconciliation Balancing - added per RECON	-1.00	ls	72,316.00 /ls	(72,316)
2	100A 4p 480v Generator quick connect switch	1.00	inc		
2	ATS-LS 200A 4' ISO bypass transfer switch 277/480v	1.00	inc		
2	ATS-OS 1000A 4p 277/480v transfer switch	1.00	ea	3,321.85 /ea	3,322
2	Dist. Panel NEDP 1000A MLO 277/480v	1.00	ea	5,741.02 /ea	5,741
2	Panel EHP1B 100A MLO 277/480v 42p	1.00	ea	2,453.58 /ea	2,454
2	Panel EHP2B 100A MLO 277/480v 42p	1.00	ea	2,453.58 /ea	2,454
2	Panel EHP3B 100A MLO 277/480v 42p	1.00	ea	2,453.58 /ea	2,454
2	Panel ELP1A 100A MCB 277/480v 42p	1.00	ea	2,598.02 /ea	2,598
2	Panel ELP1B 225A MCB 277/480v 42p	1.00	ea	2,598.02 /ea	2,598
2	Panel ELP2A 100A MCB 277/480v 42p	1.00	ea	2,598.02 /ea	2,598
2	Panel ELP2B 100A MCB 277/480v 42p	1.00	ea	2,598.02 /ea	2,598
2	Panel ELP2C 100A MCB 277/480v 42p	1.00	ea	2,598.02 /ea	2,598
2	Panel ELP3A 100A MCB 277/480v 42p	1.00	ea	2,598.02 /ea	2,598
2	Panel ELP3B 100A MCB 277/480v 42p	1.00	ea	2,598.02 /ea	2,598
2	Panel EP1A 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP1B 100A MLO 120/208v 72p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP2A 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP2B 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP2C 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP3A 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel EP3B 100A MLO 120/208v 60p 200% Neutral	1.00	ea	3,935.68 /ea	3,936
2	Panel MHP1B 400A MLO 277/480v 42p	1.00	ea	2,742.45 /ea	2,742
2	T-5 45KVA K-13 Transformer 480-120/208v	2.00	ea	14,069.12 /ea	28,138
2	Feeder Pri/sec 45KVA 3PH Transformer	2.00	ea	1,293.04 /ea	2,586

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	# 3 MI cable feeder	1,350.00	lf	162.76 /lf	219,726
2	100A 4w Feeder EMT copper	1,000.00	lf	57.15 /lf	57,150
2	125A 3w Feeder EMT copper	400.00	lf	55.77 /lf	22,308
2	225A 4w Feeder EMT copper	325.00	lf	124.46 /lf	40,450
2	Feeder Pri/sec 150A 3PH Transformer	1.00	lf	2,186.280 /lf	2,186
2	Lighting and Branch				
2	Lighting				
2	Lighting fixture budget allowance	1.00	ls	1,425,000.00 /ls	1,425,000
2	Lighting unit prices include installations & supports				
2	Type LC1 LED 50' Flexible tape under stair tread	2.00	ea	1,080.00 /ea	2,160
2	Type LCD LED Flexible tape in corner mounted channel	27.00	ea	1,440.00 /ea	38,880
2	Type LK22 LED 2x2 recessed food prep grade	40.00	ea	180.00 /ea	7,200
2	Type LP2 LED 4' pendant dir/ind	1.00	ea	225.00 /ea	225
2	Type LP4 LED 4' pendant dir/ind	42.00	ea	225.00 /ea	9,450
2	Type LP6 LED 6' pendant dir/ind	31.00	ea	261.00 /ea	8,091
2	Type LP8 LED 8' pendant dir/ind	367.00	ea	261.00 /ea	95,787
2	Type LP12 LED 12' pendant dir/ind	1.00	ea	297.00 /ea	297
2	Type LPG LED Gym high bay	30.00	ea	360.00 /ea	10,800
2	Type LR2 LED 2"x2' recessed linear	23.00	ea	108.00 /ea	2,484
2	Type LS4 LED 4' x 2" Utility strip	20.00	ea	180.00 /ea	3,600
2	Type LS6 LED 6' x 2" Utility strip	14.00	ea	216.00 /ea	3,024
2	Type LS8 LED 2' x 8" Utility strip	34.00	ea	252.00 /ea	8,568
2	Type PC1 LED architectural pendant	92.00	ea	360.00 /ea	33,120
2	#12/3C MC Cable	26,000.00	ea	5.28 /ea	137,280
2	#10/3C MC Cable	2,500.00	ea	5.57 /ea	13,925
2	60A 4w Feeder EMT copper	120.00	ea	27.43 /ea	3,292
2	Lightning and Power Specialties				
2	Building & service grounding	1.00	ls	30,000.00 /ls	30,000
2	Lighting protection	1.00	ls	125,000.00 /ls	125,000
2	Miscellaneous Systems				
2	Temporary power and lights	1.00	ls	225,000.00 /ls	225,000
2	Subcontractor general conditions	1.00	ls	287,000.00 /ls	287,000
2	BIM Coordination	1.00	ls	45,000.00 /ls	45,000
2	Bond excluded				
2	Testing and Commissioning				
2	Testing and commissioning	1.00	ls	50,000.00 /ls	50,000
	ELECTRICAL			*26.695/sf*	*4,405,552*
	165,035.00 sf				
	D5020 Lighting & Branch Wiring			*26.695/sf*	*4,405,552*
	165,035.00 sf				
D5040	*Miscellaneous Electrical Systems*				
26-0000.000	*ELECTRICAL*				
	Type LR4 LED 2"x4' recessed linear	257.00	ea	144.00 /ea	37,008
2	Type LR6 LED 2"x6 recessed linear	106.00	ea	1,440.00 /ea	152,640
2	Type LR6T LED 2"x6 recessed linear	3.00	ea	144.00 /ea	432
2	Type LR8 LED 2"x8 recessed linear	63.00	ea	180.00 /ea	11,340

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
!	Type LR8T LED 2"x8 recessed linear	4.00	ea	180.00 /ea	720
2	Type LRS LED 2"x10' recessed linear	14.00	ea	180.00 /ea	2,520
2	Type LS2 LED 2' x 2" Utility strip	6.00	ea	216.00 /ea	1,296
	ELECTRICAL			*1.248/sf*	*205,956*
	165,035.00 sf				
	D5040 Miscellaneous Electrical Systems			*1.248/sf*	*205,956*
	165,035.00 sf				
D5060	*Data Communications System*				
27-0000.000	*COMMUNICATIONS*				
)01	Telephone and Communications Systems				
001	Telecomm wall sleeve 1" - EMT	335.00	lf	165.00 /lf	55,275
001	Telcom backbone (2) 4" EMT w/hangers - adjusted per RECON	500.00	lf	118.05 /lf	59,025
001	Telcom closet ground 1/0 THHN 1" EMT	320.00	lf	18.79 /lf	6,013
001	1/4" x 4" x 3' Ccpper ground bar	4.00	ea	491.82 /ea	1,967
001	Telcom wall & floor sleeves 4" x 12"	33.00	ea	235.82 /ea	7,782
001	12" Wx 3" Dx 9" Spacing Alum cable tray	130.00	ea	68.91 /ea	8,958
001	12x 12x 6" BOX HNGD CVR - NEMA 3R	9.00	ea	378.39 /ea	3,406
001	IDF racks horizontal wire management	6.00	ea	763.93 /ea	4,584
001	IDF Closet 2-post rack, 45u	3.00	ea	601.560 /ea	1,805
001	48 Port 1-RMU FO Patch panel	2.00	ea	380.43 /ea	761
001	48 Port CAT6 UTP Patch panel	32.00	ea	339.13 /ea	10,852
001	(CAM) 1-CAT 6A Devices , termination & testing	104.00	ea	90.97 /ea	9,461
001	(W) 1-CAT 6A Devices , termination & testing	127.00	ea	90.97 /ea	11,553
001	1-CAT 6A Devices , termination & testing	6.00	ea	90.97 /ea	546
001	2-CAT 6A Devices , termination & testing	28.00	ea	159.360 /ea	4,462
001	2-CAT 6A Devices , termination & testing FP location	106.00	ea	159.360 /ea	16,892
001	3-CAT 6A Devices , termination & testing	160.00	ea	232.09 /ea	37,134
001	4-CAT 6A Devices , termination & testing	3.00	ea	300.48 /ea	901
001	(WAP) 2-CAT 6A Devices , termination & testing	192.00	ea	86.64 /ea	16,635
001	CORD - 10' 1F PATCH ST>SC MM	1,150.00	ea	46.59 /ea	53,579
001	CORD - 10' PATCH CMR CAT6A BLU	100.00	ea	36.79 /ea	3,679
001	CBL - CMP CAT6A UTP BLU	275,000.00	lf	1.45 /lf	398,750
001	FO Cable 24F MM OM4 Armored	350.00	lf	7.20 /lf	2,520
001	FO Cable 24F SM OS2 Armored	350.00	lf	4.65 /lf	1,628
001	FO Terminations	288.00	ea	68.65 /ea	19,771
001	Telecommunications - Network Switches and Telephone Equipment - added per RECON	1.00	ls	585,000.00 /ls	585,000
001	Electronic technology equipment by owner				
001	Av System				
001	AV Equipment & installation	1.00	Budget	450,000.00 /Budget	450,000
001	AV wall sleeve (1) 1" & (1) 1-1/4" - EMT & box	204.00	ea	557.080 /ea	113,644
001	[L1] ALS Antennae backbox & wall sleeve	1.00	ea	209.28 /ea	209
001	[S1] Gymnasium speaker backbox & wall sleeve	11.00	ea	260.220 /ea	2,862

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
)01	AV Ceiling projector location box & 1" sleeve	2.00	ea	209.72 /ea	419
001	Cafeteria AV 1-1/4" wall sleeve	21.00	ea	341.39 /ea	7,169
001	AV raceway rough in for classrooms	59.00	ea	500.00 /ea	29,500
001	16" Wx 4" D Wire mesh cable tray	90.00	lf	45.00 /lf	4,050
001	Digital signs	1.00	ls	25,000.00 /ls	25,000
001	Public Address Systems				
001	(TB) Classroom talk back 8" Ceiling speaker	67.00	ea	315.00 /ea	21,105
001	[CB] classroom call station	59.00	ea	619.170 /ea	36,531
001	[SR] Classroom sound reinforcement speaker	75.00	ea	1,500.00 /ea	112,500
001	Paging 8" ceiling speaker	300.00	ea	260.00 /ea	78,000
001	PA speaker w/volume control	107.00	ea	185.73 /ea	19,873
001	One way wall mounted Speaker	29.00	ea	215.13 /ea	6,239
001	One way exterior wall mounted Speaker	8.00	ea	325.00 /ea	2,600
001	Exterior wall mount speaker	1.00	ea	405.00 /ea	405
001	Gymnasium sound system raceways	660.00	lf	13.48 /lf	8,897
001	Gymnasium One way ceiling mounted box Speaker	12.00	ea	450.00 /ea	5,400
001	#18- 2P Twisted pr cable	30,000.00	lf	1.27 /lf	38,100
001	Gymnasium sound system	1.00	ls	25,000.00 /ls	25,000
001	Public address Systems equipment & installation	1.00	ls	75,000.00 /ls	75,000
001	Program Clock System				
001	Equipment & programming allowance	1.00	ls	20,000.00 /ls	20,000
001	12" Surface wireless clock	145.00	ea	410.00 /ea	59,450
001	16" Surface wireless clock w/wire guard	2.00	ea	600.00 /ea	1,200
001	DAS Radio Repeater System				
001	Radio Repeater system - Allowance	1.00	ls	125,000.00 /ls	125,000
001	Cell Booster System - Allowance - adjusted per RECON	1.00	ls	250,000.00 /ls	250,000
	COMMUNICATIONS			*17.215/sf*	*2,841,093*
	165,035.00 sf				
	D5060 Data Communications System			*17.215/sf*	*2,841,093*
	165,035.00 sf				
D5070	*Security and Fire Alarm*				
28-0000.000	*ELECTRONIC SAFETY & SECURITY*				
0	Security Access Control &CCTV				
10	[CR] Car reader raceway, device	65.00	ea	720.13 /ea	46,808
10	Security door rough-in raceways & boxes	65.00	ea	439.91 /ea	28,594
10	[DC] Door contact	108.00	ea	124.85 /ea	13,484
10	[REX] Request to exit	65.00	ea	185.00 /ea	12,025
10	[DJ] 8x8x4 Door security junction box	65.00	ea	110.89 /ea	7,208
10	[EL] Electric door lock	65.00	ea	115.00 /ea	7,475
10	[DH] Door transfer hinge	65.00	ea	75.00 /ea	4,875
10	[KP] Digital key pad , raceway	2.00	ea	673.42 /ea	1,347
10	[LD] Local down em button	11.00	ea	388.42 /ea	4,273
10	[MO] Ceiling motion sensor & cable	52.00	ea	142.62 /ea	7,416
10	[MS] Master call station	1.00	ea	676.23 /ea	676
10	[IC] Voice intercom station	14.00	ea	489.24 /ea	6,849

Item	Description	Takeoff Qty		Total Unit Cost	Amount
0	[P] Panic call button, & raceway sleeve	14.00	ea	220.00 /ea	3,080
10	[CCTV] Ceiling mount dome camera	54.00	ea	460.00 /ea	24,840
10	[CCTV] Wall mount fixed camera	24.00	ea	460.00 /ea	11,040
10	[CCTV] Exterior wall mount camera	8.00	ea	2,480.00 /ea	19,840
10	[CCTV] Exterior wall mount 360d camera	18.00	ea	3,780.00 /ea	68,040
10	#18- 1P Communication cable	4,000.00	lf	1.33 /lf	5,320
10	#18- 2P Communication cable	100.00	lf	1.71 /lf	171
10	#18/6C Shielded communication cable	15,000.00	lf	3.76 /lf	56,400
10	#22- 2P Communication cable	1,000.00	lf	1.60 /lf	1,600
10	#22/2C Communication cable	2,000.00	lf	1.34 /lf	2,680
10	#22/4C Communication cable	3,000.00	lf	1.47 /lf	4,410
10	Access control & CCTV head end equipment , programming & commissioning	1.00	ea	225,000.00 /ea	225,000
10	Fire Alarm System				
10	Equipment ,devices and programming	1.00	ls	235,000.00 /ls	235,000
10	F/A Addressable control panels per section	1.00	ea	4,621.72 /ea	4,622
10	F/A Radio master box	1.00	ea	866.57 /ea	867
10	F/A Remote annunciator	3.00	ea	577.71 /ea	1,733
10	F/A Mass notification local control panel	8.00	ea	577.71 /ea	4,622
10	F/A Graphic display	1.00	ea	433.28 /ea	433
10	F/A Knox box	1.00	ea	554.35 /ea	554
10	F/A Terminal cabinet	5.00	ea	577.71 /ea	2,889
10	Fass notification message board	2.00	ea	577.71 /ea	1,155
10	F/A Exterior rotating beacon	1.00	ea	774.07 /ea	774
10	F/A Pull station installed w/back box	15.00	ea	279.02 /ea	4,185
10	F/A CO detector installed w/.back box	12.00	ea	206.74 /ea	2,481
10	F/A Smoke detector installed w/back box	160.00	ea	475.82 /ea	76,131
10	F/A Mass notification strobe ceiling mount installed w/back box	206.00	ea	239.91 /ea	49,421
10	F/A Mass notification strobe wall mount installed w/back box	34.00	ea	266.27 /ea	9,053
10	F/A Combo Mass Notification Speaker/strobe wall mount installed w/back box	45.00	ea	223.63 /ea	10,063
10	F/A Speaker/strobe ceiling mount installed w/back box	202.00	ea	326.05 /ea	65,862
10	F/A Strobe wall mount installed w/back box	33.00	ea	179.86 /ea	5,935
10	F/A Tamper switch & monitor module	16.00	ea	454.79 /ea	7,277
10	F/A Door holder installed w/back box	4.00	ea	546.87 /ea	2,187
10	F/A Flow switch & monitor module	5.00	ea	452.94 /ea	2,265
10	F/A Control/ monitor module relay	10.00	ea	353.70 /ea	3,537
10	F/A SLC/NAC 3/4" EMT & loop circuits	4,400.00	lf	11.39 /lf	50,116
10	F/A SLC/NAC RISER 1" EMT & loop circuits	1,500.00	lf	13.66 /lf	20,490
10	F/A 14/4 FPLP/MC cable	14,200.00	lf	4.16 /lf	59,072
10	F/A 16/2 FPLP/MC cable	6,500.00	lf	3.08 /lf	20,020
10	Area of refuge	1.00	ea	25,000.00 /ea	25,000
10	F/A 16/2 FPLP/MC cable	2,200.00	lf	3.26 /lf	7,172
	ELECTRONIC SAFETY & SECURITY			*7.492/sf*	*1,236,369*
	165,035.00 sf				
	D5070 Security and Fire Alarm			*7.492/sf*	*1,236,369*
	165,035.00 sf				

Item	Description	Takeoff Qty		Unit Cost	Total Amount
	D50 ELECTRICAL			**69.360/sf**	**11,446,775**
	165,035.00 sf				
	D SERVICES			***186.211/sf***	***30,731,268***
	165,035.00 sf				
E					
E10	**EQUIPMENT**				
E1010	*Commercial Equipment*				
11-0000.000	*EQUIPMENT*				
	Food Service Equipment - Allowance	1.00	ls	876,120.00 /ls	876,120
	EQUIPMENT			*5.309/sf*	*876,120*
	165,035.00 sf				
	E1010 Commercial Equipment			*5.309/sf*	*876,120*
	165,035.00 sf				
E1060	*Residential Equipment*				
11-0000.000	*EQUIPMENT*				
30	Refrigerators	12.00	ea	1,800.00 /ea	21,600
100	Front Load Washer	1.00	ea	2,000.00 /ea	2,000
100	Front Load Dryer	1.00	ea	2,000.00 /ea	2,000
100	Freight	1.00	ls	1,500.00 /ls	1,500
100	Unload, Unwrap, and Drop Appliances in Place	14.00	ea	500.00 /ea	7,000
	EQUIPMENT			*0.207/sf*	*34,100*
	165,035.00 sf				
	E1060 Residential Equipment			*0.207/sf*	*34,100*
	165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
E1090	*Other Equipment*					
11-0000.000	*EQUIPMENT*					
)10	Rigging and Curtain System	1.00	allow	75,000.00	/allow	75,000
010	Projector Screens	2.00	ea	15,000.00	/ea	30,000
10	Motorized Basketball Hoops, Winch, Connectors	6.00	ea	12,500.00	/ea	75,000
10	Motorized Divider Curtain in Gym	1.00	ea	20,000.00	/ea	20,000
10	Volley Ball Equipment - Allowance	1.00	ls	9,000.00	/ls	9,000
10	Pickle Ball Equipment - Allowance	1.00	ls	5,000.00	/ls	5,000
10	Volley Ball Equipment - Allowance - removed per RECON	-1.00	ls	9,000.00	/ls	(9,000)
10	Pickle Ball Equipment - Allowance - removed per RECON	-1.00	ls	5,000.00	/ls	(5,000)
38	Wall Pads - 6' tall x 2' wide, Fire Rated - Gym, Allowance	1,250.00	sf	35.00	/sf	43,750
38	Interior Scoreboard w/Shot Clock	2.00	ea	20,000.00	/ea	40,000
38	Traverse Wall, climbing Wall - Allowance	540.00	sf	75.00	/sf	40,500
38	Climbing Ropes	6.00	ea	2,000.00	/ea	12,000
38	Adaptive Swings & Hooks - Gym	4.00	ea	4,500.00	/ea	18,000
38	Calming Room Wall Padding - 6' Height	2,375.00	sf	40.00	/sf	95,000
38	Pull up bar	1.00	ea	1,200.00	/ea	1,200
38	PT Platform Swing	1.00	ea	5,500.00	/ea	5,500
001	Kiln (Furnish & Install)	2.00	ea	12,000.00	/ea	24,000
001	Owner Training - Kiln Vendor	1.00	ls	500.00	/ls	500
	EQUIPMENT			*2.911/sf*		*480,450*
	165,035.00 sf					
	E1090 Other Equipment			*2.911/sf*		*480,450*
	165,035.00 sf					
	E10 EQUIPMENT			**8.427/sf**		**1,390,670**
	165,035.00 sf					
E20	**FURNISHINGS**					
E2010	*Fixed Furnishings*					
10-0000.000	*SPECIALTIES*					
:0	Curtains & Track	3.00	ea	3,000.00	/ea	9,000

Item	Description	Takeoff Qty		Total Unit Cost	Amount
	SPECIALTIES			*0.055/sf*	*9,000*
	165,035.00 sf				
12-0000.000	*FURNISHINGS*				
	Window Treatments				
2	Type WS1, manual (5,475 SF)	164.00	ea	400.00 /ea	65,600
2	Type WS2, motorized (1,960 SF)	20.00	ea	550.00 /ea	11,000
2	Type WS3, motorized (2,210 SF)	11.00	ea	575.00 /ea	6,325
2	Type WS4, manual (2,480 SF)	269.00	ea	220.00 /ea	59,180
10	Manufactured Casework				
10	Base Cabinets w/Plam Tops	1,235.00	lf	500.00 /lf	617,500
10	Plam Tops w Brackets	255.00	lf	55.00 /lf	14,025
10	Base Cabinets w/Solid Surface Tops	655.00	lf	550.00 /lf	360,250
10	Solid Surface Tops w Brackets	60.00	lf	75.00 /lf	4,500
10	Typical Tall Cabinets	965.00	lf	825.00 /lf	796,125
10	Tall Storage Cubbies	615.00	lf	850.00 /lf	522,750
10	Tall Storage w Markerboard Surfacing	42.00	lf	925.00 /lf	38,850
10	EPI Pen & Inhaler Storage	1.00	ea	850.00 /ea	850
10	Typical Wall Cabinets	1,370.00	lf	300.00 /lf	411,000
10	Narcotics Cabinet	1.00	ea	250.00 /ea	250
10	Student Tables on Casters - STE	12.00	ea	900.00 /ea	10,800
10	Student Tables on Casters - STE - FF&R per RECON	-12.00	ea	900.00 /ea	(10,800)
001	Instrument & Music Library Storage System, Allowance	1.00	ls	25,000.00 /ls	25,000
001	M10-28x29	2.00	ea		
001	MS-70	9.00	ea		
001	MS-xx Music Storage Standard	2.00	ea		
10	Telescopic Bleachers - Gym, 84' Length, 600 Seat	1.00	ls	200,000.000 /ls	200,000
	FURNISHINGS			*18.985/sf*	*3,133,205*
	165,035.00 sf				
	E2010 Fixed Furnishings			*19.040/sf*	*3,142,205*
	165,035.00 sf				
	E20 FURNISHINGS			**19.040/sf**	**3,142,205**
	165,035.00 sf				
	E EQUIPMENT AND FURNISHINGS			***27.466/sf***	***4,532,875***
	165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
	E EQUIPMENT AND FURNISHINGS			***27.466/sf***	***4,532,875***
	165,035.00 sf				

F

F20 **SELECTIVE BUILDING DEMOLITION**

F2010 *Building Demolition*

02-0000.000 *EXISTING CONDITIONS & DEMO*

)1	Hazardous Material Abatement	1.00	ls	1,200,000.00 /ls	1,200,000
01	Hazardous Material Abatement - Roofing Assumption	1.00	ls	250,000.00 /ls	250,000
110	Demolition	1.00	ls	450,000.00 /ls	450,000
110	Premium Time	1.00	ls	100,000.000 /ls	100,000

EXISTING CONDITIONS & DEMO	*12.119/sf*	*2,000,000*
165,035.00 sf		
F2010 Building Demolition	*12.119/sf*	*2,000,000*
165,035.00 sf		
F20 SELECTIVE BUILDING DEMOLITION	**12.119/sf**	**2,000,000**
165,035.00 sf		
F SPECIAL CONSTRUCTION AND DEMOLITION	***12.119/sf***	***2,000,000***
165,035.00 sf		

G

G10 **SITE PREPARATION**

G1010 *Site Preparation*

31-0000.000 *EARTHWORK*

)0	SITE PREPARATION				

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
0	Mobilization	1.00	ls	10,738.64	/ls	10,739
10	Construction Stakeout	1.00	ls	37,585.25	/ls	37,585
10	Saw Cutting	700.00	lf	5.00	/lf	3,500
10	Soil Classification Costs	1.00	ls	25,000.00	/ls	25,000
10	Winter Conditions Allowance Plowing	2.00	seas	35,000.00	/seas	70,000
10	Soil Testing/Classification Costs - By others					
10	SITE DEMOLITION					
10	Remove & Salvage					
10	Benches	1.00	ea	250.00	/ea	250
10	Soccer Plaque	1.00	ea	500.00	/ea	500
10	Playground Memorial Plaque	1.00	ea	500.00	/ea	500
10	Existing Curb, Salvage	940.00	lf	25.00	/lf	23,500
10	Remove & Dispose					
10	Existing Fence	980.00	lf	15.00	/lf	14,700
10	Existing Curb, Dispose	502.00	lf	15.00	/lf	7,530
10	Concrete Walks	7,202.00	sf	5.00	/sf	36,010
10	Strip & Remove Existing Asphalt Drives & Walkways	7,997.00	sf	3.75	/sf	29,989
10	Irrigation Systems & Pump House	1.00	ls	7,500.00	/ls	7,500
10	SITE ENABLING					
10	Temp Access Road E&B (Between Permanant)	400.00	cy	45.00	/cy	18,000
10	Temp Access Gravel Entrance	400.00	cy	55.00	/cy	22,000
10	Temp Access Remove	400.00	cy	15.00	/cy	6,000
10	Stone Construction Entrances	1.00	ls	15,000.00	/ls	15,000
10	Stone Construction Entrances, Relocate	1.00	ls	7,500.00	/ls	7,500
10	Contractor Parking / Trailer Base - E & B	1,970.00	cy	45.00	/cy	88,650
10	Contractor Parking / Trailer Base - 12" Thick	1,970.00	cy	55.00	/cy	108,350
10	Contractor Parking / Trailer Base - 12" Thick, Removals	1,970.00	cy	15.00	/cy	29,550
10	Trailer Utility Connections	2.00	ea	10,000.00	/ea	20,000
10	Site Phasing / Re-Mobilization	1.00	ls	25,000.00	/ls	25,000
20	Remove Trees - Allowance (still in Progress per L0.01)	1.00	ls	250,000.00	/ls	250,000
20	Sitework 60%-100% Bridging Allowance	1.00	ls	350,000.00	/ls	350,000
20	Vibration Monitoring - Allowance - to be revisited during 60CD RECON	1.00	ls	175,000.00	/ls	175,000
20	Unforeseen Conditions - Allowance	1.00	ls	70,000.00	/ls	70,000
003	SWPPP Plan & Monitoring	1.00	ls	15,000.00	/ls	15,000
003	Silt Fence - Install	2,770.00	lf	10.00	/lf	27,700
003	Erosion Controls - Maintain	32.00	mnth	300.00	/mnth	9,600
003	Erosion Controls - Remove	2,770.00	lf	5.00	/lf	13,850
003	12" Straw Wattle	2,770.00	lf	7.50	/lf	20,775
003	Street Sweeping	250.00	hrs	200.00	/hrs	50,000
003	Misc. Erosion Control Measures	2,770.00	lf	17.18	/lf	47,589
003	Inlet Protection	27.00	ea	104.16	/ea	2,812
003	Construction Fence	2,770.00	lf	75.00	/lf	207,750
003	Jersey Barriers	1.00	ls	35,000.00	/ls	35,000
	EARTHWORK			*11.406/sf*		*1,882,429*
	165,035.00 sf					
32-0000.000	*EXTERIOR IMPROVEMENTS*					

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
	10	Strip Topsoil	15,200.00	cy	10.00	/cy	152,000
	10	Export Topsoil - Assumed Clean	15,200.00	cy	10.00	/cy	152,000
	10	Arsenic Topsoil Disposal Allowance - 7,500 CY	12,750.00	tons	15.00	/tons	191,250
		EXTERIOR IMPROVEMENTS			*3.001/sf*		*495,250*
		165,035.00 sf					
		G1010 Site Preparation			*14.407/sf*		*2,377,679*
		165,035.00 sf					
G1020		*Site Demolition & Relocations*					
31-0000.000		*EARTHWORK*					
	0	Site Utility Demolition	1.00	ls	250,000.00	/ls	250,000
	10	UST Removal and Soil - Allowance - added per RECON	1.00	ls	50,000.00	/ls	50,000
	10	Soil Disposal per UST - Allowance - added per RECON	100.00	cy	250.00	/cy	25,000
		EARTHWORK			*1.969/sf*		*325,000*
		165,035.00 sf					
		G1020 Site Demolition & Relocations			*1.969/sf*		*325,000*
		165,035.00 sf					
G1030		*Site Earthwork*					
31-0000.000		*EARTHWORK*					
	0	Phase 1					
	10	Cut To Fill	5,345.00	cy	15.00	/cy	80,175
	10	Building Pad Raise with onsite material prior to GI install	4,835.00	cy	15.00	/cy	72,525
	10	Import for delta of building pad	160.00	cy	55.00	/cy	8,800
	10	Subgrade	402,285.00	sf	0.25	/sf	100,571
	10	Fill for remainder of site	9,950.00	cy	55.00	/cy	547,250
	10	Phase 2					
	10	Cut To Fill	3,000.00	cy	20.00	/cy	60,000
	10	Export Surplus Soils	4,000.00	cy	20.00	/cy	80,000
	10	Arsenic Soils Export Disposal Allowance - 4,000 CY	6,800.00	ton	15.00	/ton	102,000
	10	Arsenic Soils Export Disposal Allowance - additional per RECON	1.00	ls	250,000.00	/ls	250,000

Item	Description	Takeoff Qty		Unit Cost	Total Amount
	EARTHWORK			*7.885/sf*	*1,301,321*
	165,035.00 sf				
	G1030 Site Earthwork			*7.885/sf*	*1,301,321*
	165,035.00 sf				
	G10 SITE PREPARATION			**24.262/sf**	**4,004,000**
	165,035.00 sf				
G20	**SITE IMPROVEMENTS**				
G2020	*Parking Lots*				
31-0000.000	*EARTHWORK*				
0	Dense Grade Below Paving, 2 - 6" Lifts	5,241.00	cy	50.00 /cy	262,050
10	Gravel Base Below Basketball Courts, 8"	273.00	cy	50.00 /cy	13,650
10	Gravel Base Below Concrete Walks, 8"	1,125.00	cy	50.00 /cy	56,250
10	Gravel Base Below Concrete Pavers, 8"	240.00	cy	50.00 /cy	12,000
10	Gravel Base Below Synthetic Turf, 8"	216.00	sy	50.00 /sy	10,800
10	Washed Stone Below Turf Field, 8"	146.00	sy	50.00 /sy	7,300
10	Gravel Base Below Playground PIP, 12"	980.00	cy	50.00 /cy	49,000
10	Gravel Base Below Concrete Shed Pad, 36" Thick	28.00	cy	50.00 /cy	1,400
10	Gravel Base Below Concrete Pads, 12" Thick	36.00	cy	50.00 /cy	1,800
10	Gravel Base Below Granite Bench, 2' width x 2'-8"	38.00	cy	50.00 /cy	1,900
	EARTHWORK			*2.522/sf*	*416,150*
	165,035.00 sf				
32-0000.000	*EXTERIOR IMPROVEMENTS*				
25	E4, Bituminous Concrete Paving, Sport Court Paving	1,272.73	sy	8.054 /sy	10,251
25	A6, Concrete Unit Pavers - Pedestrian w pattern (A7)	9,510.00	sf	1.289 /sf	12,255
25	Concrete Pads	1,367.33	sf	1.289 /sf	1,762
25	Loading Dock - part of Building Concrete				
25	HMA, Parking and Drives	15,686.61	sy	35.00 /sy	549,031
25	Fine Grading - Driveway/Parking	15,686.61	sy	1.50 /sy	23,530
25	HMA, Basketball Courts	1,272.73	sy	25.773 /sy	32,802
25	Fine Grading - Basketball	1,320.00	sy	2.00 /sy	2,640
2	Veritcal Granite Curb - Straight	3,435.00	lf	58.00 /lf	199,230
2	Veritcal Granite Curb - Radius	2,012.00	lf	62.00 /lf	124,744
2	Precast Concrete Curbing	900.00	lf	50.00 /lf	45,000

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
	2	Precast Concrete Curbing - Turf Edger	360.00	lf	50.00	/lf	18,000
	2	CIP Concrete Curbing - Fence Strip	310.00	lf	65.00	/lf	20,150
	6	Line Painting	1.00	ls	45,000.00	/ls	45,000
	6	Painted Courts	3.00	ea	27,276.15	/ea	81,828
	6	Painted 4-Square	3.00	ea	2,416.193	/ea	7,249
	6	Temp Line Striping	1.00	ls	15,000.00	/ls	15,000
		EXTERIOR IMPROVEMENTS			*7.201/sf*		*1,188,472*
		165,035.00 sf					
		G2020 Parking Lots			*9.723/sf*		*1,604,622*
		165,035.00 sf					
G2040		*Site Developement*					
05-0000.000		*METALS*					
	0	Bollards - w Landscaping	16.00	ea			
	10	Bollards - Light Type - w Landscaping	16.00	ea			
		METALS					*0*
		165,035.00 sf					
32-0000.000		*EXTERIOR IMPROVEMENTS*					
	5	Site Concrete, Foundations	3,250.00	sf	40.00	/sf	130,000
	6	Site Concrete - Flatwork					
	6	Site Concrete, Flatwork, P&F - Sidewalks, 6" Thickness - adjusted per RECON	45,565.00	sf	12.00	/sf	546,780
	6	Site Concrete, Flatwork, P&F - Paver Base, 4" Thickness - adjusted per RECON	9,720.00	sf	12.00	/sf	116,640
	6	Site Concrete, Flatwork Materials	964.00	cy	155.00	/cy	149,420
	6	Site Concrete					
	6	Granite Slab Bench Footings, 1' thick x 2' width, F&P	190.00	lf	80.00	/lf	15,200
	6	Granite Slab Bench Footings, Material	13.00	cy	155.00	/cy	2,015
	6	Bench Footings	10.00	ea	1,500.00	/ea	15,000
	6	Trash / Recycling Footings	11.00	ea	250.00	/ea	2,750
	6	Table Footings	5.00	ea	2,500.00	/ea	12,500
	6	Circular Bench Footings	2.00	ea	2,500.00	/ea	5,000
	6	Free Form Bench Footings	4.00	ea	2,500.00	/ea	10,000
	6	Shed Footing Mat Slab 1' Thick, 10'x20'	200.00	sf	11.00	/sf	2,200
	6	Shed Footing Mat Slab , Material	8.00	cy	171.00	/cy	1,368
	6	Raised Garden Bed 6" Thick, 4'x4'	6.00	ea	500.00	/ea	3,000
	6	Main Entry Sign (AG0.04) - Form And Place, Footings & Wall	191.00	sfca	20.00	/sfca	3,820
	6	Main Entry Sign (AG0.04) - Material	5.50	cy	171.00	/cy	941
	6	Main Entry Sign (AG0.04) - Rigid Insulation, 3"	78.00	sf	3.00	/sf	234
	001	Exterior Score Board Allowance					

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
)01	Basketball Goals	4.00	ea	9,000.00	/ea	36,000
001	Soccer Goals	2.00	ea	8,500.00	/ea	17,000
001	E9, Player Benches	2.00	ea	2,500.00	/ea	5,000
20	Synthetic Lawn Areas	8,842.00	sf	20.00	/sf	176,840
20	Rubber Play Surfacing @ Playground	26,433.00	sf	36.90	/sf	975,378
20	Synthetic Turf Prep					
20	Concrete Edger, Excavate & Backfill Edging	360.00	lf	50.00	/lf	18,000
20	Finegrading	7,880.00	sf	2.00	/sf	15,760
20	A10, Synthetic Turf, Play Shock Pad	4,805.00	sf	6.90	/sf	33,155
20	A11, Synthetic Turf, Play Mound Shock Pad	2,642.00	sf	6.90	/sf	18,230
001	Traffic Signs, Allow	1.00	ls	10,738.64	/ls	10,739
001	Entry Signs, Allow	1.00	ea	16,107.97	/ea	16,108
001	D1, 6' Long Benches w Arms	7.00	ea	8,000.00	/ea	56,000
001	D2, 6' Long Backless Benches - None Shown					
001	D3, Table w Integral Seats	2.00	ea	7,725.00	/ea	15,450
001	D4, Table w Integral Seats & ADA Seat	3.00	ea	7,000.00	/ea	21,000
001	D5, Litter Receptacles	11.00	ea	5,000.00	/ea	55,000
001	D6, Bicycle Racks	23.00	ea	977.00	/ea	22,471
001	D7, Aluminum Flagpole, Internal Halyard	2.00	ea	15,000.00	/ea	30,000
001	D8, 10' x 20' Prefabricated Shed	1.00	ea	25,000.00	/ea	25,000
001	D9, Raised Garden Beds, ADA Compliant	6.00	ea	1,835.00	/ea	11,010
001	D10, Free-Form Benches	4.00	ea	7,425.00	/ea	29,700
001	D11, Sculptural Benches	2.00	ea	13,275.00	/ea	26,550
001	D12, Backless Curved Benches	4.00	ea	1,700.00	/ea	6,800
001	D13, Movable Cube Seats, Free-Standing	17.00	ea	175.00	/ea	2,975
001	D14, Circular Benches	2.00	ea	1,500.00	/ea	3,000
001	D15, Shade Structure	6.00	ea	48,767.00	/ea	292,602
001	D16, Drinking Fountain w Bottle Filler, ADA Compliant	2.00	ea	225.00	/ea	450
001	B1, Masonry Panel System Seatwall, Self-Capping - adjusted per RECON	140.00	lf	1,200.00	/lf	168,000
001	B2, Granite Slab Monolithic Benches - adjusted per RECON	70.00	lf	350.00	/lf	24,500
001	B2/B3, Assumed Seating - Not Tagged	520.080	lf	350.00	/lf	182,028
001	B3, Granite Slab Monolithic Bench Layout	187.31	lf	350.00	/lf	65,559
001	C1, Vehicular Bollards, Stainless Steel w LED Light	16.00	ea	725.00	/ea	11,600
001	C2, Vehicular Bollards, Stainless Steel nonlit	16.00	ea	650.00	/ea	10,400
001	Playground Equipment - Pre-K	1.00	allow	283,500.00	/allow	283,500
001	Playground Equipment - K -> 2nd	1.00	allow	331,380.00	/allow	331,380
001	Playground Equipment - 3 -> 5	1.00	allow	409,500.00	/allow	409,500
001	Playground Underdrainage	1.00	ls	100,000.000	/ls	100,000
001	Existing Playground to be Reinstalled & Salvaged - added per RECON (in place of Alt)	1.00	allow	150,000.00	/allow	150,000
20	Fencing					
20	C4, Metal Fencing, 4' height	300.00	lf	140.00	/lf	42,000
20	C5, Self-Closing Latch Metal Double Gate, 6' width	2.00	ea	850.00	/ea	1,700
20	C6, Self-Closing Latch Metal Single Gate, 4' width	1.00	ea	525.00	/ea	525
20	C7, Chain Link Fencing, 4' height	622.00	lf	110.00	/lf	68,420
20	C8, Self-Closing Latch Pedestrian Chain Link Single Gate, 4' width - None Shown					
20	C9, Self-Closing Latch Pedestrian Chain Link Double Gate, 6' width	3.00	ea	725.00	/ea	2,175
20	C10, Self-Closing Magnetic Childproof Gate Lock - None Shown					
20	C11, Chain Link Sport Court Fencing, 10' height	1,230.00	lf	200.00	/lf	246,000
20	C12, Chain Link Sport Court Double Gate, 10' width	4.00	ea	1,200.00	/ea	4,800
20	C13, Wood Privacy Fencing, 6' height	895.00	lf	135.00	/lf	120,825

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
	:0	C14, Utility Screen Fencing, 6' height	185.00	lf	150.00 /lf	27,750
	20	C14, Utility Screen Double Gate, 5' width	3.00	ea	435.00 /ea	1,305
	20	C15, Vehicular Barrier Double Swing Gate, 24' width	4.00	ea	12,000.00 /ea	48,000
	20	C16, Vehicular Barrier Double Swing Gate, 22' width - None Shown				
		EXTERIOR IMPROVEMENTS			*31.733/sf*	*5,237,051*
		165,035.00 sf				
		G2040 Site Developement			*31.733/sf*	*5,237,051*
		165,035.00 sf				
G2050		*Landscaping*				
04-0000.000		*MASONRY*				
	!	Cast Stone Cap - 2'4" w x 12'4" l x 5" d - Exterior Monument Signage	28.76	sf	160.00 /sf	4,602
	110	Brick Veneer - Exterior Monument Signage	96.30	sf	46.00 /sf	4,430
	102	Exterior 6" CMU Wall - Exterior Monument Signage	22.00	sf	35.00 /sf	770
	102	Exterior 12" CMU Wall - Exterior Monument Signage	22.00	sf	42.00 /sf	924
	102	Exterior CUVM Veneer - Custom Cast Stone, Light Buff - Exterior Monument Signage	12.16	sf	70.00 /sf	851
		MASONRY			*0.070/sf*	*11,577*
		165,035.00 sf				
10-0000.000		*SPECIALTIES*				
	110	1-Sided Monument Signage - Allowance	1.00	ls	22,000.00 /ls	22,000
	110	Includes Exterior 5" Fabricated Letter, Aluminum "WILMINGTON ELEMENTARY SCHOOL"	26.00	ea		
	110	Includes Exterior 4" Fabricated Letter, Aluminum "320 SALEM STREET"	14.00	ea		
	110	Includes LED Outdoor Signage - 33" x 66" x 10"	1.00	ea		
	110	Includes aluminum mounting insert	1.00	ea		
	110	38" X 84" MDF Project Signage - Allowance	1.00	ls	1,300.00 /ls	1,300
		SPECIALTIES			*0.141/sf*	*23,300*
		165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
	SPECIALTIES			*0.141/sf*		*23,300*
	165,035.00 sf					
32-0000.000	*EXTERIOR IMPROVEMENTS*					
:0	Synthetic Turf					
2	Retaining Wall - Block Wall, 4' Height	175.00	lf	1,250.00	/lf	218,750
2	Planted Underdrainage Area to receive Sprinkler Irrigation	13,751.00	sf	3.00	/sf	41,253
2	Underdrainage Area	36,393.00	sf	2.25	/sf	81,884
2	Schematic Irrigation Controller Power Conduit from Building - w Electrical	647.700	lf			
2	Schematic Irrigation Water Supply Pipe from Building - w Civil	630.39	lf			
2	Two-Wire, Internet Based Irrigation Controller	1.00	ea	150.00	/ea	150
2	Quick Coupling Valve	4.00	ea	225.00	/ea	900
2	2" Isolation Valve	3.00	ea	200.00	/ea	600
2	2" Master Valve	1.00	ea	200.00	/ea	200
2	Irrigation Mainline 2" PVC class 200	453.66	lf	35.00	/lf	15,878
2	1.5" Flow Sensor	1.00	ea	1,500.00	/ea	1,500
2	2" Irrigation Point of Connection in Landscape	1.00	ls	2,500.00	/ls	2,500
2	6" Pop-Up Gear-Driven Rotor w 3/4" Inlet (Stainless Steel Riser)	24.00	ea	175.00	/ea	4,200
25	Mulching	45.00	cy	165.00	/cy	7,425
10	Import and Place Topsoil - Lawn Areas, 6"	3,700.00	cy	45.00	/cy	166,500
10	Planting Soils - 12"	230.00	cy	85.00	/cy	19,550
5	Lawn and Planting Maintenance	1.00	ls	15,000.00	/ls	15,000
5	Fine Rake And Seed	178,214.00	sf	0.45	/sf	80,196
120	Trees and Plantings - Allowance	1.00	ls	450,000.00	/ls	450,000
120	Deciduous Screening Trees					
120	Acer Freeman "Freeman Maple" 2"-2.5" cal. 30' oc	13.00	ea			
120	Acer Rubrum "Red Sunset" 3"-3.5" cal. 30' oc	9.00	ea			
120	Acer Saccharum "Green Mountaint" 2.5"-3" cal. 30' oc	4.00	ea			
120	Amelanchier Canadensis 6'-7' ht 15' oc	14.00	ea			
120	Betula Nigra "Heritage" 14'-16' ht 20' oc	17.00	ea			
120	Carpinus Caroliniana 2.5"-3" cal. 20' oc	7.00	ea			
120	Gleditsia Tria. Inermis "Halka" 3"-3.5" cal. 30' oc	11.00	ea			
120	Liquidambar Styraciflua 2.5"-3" cal. 30' oc	8.00	ea			
120	Liriodendron Tulipifera 3"-3.5" cal. 30' oc	3.00	ea			
120	Magnolia Virginiana 8'-10' ht 12' oc	11.00	ea			
120	Malus "Spring Snow" 2"-2.5" cal. 20' oc	2.00	ea			
120	Nyssa Sylvatica 2"-2.5" cal. 30' oc	15.00	ea			
120	Platanus x Acerifolia "Exclamation" 2"-2.5" cal. 30' oc	10.00	ea			
120	Prunus Subhirtela "Autumnalis" 2.5"-3" cal. 20' oc	3.00	ea			
120	Quercus Bicolor 2.5"-3" cal. 30' oc	6.00	ea			
120	Evergreen Screening Trees					
120	Abies Balsamea 12'-14' ht 15' oc	12.00	ea			
120	Abies Concolor 8'-10' ht 15' oc	3.00	ea			
120	Larix Larcina 10'-12' ht 15' oc	12.00	ea			
120	Picea Glauca 8'-10' ht 15' oc	4.00	ea			
120	Thuja Occidentalis "Nigra" 10'-12' ht 10' oc	39.00	ea			
120	Thuja Plicata "Green Giant" 10'-12' ht 15' oc	21.00	ea			
120	Deciduous Screening Shrubs					
120	Calycanthus Floridus 36"-48" ht 6' oc	43.00	ea			
120	Clethra Alnifolia "Hummingbird" 24"-30" ht 6' oc	30.00	ea			

Item		Description	Takeoff Qty		Total Unit Cost	Amount
	20	Cornus Swida Serice Sericea "Arctic Fire" 18"-24" ht 5' oc	60.00	ea		
	120	Hamamelis Virginiana 4'-5' ht 8' oc	25.00	ea		
	120	Viburnum Dentatum "Christom" 24"-30" ht 5' oc	40.00	ea		
	120	Evergreen Screening Shrubs				
	120	Ilex Verticillata "Red Sprite" 18"-24" ht 5' oc	50.00	ea		
	120	Ilex Verticillata "Jim Dandy" 24"-30" ht 5' oc	3.00	ea		
	120	Screening Understory Seed Mixes				
	120	Non-Irrigated Ernmx-132-1 Shade Right-of-Way Native Woods Mix w Annual Ryegrass	9,869.00	sf		
	120	Non-Irrigated Ernmx-156 Low-Growing Wildflower and Grass Mix	13,471.00	sf		
	120	Turfgrass				
	120	Irrigated Multi-Use Athletic Field Seed Mix	13,553.00	sf		
	120	Non-Irrigated General Lawn Seed Mix	99,161.00	sf		
	120	Non-Irrigated Multi-Use Athletic Field Seed Mix	36,221.00	sf		
	120	Non-Irrigated Shade Lawn Seed Mix	5,939.00	sf		
	120	Deciduous Shrubs				
	120	Fothergilla Gardenii 18"-24" ht 3' oc	39.00	ea		
	120	Ithea Virginica "Henry's Garnet" 24"-30" cont. 3' oc	25.00	ea		
	120	Spiraea Japonica "Little Princess" 18"-24" ht 3' oc	13.00	ea		
	120	Syringa Patula "Miss Kim" 30"-36" ht 4' oc	12.00	ea		
	120	Evergreen Shrubs				
	120	Ilex Glabra "Compacta" 24"-30" ht 4' oc	20.00	ea		
	120	Juniperus Horizontalis "Bar Harbor" 15"-18" sp. 3' oc	93.00	ea		
	120	Pinus Mugo "Pumilio" 18"-24" ht 3' oc	33.00	ea		
	120	Rhododendron Yakushimanum 24"-30" ht 4' oc	15.00	ea		
	120	Perennials				
	120	Allium "Globemaster" #1 gal. 18" oc	33.00	ea		
	120	Aster Novae-Angliae "Purple Dome" #1 gal. 18" oc	31.00	ea		
	120	Astilbe Japonica "Deutschland" #1 gal. 18" oc	148.00	ea		
	120	Athyrium Filix-Femina 2 qt. cont. 18" oc	57.00	ea		
	120	Chrysanthemum Weyrichii "White Bomb" #1 gal. 24" oc	37.00	ea		
	120	Hemerocallis x "Joan Senior" #1 gal. 24" oc	86.00	ea		
	120	Liriope Spicata #1 qt 12" oc	446.00	ea		
	120	Rudbeckia Fulgia Var. "Goldsturm" 1 gal. 24" oc	55.00	ea		
	120	Salvia Nemorosa "Carodonna" 1 gal. 12" oc	137.00	ea		
	120	Sedum Rupestre "Silver" #1 qt 12" oc	90.00	ea		
	120	Thymus Praecox "Elfin" 2 qt. cont. 18" cont.	32.00	ea		
	120	Grasses				
	120	Festuca Glauca "Elijah Blue" 10"-18" ht. 18" oc	159.00	ea		
	120	Miscanthus Sinensis "Little Kitten" #2 gal. 48" oc	22.00	ea		
	120	Penninsetum Alop. "Hamlen" #2 gal. 36" oc	33.00	ea		
		EXTERIOR IMPROVEMENTS			*6.705/sf*	*1,106,487*
		165,035.00 sf				
		G2050 Landscaping			*6.916/sf*	*1,141,363*
		165,035.00 sf				

Item	Description	Takeoff Qty		Total Unit Cost		Total Amount
	G20 SITE IMPROVEMENTS			**48.372/sf**		**7,983,035**
	165,035.00 sf					
G30	**SITE MECHANICAL UTILITIES**					
G3010	*Water Supply*					
33-0000.000	*UTILITIES*					
: 4	Domestic & Fire Protection Water Supply					
c 4	Permits	1.00	ls	1,000.00	/ls	1,000
c 4	Test Pits	12.00	ea	1,500.00	/ea	18,000
c 4	Trench Protection	1.00	ls	2,500.00	/ls	2,500
c 4	Trench Excavate & Backfill (Typical Trench 7'-10"h x 3'-8"w)	1,735.00	cy	35.00	/cy	60,725
c 4	Pipe Bedding	322.00	cy	50.00	/cy	16,100
c 4	Utility Crossing	12.00	ea	500.00	/ea	6,000
c 4	Interior Building Connection	2.00	ea	750.00	/ea	1,500
c 4	8" D.I. Pipe (Zinc Coated)	1,481.00	lf	100.00	/lf	148,100
c 4	8" D.I. Fittings	16.00	ea	800.00	/ea	12,800
c 4	8" Gate Valve & Box	9.00	ea	4,000.00	/ea	36,000
c 4	8" Tapping Sleeve & Valve	2.00	ea	10,000.00	/ea	20,000
c 4	6" D.I. Pipe (Zinc Coated)	147.00	lf	95.00	/lf	13,965
c 4	6" D.I. Fittings	20.00	ea	800.00	/ea	16,000
c 4	6" Gate Valve & Box	7.00	ea	2,500.00	/ea	17,500
c 4	Hydrants & Tees	4.00	ea	9,500.00	/ea	38,000
c 4	Steel Sleeves Through New Foundation	2.00	ea	500.00	/ea	1,000
c 4	Connect to Existing	3.00	loc	500.00	/loc	1,500
c 4	Restrained Joints	15.00	ea	75.00	/ea	1,125
c 4	Poly Wrap	1,630.00	lf	3.00	/lf	4,890
c 4	Thrust Blocks	15.00	ea	175.00	/ea	2,625
c 4	Warning Tape	1,630.00	lf	0.15	/lf	245
c 4	Clean, Test, Disinfect	1.00	ls	5,000.00	/ls	5,000
c 4	As-Builts	1.00	ls	500.00	/ls	500
c 4	Dispose of Excess (Assumed Clean)	322.00	cy	15.00	/cy	4,830
	UTILITIES			*2.605/sf*		*429,905*
	165,035.00 sf					
	G3010 Water Supply			*2.605/sf*		*429,905*
	165,035.00 sf					
G3020	*Sanitary Sewer*					
33-0000.000	*UTILITIES*					
3	Sewer Pipe and Trenching					
8	Trench Protection	1.00	ea	2,500.00	/ea	2,500

Item		Description	Takeoff Qty		Total Unit Cost		Total Amount
	3	Trench Excavate & Backfill (Typical Trench 7'-10"h x 3'-8"w)	1,022.00	cy	35.00	/cy	35,770
	8	Pipe Bedding	260.00	cy	60.00	/cy	15,600
	8	Utility Crossing	8.00	ea	500.00	/ea	4,000
	8	8" SDR 35 PVC Pipe	995.00	lf	30.00	/lf	29,850
	8	8" Fittings	36.00	ea	200.00	/ea	7,200
	8	Clean Out	5.00	ea	750.00	/ea	3,750
	8	Grease Trap	1.00	ea	15,000.00	/ea	15,000
	8	Connect to Existing Sewer MH	1.00	ea	500.00	/ea	500
	8	Sewer Manhole	11.00	ea	5,000.00	/ea	55,000
	8	Warning Tape	960.00	ea	0.15	/ea	144
	8	Clean, Test	1.00	ea	7,500.00	/ea	7,500
	8	As-Builts	1.00	ea	500.00	/ea	500
	8	Dispose of Excess (Assumed Clean)	260.00	cy	15.00	/cy	3,900
		UTILITIES			*1.098/sf*		*181,214*
		165,035.00 sf					
		G3020 Sanitary Sewer			*1.098/sf*		*181,214*
		165,035.00 sf					
G3030		*Storm Drainage System*					
33-0000.000		*UTILITIES*					
)4-06		Storm Drainage Systems					
04-06		Trench Excavate & Backfill, Storm Piping	1,374.00	cy	35.00	/cy	48,090
04-06		Stone Bedding	179.00	cy	60.00	/cy	10,740
04-06		Building Connection	4.00	ea	250.00	/ea	1,000
04-06		Warning Tape	2,877.00	lf	0.15	/lf	432
04-06		Permits	1.00	ls	1,000.00	/ls	1,000
04-06		Clean & Video Inspect Existing	1.00	ls	2,500.00	/ls	2,500
04-06		Utility Crossings	10.00	ea	500.00	/ea	5,000
04-06		12" HDPE Pipe	2,000.00	lf	22.00	/lf	44,000
04-06		15" HDPE Pipe	694.00	lf	40.00	/lf	27,760
04-06		18" HDPE Pipe	183.00	lf	50.00	/lf	9,150
04-06		12" HDPE Fittings	65.00	ea	350.00	/ea	22,750
04-06		15" HDPE Fittings	28.00	ea	400.00	/ea	11,200
04-06		18" HDPE Fittings	10.00	ea	500.00	/ea	5,000
04-06		Connect to Existing MH	2.00	ea	500.00	/ea	1,000
04-06		Catch Basins	24.00	ea	4,800.00	/ea	115,200
04-06		Drain Manholes	30.00	ea	4,500.00	/ea	135,000
04-06		Water Quality Units	2.00	ea	20,000.00	/ea	40,000
04-06		Clean, Test	1.00	ls	5,000.00	/ls	5,000
04-06		As-Builts	1.00	ls	500.00	/ls	500
04-06		Dispose of Excess (Assumed Clean)	180.00	cy	15.00	/cy	2,700
04-06		Field Under Drain - Not Yet Designed					
04-06		Underdrain Allowance	50,270.00	sf	2.25	/sf	113,108
04-06		Infiltration Systems - Pipe 1, 180' x 28' - 7' Depth					
04-06		Bulk Excavate	1,307.00	cy	15.00	/cy	19,605
04-06		36" HDPE	1,260.00	lf	110.00	/lf	138,600
04-06		Filter Fabric	11,460.00	sf	0.60	/sf	6,876

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
)4-06	Stone Bedding, Minus Pipe Volume	302.00	cy	60.00 /cy	18,120
04-06	Pipe End Caps	14.00	ea	300.00 /ea	4,200
04-06	Clean Outs	7.00	ea	1,000.00 /ea	7,000
04-06	Backfill w/ Insitu Material	676.00	cy	15.00 /cy	10,140
04-06	Dispose of Excess (Assumed Clean)	631.00	cy	15.00 /cy	9,465
04-06	Infiltration Systems - Pipe 2, 140' x 50' - 7' Depth				
04-06	Bulk Excavate	1,815.00	cy	15.00 /cy	27,225
04-06	36" HDPE	1,680.00	lf	110.00 /lf	184,800
04-06	Filter Fabric	15,266.00	sf	0.60 /sf	9,160
04-06	Stone Bedding, Minus Pipe Volume	424.00	cy	60.00 /cy	25,440
04-06	Pipe End Caps	24.00	ea	300.00 /ea	7,200
04-06	Clean Outs	12.00	ea	1,000.00 /ea	12,000
04-06	Backfill w/ Insitu Material	951.00	cy	15.00 /cy	14,265
04-06	Dispose of Excess (Assumed Clean)	864.00	cy	15.00 /cy	12,960
04-06	Infiltration Systems # 3 - Cultec R300HD, 202' x 135' - 6.5' Depth				
04-06	Bulk Excavate - adjusted per RECON	3,119.00	cy	15.00 /cy	46,785
04-06	Filter Fabric	56,225.00	sf	0.60 /sf	33,735
04-06	Stone Bedding	2,854.00	cy	60.00 /cy	171,240
04-06	Storm-Tech Chambers, 45 Cu/Ft per chamber	400.00	ea	750.00 /ea	300,000
04-06	Storm-Tech End Caps	40.00	ea	300.00 /ea	12,000
04-06	Clean Outs	2.00	ea	1,000.00 /ea	2,000
04-06	Backfill w/ Insitu Material	3,030.00	cy	15.00 /cy	45,450
04-06	Dispose of Excess (Assumed Clean)	3,535.00	cy	15.00 /cy	53,025
	UTILITIES			*10.740/sf*	*1,772,420*
	165,035.00 sf				
	G3030 Storm Drainage System			*10.740/sf*	*1,772,420*
	165,035.00 sf				
	G30 SITE MECHANICAL UTILITIES			**14.443/sf**	**2,383,538**
	165,035.00 sf				
G40	**SITE ELECTRICAL UTILITIES**				
G4010	*Site Electrical Utilities*				
33-0000.000	*UTILITIES*				
)08	Electrical Site Distribution - Site Contractor Scope				
008	Trench Excavate & Backfill	645.00	cy	35.00 /cy	22,575
008	Utility Crossings	16.00	ea	500.00 /ea	8,000
008	Concrete Encasement - 255 Yards Total				
008	Warning Tape	6,023.00	lf	0.15 /lf	903
008	Prepare for Equipment Pads	2.00	ea	1,000.00 /ea	2,000
001	Electrical Site Distribution				
001	Primary service riser pole (2) 4" GRC	1.00	ea	2,800.00 /ea	2,800
001	Primary service duct bank 4x 4" PVC	615.00	lf	100.00 /lf	61,500
001	Service pad grounding	2.00	ea	1,722.00 /ea	3,444

Item		Description	Takeoff Qty		Total Unit Cost	Total Amount
	)01	Secondary service #1 (6) 4" PVC	224.00	ea	850.56 /ea	190,525
	001	Secondary service #2 (6) 4" PVC	209.00	ea	841.81 /ea	175,938
	001	Electric utility manhole grounding & racks	2.00	ea	4,772.38 /ea	9,545
	001	Generator pad grounding	2.00	lf	3,177.32 /lf	6,355
	001	Generator feeder (4) 4" PVC 1200A	191.00	ea	568.24 /ea	108,534
	001	Generator feeder (2) 1 1/2" PVC 100A	57.00	ea	66.25 /ea	3,776
	001	Generator -quick connect feeder (2) 1 1/2" PVC 100A	144.00	ea	42.56 /ea	6,129
	001	EV Provision In-grade pull box	10.00	ea	890.50 /ea	8,905
	001	EV Feeder 100A 3w PVC copper	3,600.00	ea	20.82 /ea	74,952
	001	Lighting unit prices include installations & supports				
	001	Type SL1 LED single head on 12.5 pole	57.00	ea	865.00 /ea	49,305
	001	Site lighting branch 1" PVC 4 #8	4,400.00	lf	11.45 /lf	50,380
	001	Site lighting branch 1 1/4" PVC - 4 # 4	1,236.00	lf	17.55 /lf	21,692
	001	In grade oull box	4.00	ea	890.50 /ea	3,562
	001	Site Communications				
	001	Telecomm service pole riser (2) 4" GRC	1.00	lf	3,394.81 /lf	3,395
	001	Telcom duct bank 5x 4" PVC 1-w/3 inner ducts	820.00	lf	125.00 /lf	102,500
	001	4'x 4'x 6' Telcom manhole grounding & racks	2.00	lf	2,035.00 /lf	4,070
		UTILITIES			*5.579/sf*	*920,785*
		165,035.00 sf				
		G4010 Site Electrical Utilities			*5.579/sf*	*920,785*
		165,035.00 sf				
G4020		*Site Lighting*				
33-0000.000		*UTILITIES*				
	)08	Site Lighting Conduit Trench	4,600.00	lf	15.00 /lf	69,000
	008	UG Electric Duct Bank - AA - 10 - 4" PVC Conduits, 18" x 41"	726.00	lf	57.00 /lf	41,382
	008	UG Electric Duct Bank - BB - 4 - 4" PVC Conduits, 18" x 18"	105.00	lf	25.00 /lf	2,625
	008	UG Electric Duct Bank - CC - 6 - 4" PVC Conduits, 18" x 26"	337.00	lf	36.00 /lf	12,132
	008	UG Electric Duct Bank - DD - 6 - 4" PVC Conduits, 18" x 26"	35.00	lf	36.00 /lf	1,260
	008	UG Electric Duct Bank - EE - 12 - 4" PVC Conduits, 26" x 33"	75.00	lf	66.00 /lf	4,950
	008	UG Electric Duct Bank - FF - 18 - 4" PVC Conduits, 26" x 48"	145.00	lf	97.00 /lf	14,065
	008	Transformer Pad, Precast	2.00	ea	2,750.00 /ea	5,500
	008	E&B for Generator Pads	1.00	ls	5,400.00 /ls	5,400
	008	Light Pole Bases	60.00	ea	355.00 /ea	21,300
	008	Electrical Manhole	6.00	ea	1,250.00 /ea	7,500
	008	Dispose of Excess (Assumed Clean)	255.00	cy	15.00 /cy	3,825
	001	Site sign connection	2.00	lf	347.86 /lf	696
	001	Site sign circuits 1" PVC 4#6	1,305.00	lf	23.05 /lf	30,080
	001	Electrical Site Lighting				
	001	Site Lighting fixture budget	1.00	ls	175,000.00 /ls	175,000

Item		Description	Takeoff Qty		Unit Cost	Total Amount
	)01	Type SL2 LED single head on 12.5 pole	4.00	ea	865.00 /ea	3,460
		UTILITIES			*2.413/sf*	*398,175*
		165,035.00 sf				
		G4020 Site Lighting			*2.413/sf*	*398,175*
		165,035.00 sf				
G4030		*Site Communications And Security Systems*				
33-0000.000		*UTILITIES*				
	)01	Type SL6 LED In grade flood	6.00	ea	347.41 /ea	2,084
	001	Type SL3 LED bollard	16.00	ea	361.07 /ea	5,777
	001	Type SL3B LED bollard	16.00	ea	361.07 /ea	5,777
	001	24" precast concrete pole base	61.00	ea	1,159.51 /ea	70,730
	001	Bollard precast support base	32.00	ea	951.91 /ea	30,461
		UTILITIES			*0.696/sf*	*114,830*
		165,035.00 sf				
		G4030 Site Communications And Security Systems			*0.696/sf*	*114,830*
		165,035.00 sf				
		G40 SITE ELECTRICAL UTILITIES			**8.688/sf**	**1,433,790**
		165,035.00 sf				
		G SITEWORK			***95.764/sf***	***15,804,363***
		165,035.00 sf				

Estimate Totals

Description	Amount	Totals	Rate
Direct Cost	**107,224,898**	**107,224,898**	
Design Contingency	5,361,245		5.000 %
Escalation	4,664,283		4.350 %
Construction Contingency	2,680,622		2.500 %
Subtotal	**12,706,150**	**119,931,048**	
Sub Default Insurance	767,810		
General Requirements	5,681,683		
General Conditions	5,733,391		
Preconstruction Services			
	12,182,884	**132,113,932**	
General Liability Insurance	1,507,040		1.095 %
Performance Bond	956,523		0.695 %
Builder's Risk Insurance	265,624		0.193 %
Pollution Insurance	66,062		0.048 %
General Building Permit - Waived			
Subtotal	**2,795,249**	**134,909,181**	
CM Fee	2,720,000		
Subtotal	**2,720,000**	**137,629,181**	
Project GSF 165,035			
Total		**137,629,181**	

Item	Description	Takeoff Qty		Total Unit Cost	Total Amount
31-0000.000	***EARTHWORK***				
0	Building Over-Excavation in lieu of Ground Improvements	1.00	ls	1,432,245.00 /ls	1,432,245
	EARTHWORK			***8.678/sf***	***1,432,245***
	165,035.00 sf				
32-0000.000	***EXTERIOR IMPROVEMENTS***				
25	HMA, Basketball Court	-650.41	sy	25.773 /sy	(16,763)
25	Fine Grading - Basketball	-650.41	sy	2.00 /sy	(1,301)
6	C3, CIP Concrete Fence Strip	-302.00	lf	65.00 /lf	(19,630)
2	Remove and salvage curbing at existing School	502.00	lf	107.386 /lf	53,908
2	DPW storage				
2	Reinstallation				
6	Painted Courts	-1.00	ea	27,276.15 /ea	(27,276)
001	E7, Exterior Basketball Hoop & Post	-2.00	ea	9,000.00 /ea	(18,000)
20	C11, Chain Link Sport Court Fencing	-302.00	lf	40.00 /lf	(12,080)
20	C12, Chain Link Sport Court Gate - 10' x 10' Double Gate	-1.00	ea	240.00 /ea	(240)
5	Lawn and Planting Maintenance	1.00	ls	5,000.00 /ls	5,000
5	Fine Rake And Seed	5,853.68	sf	0.45 /sf	2,634
	EXTERIOR IMPROVEMENTS			***(0.204)/sf***	***(33,748)***
	165,035.00 sf				

Estimate Totals

Description	Amount	Totals	Rate	
Direct Cost	**1,398,497**	**1,398,497**		
Design Contingency	69,925		5.000	%
Escalation	60,835		4.350	%
Construction Contingency	34,962		2.500	%
Subtotal	**165,722**	**1,564,219**		
Sub Default Insurance	21,899		1.400	%
General Requirements				
General Conditions				
Preconstruction Services				
	21,899	**1,586,118**		
General Liability Insurance	18,098		1.095	%
Performance Bond	11,487		0.695	%
Builder's Risk Insurance	3,190		0.193	%
Pollution Insurance	793		0.048	%
ıeral Building Permit - Waived				
Subtotal	**33,568**	**1,619,686**		
CM Fee	33,055		2.000	%
Subtotal	**33,055**	**1,652,741**		
Project GSF 165,035				
Total		**1,652,741**		

RECONCILED CONSTRUCTION COST ESTIMATE TEMPLATE

District: Town of Wilmington
Project: Wildwood Elementary School
OPM: LeftField, LLC
Designer: Dore + Whittier
CM (if applicable): Fontaine Brothers, Inc
Project Type: New Construction
Submittal (DD/60/90): DD
Proposed Gross SqFt: 165,035

Reconciliation Notes

Shaded cells represent entries [columns/rows] added to this MSBA standard document

		VE NOT INCLUDED				VE INCLUDED
		PM&C CSI Estimate dated 3/10/2026	Fontaine CSI Estimate dated 3/10/2026	% Delta	$ Delta	Fontaine CSI Estimate dated 3/10/2026
CSI DIVISION	DESCRIPTION	DESIGNER COST ESTIMATE	CM COST ESTIMATE			OPM Reconciled Amount
n/a	GMP Fee, GC's, Insurances & Bonds	$11,756,528	$12,016,450	2%	$259,922	$12,016,450
n/a	GMP Insurance (included above)	$0	$0		$0	$0
n/a	GMP Contingency	$3,236,482	$2,680,622	-17%	-$555,860	$2,680,622
n/a	Design & Estimating Contingency	$5,239,319	$5,361,245	2%	$121,926	$5,361,245
n/a	Escalation	$4,715,387	$4,664,283	-1%	-$51,104	$4,664,283
1000	General Requirements	$5,681,683	$5,681,683	0%	$0	$5,681,683
2000	Existing Conditions	$2,032,010	$2,000,000	-2%	-$32,010	$2,000,000
3000	Concrete	$4,611,187	$4,978,802	8%	$367,615	$4,978,802
4000	Masonry	$7,151,235	$7,150,096	0%	-$1,139	$7,150,096
5000	Metals	$10,743,498	$10,023,638	-7%	-$719,860	$10,023,638
6000	Woods, Plastics, Composites	$1,789,447	$2,022,917	13%	$233,470	$2,022,917
7000	Thermal and Moisture Protection	$7,082,092	$8,617,568	22%	$1,535,476	$8,617,568
8000	Openings	$4,429,440	$4,785,076	8%	$355,636	$4,785,076
9000	Finishes	$13,628,220	$13,431,301	-1%	-$196,919	$13,431,301
10000	Specialties	$2,098,348	$794,475	-62%	-$1,303,873	$794,475
11000	Equipment	$1,336,570	$1,390,670	4%	$54,100	$1,390,670
12000	Furnishings	$3,071,617	$3,133,205	2%	$61,588	$3,133,205
13000	Special Construction	$0	$0	0%	$0	$0
14000	Conveying Equipment	$270,000	$258,750	-4%	-$11,250	$258,750
21000	Fire Suppression	$1,420,542	$1,206,770	-15%	-$213,772	$1,206,770
22000	Plumbing	$3,471,797	$3,628,243	5%	$156,446	$3,628,243
23000	Heating Ventilating and Air Conditioning	$14,263,824	$14,176,380	-1%	-$87,444	$14,176,380
26000	Electrical	$12,538,420	$11,446,776	-9%	-$1,091,644	$11,446,776
27000	Communications	Included in Electrical	Included in Electrical			Included in Electrical
28000	Electronic Safety and Security	Included in Electrical	Included in Electrical			Included in Electrical
31000	Earthwork	$5,449,296	$6,335,645	16%	$886,349	$6,335,645
32000	Exterior Improvements	$7,543,116	$8,027,259	6%	$484,143	$8,027,259
33000	Utilities	$1,855,721	$3,817,328	106%	$1,961,607	$3,817,328
	Subtotal Base Contract Amount	$135,415,779	$137,629,182	1.63%	$2,213,403	$137,629,182
	Bid Alternates (If applicable)	$0	$0	#DIV/0!	$0	$0
	TOTAL AMOUNT	**$135,415,779**	**$137,629,182**	**1.63%**	**$2,213,403**	**$137,629,182**
	TOTAL $/SF	**821**	**834**	**1.63%**	**$13**	**834**

COST ESTIMATE COMPARISON SPREADSHEET (UNIFORMAT)

Wildwood Elementary School - New Construction

Estimated Construction Start Date:			June-26			June-26			June-26			XXXX			XXXX		
Division #		Description	Project Scope & Budget			Project Funding Agreement			Design Development			60% CD			100% CD		
			GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost
A		Substructure	165,035	$5,818,594	$35.26	165,035	$5,818,594	$35.26	165,035	$5,727,053	$34.70			#DIV/0!			#DIV/0!
B		Shell	165,035	$28,185,853	$170.79	165,035	$28,185,853	$170.79	165,035	$30,786,252	$186.54	0	$0	#DIV/0!	0	0	#DIV/0!
	B10	Superstructure	165,035	$11,031,003	$66.84	165,035	$11,031,003	$66.84	165,035	$11,844,056	$71.77	0		#DIV/0!	0		#DIV/0!
	B20	Exterior Enclosure	165,035	$14,494,280	$87.83	165,035	$14,494,280	$87.83	165,035	$15,855,014	$96.07	0	$0	#DIV/0!	0	0	#DIV/0!
		B2010 Exterior Walls	165,035	$12,000,405	$72.71	165,035	$12,000,405	$72.71	165,035	$12,791,739	$77.51	0		#DIV/0!	0		#DIV/0!
		B2020 Exterior Windows	165,035	$2,325,955	$14.09	165,035	$2,325,955	$14.09	165,035	$2,836,075	$17.18	0		#DIV/0!	0		#DIV/0!
		B2030 Exterior Doors	165,035	$167,920	$1.02	165,035	$167,920	$1.02	165,035	$227,200	$1.38	0		#DIV/0!	0		#DIV/0!
	B30	Roofing	165,035	$2,660,570	$16.12	165,035	$2,660,570	$16.12	165,035	$3,087,182	$18.71	0		#DIV/0!	0		#DIV/0!
C		Interiors	165,035	$17,253,514	$104.54	165,035	$17,253,514	$104.54	165,035	$17,643,087	$106.91	0		#DIV/0!	0		#DIV/0!
D		Services	165,035	$28,827,960	$174.68	165,035	$28,827,960	$174.68	165,035	$30,731,268	$186.21	0	$0	#DIV/0!	0	0	#DIV/0!
	D10	Conveying	165,035	$259,620	$1.57	165,035	$259,620	$1.57	165,035	$273,100	$1.65	0		#DIV/0!	0		#DIV/0!
	D20	Plumbing	165,035	$3,504,350	$21.23	165,035	$3,504,350	$21.23	165,035	$3,628,243	$21.98	0		#DIV/0!	0		#DIV/0!
	D30	HVAC	165,035	$13,913,586	$84.31	165,035	$13,913,586	$84.31	165,035	$14,176,380	$85.90	0		#DIV/0!	0		#DIV/0!
	D40	Fire Protection	165,035	$1,317,979	$7.99	165,035	$1,317,979	$7.99	165,035	$1,206,770	$7.31	0		#DIV/0!	0		#DIV/0!
	D50	Electrical	165,035	$9,832,425	$59.58	165,035	$9,832,425	$59.58	165,035	$11,446,775	$69.36	0		#DIV/0!	0		#DIV/0!
E		Furnishings & Fixed Equipment	165,035	$4,095,892	$24.82	165,035	$4,095,892	$24.82	165,035	$4,532,875	$27.47	0		#DIV/0!	0		#DIV/0!
		Building Subtotal	**165,035**	**$84,181,813**	**$510**	**165,035**	**$84,181,813**	**$510**	**165,035**	**$89,420,535**	**$541.83**	**0**	**$0**	**#DIV/0!**	**0**	**0**	**#DIV/0!**
F		Special Construction & Demo	165,035	$2,032,010	$12.31	165,035	$2,032,010	$12.31	165,035	$2,000,000	$12.12	0		#DIV/0!	0		#DIV/0!
G		Other Site Construction	165,035	$15,594,947	$94.49	165,035	$15,594,947	$94.49	165,035	$15,804,363	$95.76	0	$0	#DIV/0!	0	0	#DIV/0!
	G10	Site Preparation	165,035	$4,013,109	$24.32	165,035	$4,013,109	$24.32	165,035	$4,004,000	$24.26	0		#DIV/0!	0		#DIV/0!
	G20	Site Improvements	165,035	$8,197,222	$49.67	165,035	$8,197,222	$49.67	165,035	$7,983,035	$48.37	0		#DIV/0!	0		#DIV/0!
	G30	Mechanical Utilities	165,035	$2,418,926	$14.66	165,035	$2,418,926	$14.66	165,035	$2,383,538	$14.44	0		#DIV/0!	0		#DIV/0!
	G40	Electrical Utilities	165,035	$965,690	$5.85	165,035	$965,690	$5.85	165,035	$1,433,790	$8.69	0		#DIV/0!	0		#DIV/0!
		Subtotal	**165,035**	**$101,808,770**	**$617**	**165,035**	**$101,808,770**	**$617**	**165,035**	**$107,224,898**	**$649.71**	**0**	**$0**	**#DIV/0!**	**0**	**0**	**#DIV/0!**
Z		Mark-Ups	165,035	$28,299,238	27.8%	165,035	$28,299,238	27.8%	165,035	$25,740,000	24.0%	0	#REF!	#REF!	0	#REF!	#REF!
Z		Insurance	165,035	$0	0.0%	165,035	$0	0.0%	165,035	$2,606,536	2.4%	0	#REF!	#REF!	0	#REF!	#REF!
Z		Subcontractor Bonds	165,035	$768,665	0.8%	165,035	$768,665	0.8%	165,035	$956,523	0.9%	0	#REF!	#REF!	0	#REF!	#REF!
Z		GC Bonds	165,035	$0	0.0%	165,035	$0	0.0%	165,035	$0	0.0%	0	#REF!	#REF!	0	#REF!	#REF!
Z		Design & Pricing Contingency	165,035	$10,180,877	10.0%	165,035	$10,180,877	10.0%	165,035	$5,361,245	5.0%	0	#REF!	#REF!	0	#REF!	#REF!
Z		General Conditions	165,035	$14,687,983	14.4%	165,035	$14,687,983	14.4%	165,035	$14,095,696	13.1%	0	#REF!	#REF!	0	#REF!	#REF!
Z		Overhead & Profit	165,035	$2,661,713	2.6%	165,035	$2,661,713	2.6%	165,035	$2,720,000	2.5%	0	#REF!	#REF!	0	#REF!	#REF!
		Construction Subtotal	**165,035**	**$130,108,008**	**$788**	**165,035**	**$130,108,008**	**$788**	**165,035**	**$132,964,898**	**$805.68**	**0**	**#REF!**	**#REF!**	**0**	**#REF!**	**#REF!**
Z		Escalation to Construction Mid-Point	165,035	$7,635,658	7.5%	165,035	$7,635,658	7.5%	165,035	$4,664,283	4.3%	0	#REF!	#REF!	0	#REF!	#REF!
		Total Addition Cost	**165,035**	**$137,743,666**		**165,035**	**$137,743,666**		**165,035**	**$137,629,181**		**0**	**#REF!**		**0**	**#REF!**	
		$/GSF		**$835**			**$835**			**$834**			**#REF!**			**#REF!**	

		Alternates															
		1															
		2															
		3															
		4															

MSBA TEMPLATE (UNIFORMAT), REVISED 5-13-2010

(Enter School Name) (Renovation)

Estimated Construction Start Date:		XXXX			XXXX			XXX-2010			XXXX			XXXX		
Division #		Description	Project Scope & Budget			Project Funding Agreement			Design Development			60% Design			100% Design		
			GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost	GSF	Total Cost	Unit Cost
A		Substructure			#DIV/0!			#DIV/0!			#DIV/0!			#DIV/0!			#DIV/0!
B		Shell	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!
	B10	Superstructure	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
	B20	Exterior Enclosure	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!
		B2010 Exterior Walls	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
		B2020 Exterior Windows	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
		B2030 Exterior Doors	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
	B30	Roofing	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
C		Interiors	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
D		Services	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!	0	$0	#DIV/0!
	D10	Conveying	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
	D20	Plumbing	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
	D30	HVAC	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
	D40	Fire Protection	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
	D50	Electrical Utilities	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
E		Furnishings & Fixed Equipment	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
		Building Subtotal	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**
F		Special Construction & Demo	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!	0		#DIV/0!
		Subtotal	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**	**0**	**$0**	**#DIV/0!**
Z		Mark-Ups	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
Z		Insurance	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
Z		Subcontractor Bonds	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
Z		GC Bonds	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
Z		Design & Pricing Contingency	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
Z		General Conditions	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
Z		Overhead & Profit	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
		Construction Subtotal	**0**	**#REF!**	**#REF!**	**0**	**#REF!**	**#REF!**	**0**	**#REF!**	**#REF!**	**0**	**#REF!**	**#REF!**	**0**	**#REF!**	**#REF!**
Z		Escalation to Construction Mid-Point	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!	0	#REF!	#REF!
		Total Renovation Cost	**0**	**#REF!**		**0**	**#REF!**		**0**	**#REF!**		**0**	**#REF!**		**0**	**#REF!**	
		$/GSF		**#REF!**			**#REF!**			**#REF!**			**#REF!**			**#REF!**	
Total Addition & Renovation Cost			**165,035**	**#REF!**		**165,035**	**#REF!**		**165,035**	**#REF!**			**#REF!**			**#REF!**	
		$/GSF		**#REF!**			**#REF!**			**#REF!**			**#REF!**			**#REF!**	

NOTES:

1 Project Scope & Budget costs are based on , 2010 dollars.
2 Design Development costs are based on , 2010 dollars.
3 60% Construction Document costs are based on , 2010 dollars.
4 100% Construction Document costs are based on , 2010 dollars.

MSBA TEMPLATE (UNIFORMAT), REVISED 5-13-2010

Town of Wilmington
Wildwood Elementary School

DRAFT

Total Project Budget: All costs associated with the project are subject to 963 CMR 2.16(5)	Estimated Budget	Scope Items Excluded from the Estimated Basis of Maximum Facilities Grant or Otherwise Ineligible	Estimated Basis of Maximum Total Facilities Grant[1]	Estimated Maximum Total Facilities Grant[1]
Feasibility Study Agreement				
OPM Feasibility Study	$150,000	$0	$150,000	
A&E Feasibility Study	$853,920	$0	$853,920	
Environmental & Site	$145,076	$0	$145,076	
Other	$66,004	$0	$66,004	
Feasibility Study Agreement Subtotal	**$1,215,000**	**$0**	**$1,215,000**	**$665,577**
Administration				
Legal Fees	$100,000	$100,000	$0	**$0**
Owner's Project Manager				
Design Development	$400,000	$0	$400,000	
Construction Contract Documents	$600,000	$256,695	$343,305	
Bidding	$250,000	$0	$250,000	
Construction Contract Administration	$3,250,000	$1,276,381	$1,973,619	
Closeout	$220,000	$0	$220,000	
Extra Services	$0	$0	$0	
Reimbursable & Other Services	$60,000	$0	$60,000	
Cost Estimates	$0	$0	$0	
Advertising	$20,000	$0	$20,000	
Permitting	$120,000	$0	$120,000	
Owner's Insurance	$300,000	$0	$300,000	
Other Administrative Costs	$200,000	$0	$200,000	
Administration Subtotal	**$5,520,000**	**$1,633,076**	**$3,886,924**	**$2,129,257**
Architecture and Engineering				
Basic Services				
Design Development	$3,409,156	$698,359	$2,710,797	
Construction Contract Documents	$4,772,818	$799,272	$3,973,546	
Bidding	$681,831		$681,831	
Construction Contract Administration	$4,090,986	$4,090,986	$0	
Closeout	$681,831	$0	$681,831	
Other Basic Services	$0	$0	$0	
Basic Services Subtotal	**$13,636,622**	**$5,588,617**	**$8,048,005**	
Reimbursable Services				
Construction Testing	$0	$0	$0	
Printing (over minimum)	$0	$0	$0	
Other Reimbursable Costs	$712,976	$0	$712,976	
Hazardous Materials	$183,700	$0	$183,700	
Geotechnical & Geo-Environmental	$316,624	$0	$316,624	
Site Survey	$0	$0	$0	
Wetlands	$0	$0	$0	
Traffic Studies	$51,700	$0	$51,700	
Architectural/Engineering Subtotal	**$14,901,622**	**$5,588,617**	**$9,313,005**	**$5,101,664**
CM at Risk Pre-Construction Services				
Pre-Construction Services	$320,000	$0	**$320,000**	**$175,296**
Site Acquisition				
Land / Building Purchase	$0	$0	$0	
Appraisal Fees	$0	$0	$0	
Recording fees	$0	$0	$0	
Site Acquisition Subtotal	**$0**	**$0**	**$0**	**$0**
Construction Costs				
SUBSTRUCTURE				
Foundations	$2,098,203			
Basement Construction	$3,628,850			
SHELL				
Super Structure	$11,844,056			
Exterior Closure	$0			
Exterior Walls	$12,791,739			
Exterior Windows	$2,836,075			
Exterior Doors	$227,200			
Roofing	$3,087,182			
INTERIORS				
Interior Construction	$10,111,295			
Staircases	$946,465			
Interior Finishes	$6,585,328			
SERVICES				
Conveying Systems	$273,100			
Plumbing	$3,628,243			
HVAC	$14,176,380			
Fire Protection	$1,206,770			
Electrical	$11,446,775			
EQUIPMENT & FURNISHINGS				
Equipment	$1,390,670			
Furnishings	$3,142,205			

SPECIAL CONSTRUCTION & DEMOLITION				
Special Construction	$0	$0		
Existing Building Demolition	$550,000	$0		
In-Building Hazardous Material Abatement	$1,290,000	$0		
Asbestos Containing Floor Material / Ceiling Tile Abatement	$160,000	$160,000		
Other Hazardous Material Abatement	$0	$0		
BUILDING SITE WORK				
Site Preparation	$4,004,000	$0		
Site Improvements	$7,983,035	$0		
Site Civil / Mechanical Utilities	$2,383,538	$0		
Site Electrical Utilities	$1,433,790	$0		
Scope Excluded Site Work	$0	$0		
Construction Trades Subtotal	$107,224,899	$160,000		
Contingencies (Design and Pricing)	$5,361,245	$8,000		
Sub-Contractor Bonds	$767,810	$1,146		
D/B/B Insurance	$0	$0		
General Conditions	$11,415,074	$17,033		
D/B/B Overhead & Profit	$0	$0		
GMP Insurance	$2,795,249	$4,171		
GMP Fee	$2,720,000	$4,059		
GMP Contingency	$2,680,622	$4,000		
Escalation to Mid-Point of Construction	$4,664,283	$6,960		
Construction Cost over Funding Cap		$41,170,794		
Construction Budget	**$137,629,182**	**$41,376,163**	**$96,253,019**	**$52,727,404**
Alternates				
Ineligible Work Included in the Base Project	$0	$0	$0	
Alternates Included in the Total Project Budget	$0	$0	$0	
Alternates Excluded from the Total Project Budget	$0		$0	
Subtotal to be Included in Total Project Budget	**$0**	**$0**	**$0**	**$0**
Miscellaneous Project Costs				
Utility Company Fees	$200,000	$0	$200,000	
Testing Services	$500,000	$0	$500,000	
Swing Space / Modulars	$0	$0	$0	
Other Project Costs (Mailing & Moving)	$350,000	$350,000	$0	
Miscellaneous Project Costs Subtotal	**$1,050,000**	**$350,000**	**$700,000**	**$383,460**
Furnishings and Equipment				
Furniture, Fixtures & Equipment	$1,661,000	$755,000	$906,000	
Technology	$1,661,000	$755,000	$906,000	
FF&E Subtotal	**$3,322,000**	**$1,510,000**	**$1,812,000**	**$992,614**
Soft Costs that exceed 20% of Construction Cost		$0	$0	
Project Budget	**$163,957,804**	**$50,457,856**	**$113,499,948**	**$62,175,272**

David Saindon:
$1.00 rounding descrepancy in total. Adjusted transfer of savings by $1.00 to Owners Contingency to match total project budget.

Board Authorization	
Design Enrollment	755
Total Building Gross Floor Area (GSF)	165,035
Total Project Budget (excluding Contingencies)	$163,957,804
Scope Items Excluded or Otherwise Ineligible	- $50,457,856
Third Party Funding (Ineligible)	- $0
Estimated Basis of Maximum Total Facilities Grant [1]	$113,499,948
Reimbursement Rate [3]	54.78%
Est. Max. Total Facilities Grant (before recovery) [1]	$62,175,272
Cx Costs associated with Ineligible Building Area [4]	- $18,985
Cost Recovery associated with Prior Projects [4]	- $209,597
Estimated Maximum Total Facilities Grant [1]	$61,946,690

Construction Contingency [2]	$7,001,667
Ineligible Construction Contingency [2]	$5,625,375
"Potentially Eligible" Construction Contingency [2]	$1,376,292
Owner's Contingency [2]	$2,306,155
Ineligible Owner's Contingency [2]	$1,618,009
"Potentially Eligible" Owner's Contingency [2]	$688,146
Total Potentially Eligible Contingency [2]	$2,064,438
Reimbursement Rate [3]	54.78%
Potential Additional Contingency Grant Funds [2]	$1,130,899
Maximum Total Facilities Grant	$63,077,589
Total Project Budget	$173,265,626

49.11	Reimbursement Rate Before Incentive Points
5.67	Total Incentive Points [3]
54.78%	MSBA Reimbursement Rate

NOTES

This document was prepared by the MSBA based on a preliminary review of information and estimates provided by the Town of Wilmington for the Wildwood Elementary School project. Based on this preliminary review, certain budget, cost and scope items have been determined to be ineligible for reimbursement, however, this document does not contain a final, exhaustive list of all budget, cost and scope items which may be ineligible for reimbursement by the MSBA. Nor is it intended to be a final determination of which budget, cost and scope items may be eligible for reimbursement by the MSBA. All project budget, cost and scope items shall be subject to review and audit by the Authority, and the Authority shall determine, in its sole discretion whether any such budget, cost and scope items are eligible for reimbursement. The MSBA may determine that certain additional budget, cost and scope items are ineligible for reimbursement.

1 - The Estimated Basis of Total Facilities Grant and Estimated Maximum Facilities Grant amounts do not include any potentially eligible contingency funds and are subject to review and audit by the MSBA.

2 - Pursuant to Section 3.21 of the Project Funding Agreement and the applicable policies and guidelines of the Authority, any project costs associated with the reallocation or transfer of funds from either the Owner's contingency or the Construction contingency to other budget line items shall be subject to review by the Authority to determine whether any such costs are eligible for reimbursement by the Authority. All costs are subject to review and audit by the MSBA.

3 - The MSBA has provisionally included three (3) incentive points for energy efficiency, and one (1) incentive point for indoor air quality, subject to the District meeting certain sustainability requirements for the project. If the District does not meet the requirements of the Green Schools Program, the District will not qualify for some or all of these incentive points, and the MSBA will adjust the reimbursement rate accordingly.

4 - Costs associated with the commissioning of ineligible building area will result in the recovery of a portion of the overall commissioning cost. The MSBA has calculated this recovery of funds to be $18,985 and this amount has been deducted from the Estimated Total Facilities Grant and the Maximum Total Facilities Grant. The proposed demolition of the North Intermediate School will result in the MSBA recovering a portion of state funds previously paid to the District for the 201203420060 Accelerated Repair Windows/Doors project at the existing North Intermediate School completed in September 15, 2014. The MSBA has calculated this recovery of funds to be $209,597 and this amount has been deducted from the Estimated Maximum Total Facilities Grant and the Maximum Total Facilities Grant.

FONTAINE BROS.

Project Name:	**Wilmington Elementary School**
Document Name:	**Value Engineering Log**
Project Phase:	**Design Development**
Review Date:	**Tuesday, March 10, 2026**

Item #	Category/ Discipline	Item	Recommendations and Values	Accepted	Alternates	Deferred/Rejected	Notes
1	Architectural	Reduce Restroom wall tile to wet walls only	$ (313,100)				$32/sf DEDUCT for wall tile; $1/sf ADD for painted GWB walls
2	Architectural	Reduce Restroom wall tile from full height to 3'6" wainscot	$ (362,700)				$32/sf DEDUCT for wall tile; $1/sf ADD for painted GWB walls
3	Architectural	Replace WD-1, Armstrong Woodworks Linear Closed ceilings with painted gypsum	$ (284,275)				$60/sf DEDUCT for WD-1; $15+$3.5/sf ADD for painted GWB ceilings
4	Architectural	Standardize/simplify the student cubbies	$ (100,000)				target $100k savings; per NEIS this is about $400k F&I
5	Architectural	Replace all corian counters with plastic laminate	$ (33,950)				$550+$75/lf DEDUCT for SS; $500+$55/lf ADD for plam
6	Structural	Reduce glulam to Cafeteria only	$ (52,250)				Removed Addendum 1 values from budget, assumed as steel structure and ACT ceiling
7	Architectural	Reduce wood slat panels w acoustical backing by 20%	$ (36,300)				Wood Slat Panels w acoustical felt backing total $181,050
8	Electrical	Reduce lighting package by 5%	$ (131,700)				Lighting package total $2,633,809
9							
10							
11							
12		**Total:**	**$ (1,314,275)**	**$ -**	**$ -**	**$ -**	
15							

Project information									PFA or PSBA data					
MSBA ID	Calendar Year of sub bid date	District	School	OPM	Designer	CM/GC	Procurement Type (DBB/CMR)	PS&B Authorised Date (Board Meeting)	PS&B/PFA Construction Budget W\ Pre-Con & Alts	Design & Pricing Contingency	Design & Pricing Contingency (% of Construction Budget)	Escalation to mid point of construction ($)	Escalation to mid point of construction (%)	Total Project Budget
											#DIV/0!		#DIV/0!	
202003420015	2026	Wilmington	Wildwood ES	LeftField, LLC	Dore + Whittier	Fontaine Brothers	CMR	6/18/2025	**$137,743,666**	$10,180,877	7.39%	$7,635,658	5.54%	$164,312,288

DD														
Designer Current Cost Estimate	OPM's Current Cost Estimate	OPM Reconciled DD Estimate after VE	Design & Pricing Contingency	Design & Pricing Contingency (% of DD Construction Budget)	Escalation to mid point of construction	Escalation to mid point of construction (%)	Approved VE at DD since PFA	% OF approved VE since PFA	DD Total Project Budget	DD Date	Comments	Designer Current Cost Estimate	OPM's Current Cost Estimate	OPM Reconciled CD60 Estimate after VE
				#DIV/0!		#DIV/0!		#DIV/0!						
$135,415,779	$137,629,182	$137,629,182	$5,361,245	3.90%	$4,664,283	3.39%	$0	0.00%	$164,312,288	3/20/2026	Reconciled cost estimate is under budget, no VE needed			

CD60																
Design & Pricing Contingency	Design & Pricing Contingency (% of CD60 Construction Budget)	Escalation to mid point of construction	Escalation to mid point of construction (%)	Approved VE at CD60	% OF CD60 VE to PFA	Approved VE since PFA	% of approved VE since PFA	CD60 Total Project Budget	CD60 Date	Comments	Designer Current Cost Estimate	OPM's Current Cost Estimate	OPM Reconciled CD90 Estimate after VE	Design & Pricing Contingency	Design & Pricing Contingency (% of CD90 Construction Budget)
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CD90									Final Cost						
Escalation to mid point of construction	Escalation to mid point of construction (%)	Approved VE at CD90	% OF CD90 VE to PFA	Approved VE since PFA	% of approved VE since PFA	CD90 Total Project Budget	CD90 Date	Comments	Sub Bid Date	Bid/GMP Date	Combined Approved VE	Combined Approved VE since PFA (%)	Total Bid/GMP Amount	Total Over(+) /Under(-) PFA Construction Budget	Bid/GMP Variance to PFA (%)
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	#DIV/0!		0.00%	$0	0.00%						$0	0.00%		($137,743,666)	-100.00%

ACENTECH
ACOUSTICS TECHNOLOGY VIBRATION

Memorandum

TO	Rani Philip, Assoc. AIA (Dore + Whittier)
FROM	Kristen Murphy, Nicole Cuff (Acentech)
DATE	January 30, 2026
PROJECT	**Wilmington Elementary School**
SUBJECT	Community Noise Measurements
PROJECT NO	J638971
ENCLOSED	Noise Monitor Results

SUMMARY

Noise generated by new equipment serving Wilmington Elementary School must be carefully evaluated to keep background sound levels within the Massachusetts Department of Environmental Protection (MassDEP) noise regulation.

To understand the current community noise levels from the existing site conditions, we collected measurements between December 3, 2025 to December 11, 2025.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MASSDEP) NOISE REGULATION

The MassDEP policy[1] establishes the project noise limits at the property lines predicated on the existing background sound level, which is defined in terms of the 90th percentile A-weighted sound level (L_{90}). A sound source or facility which causes the background sound level to increase by 10 dBA or more is in violation of the MassDEP noise policy. In addition, the MassDEP policy prohibits the creation of a "pure-tone condition", wherein the sound pressure level in an octave band exceeds the sound pressure level in both adjacent bands by 3 dB or more.

The Town of Wilmington, Massachusetts does not appear to have its own Noise Ordinance separate from the State's environmental noise regulation.

[1] https://www.mass.gov/doc/massdep-noise-policy/download

BACKGROUND SOUND LEVEL MEASUREMENTS

We visited the project site from December 3, 2025 to December 11, 2025 to record the existing background sound levels. This was done by installing (4) continuous noise monitors that recorded statistical sound measurements every hour over the course of this period. The aerial photograph in Figure 1 below shows the locations selected for our measurement and evaluation.



Figure 1: Measurement Locations

Please note that the measurement equipment at the school pick-up/dropoff location ended early, on December 8, 2025. Because this location had the loudest measured levels on site, we expect this does not affect the MassDEP baseline (which is based on the quietest measured levels).

Table 1 below shows a summary of the measured 1-hour LA_{90} results (consistent with the MassDEP policy) at each measurement location. The L_{90} is the sound level that is exceeded 90% of the measurement time, and is generally near to the minimum value measured over the same interval.

Table 1: Measured Lowest Background Sound Level

Location	LA_{90}, Lowest Nighttime Background Sound Levels 10PM to 7AM	LA_{90}, Lowest Daytime Background Sound Levels 7AM to 10PM
School pick-up/dropoff	46 dBA	52 dBA
East property line	42 dBA	46 dBA
North property line	40 dBA	43 dBA
West property line	39 dBA	41 dBA

The background sound level in each day and nighttime period fluctuates throughout the week, season, and year. To be most conservative, we have based our analysis on the minimum measured L_{90}. We have measured the quietest nighttime levels between 39 dBA – 42 dBA and quietest daytime levels between 41 – 46 dBA at the nearest residential property lines adjacent to the proposed site (based on the measurement location).

Please see the graphs attached at the end of this report for a record of the measured sound levels. These graphs include the L_{01}[2] and LA_{eq}[3] average have also been provided in the tables below for context. We would be pleased to provide additional technical information describing these data at your request.

PROJECT DESIGN GOALS

Per MassDEP, based on our collected measurement data, the broadband sound emissions by the new equipment should not exceed **49 dBA – 52 dBA** during nighttime hours and **51 – 56 dBA** during daytime hours.

Detailed recommendations for both exterior mechanical noise control and sound isolation of the building envelope will be provided in later design stages once equipment selections have been made.

For now, we have the following preliminary comments and recommendations for the project design:

- The project has planned for 12' tall acoustical barrier roof screens surrounding the rooftop mechanical equipment. The barriers must be installed at least a foot above the top of the rooftop unit installed height and extend as close to the roof level as possible.
- To the extent feasible, select equipment that is as quiet as possible. Select "low noise" options where available – especially for the rooftop unit supply/exhaust fans (where sound radiates to the community through the unit intake/exhaust openings), and outdoor condensing sections.
- Depending on our review of the selected mechanical equipment, additional noise control measures may be needed, such as exterior sound attenuators, compressor wraps, etc.
- In addition to updated rooftop unit data, please provide sound power data for the following equipment:
    - Condensing fans, including condensing sections in air-handling units and outdoor split system ACCUs.
    - Exhaust fans
    - Emergency generators
    - Any other exterior noise-generating equipment

[2] L_{01} is the sound level that is exceeded for 1% of the measurement time, and is generally near to the maximum value measured over the same interval.

[3] L_{eq} is the steady sound pressure level which, has the same total energy as the measured fluctuating noise over the measurement time, and is generally the average value measured over the same interval.

- Please provide information on the mechanical equipment setback schedule as soon as it becomes available. This information is important in determining the required noise control measures needed during different operating conditions.
- Plan for a critical grade sound enclosure and exhaust muffler for the emergency generator.

*** End of Memorandum ***

The Green Engineer
Sustainable Design Consulting

www.greenengineer.com

WILMINGTON ELEMENTARY SCHOOL

WILMINGTON, MA

PRELIMINARY TEDI ASSESSMENT

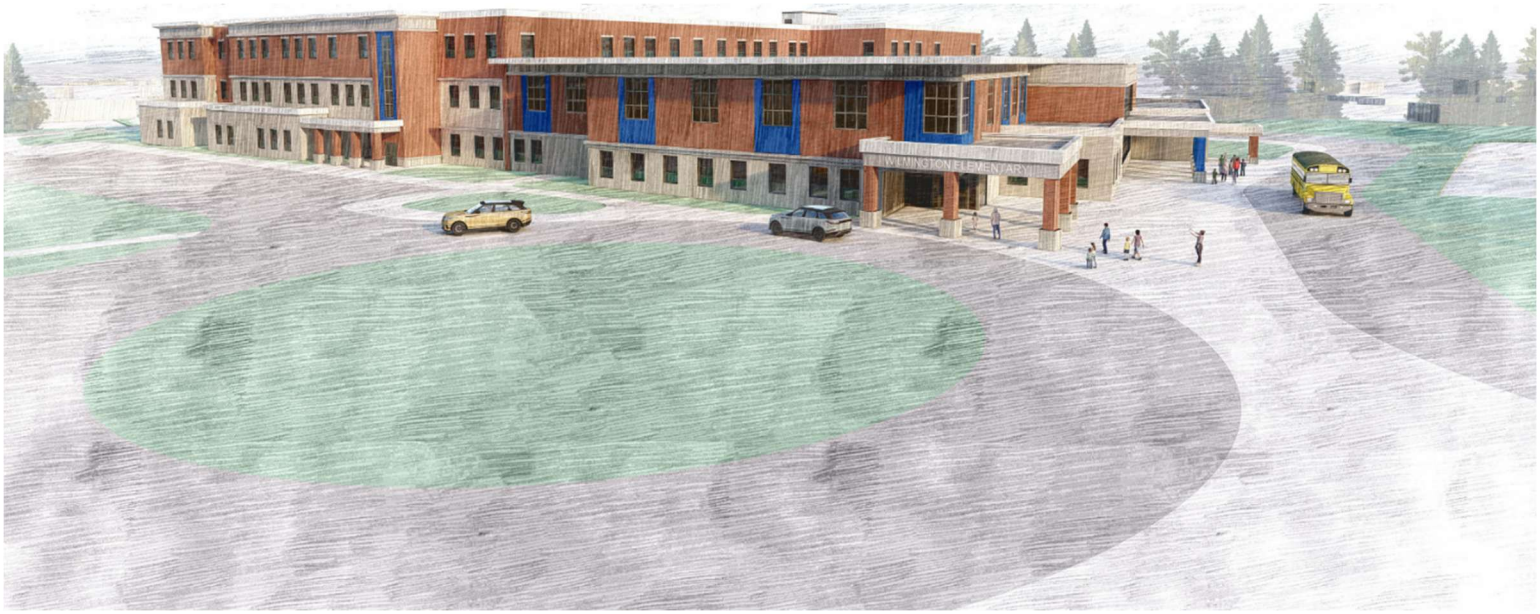


Figure 1: Wilmington Elementary School
Source: Dore + Whittier

Prepared For:
Dore + Whittier
260 Merrimac Street
Building 7, 2nd Floor
Newburyport, MA 01950

Prepared By:
The Green Engineer, Inc.

23 Bradford Street
Concord, MA 01742
978.369.8978

Report Date:
March 2, 2026

Table of Contents

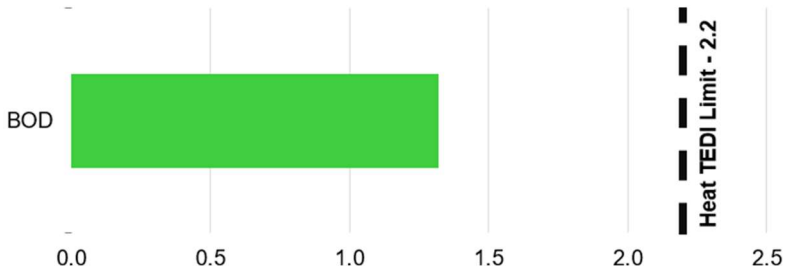
Executive Summary 2
1. Project Overview 4
2. Discussion of Results 5
3. Recommendations 7
Appendix A: Analysis Methodology and Input Summary 8
Appendix B: Energy Model Input Tables 10

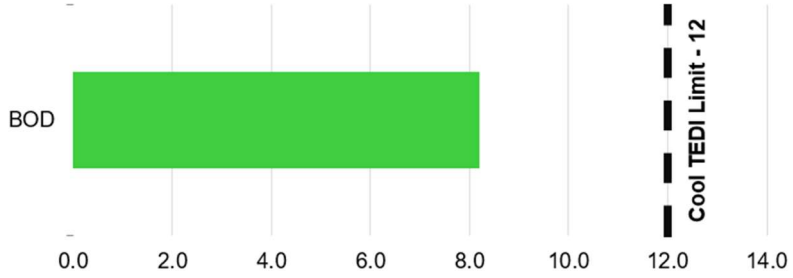
DISCLAIMER: The results and findings presented in this report are based, in whole or in part, on information contained in design documents and communications with the designers of record. While The Green Engineer, Inc. has made reasonable efforts to verify the information, we do not guarantee the completeness or accuracy of information provided by others. The Green Engineer, Inc. assumes no responsibility for any errors, omissions, or misrepresentations in the information provided by others and disclaims any liability for discrepancies between reported information and actual constructed conditions and/or actual energy performance. No warranty, expressed or implied, is made regarding the accuracy or completeness of the information presented.

Executive Summary

This report contains the results of the Thermal Energy Demand Intensity (TEDI) Assessment for the Wilmington Elementary School project, a new three-story building consisting of classrooms, administration offices, gymnasium, cafeteria/auditorium, and kitchen spaces. The project is in the Design Development phase of design and intends to meet the Massachusetts Stretch Energy Code effective July 1, 2025, by pursuing **Section C401.2.1(2) Targeted Performance Compliance Pathway**. This report evaluates the performance of the design with respect to Section C407.1.1 and assesses TEDI standards in the design process.

The Green Engineer (TGE) performed a building performance analysis in accordance with the MA Department of Energy Resources (DOER) recommended Simulation Guidelines that accompany Section C407.1, to document compliance with the Targeted Performance Pathway. The final TEDI assessment was conducted utilizing the 100% Schematic Design drawings and supplemental information from design team members. Based on this information, the project as currently designed **complies** with the MA State Stretch Energy Code Section C407.1 Targeted Performance Pathway.





1. Project Overview

The Wilmington Elementary School project includes the design and construction of a new three-story building on the site of the North Intermediate School in Wilmington, MA. The building has an approximate area of 165,000 Gross Square Feet (GSF), and includes classrooms, administration offices, gymnasium, cafeteria/auditorium, and kitchen spaces. The current project team includes Dore + Whittier as the project architects, SMMA consulting as the owners' project manager, Garcia Galuska & Desousa as the MEP/FP engineers, and The Green Engineer as sustainability consultants.

The results of the TEDI analysis detailed in this report indicate **that the Basis of Design evaluated for the team complies with the Stretch code TEDI requirements**.

Detailed results are provided in Section 2. A summary table of model inputs is provided in Appendix B.

The model inputs are based on the 100% Schematic Design drawings (with the exception of the building geometry and floor plan, from the 02/26/2026 Design Development pricing set), narratives, and supplemental information provided by the design team.

The analysis also assesses multiple design alternates to characterize the scale of their impact on annual heating & cooling loads.

The following design alternatives have also been assessed:

- **Alternative 1:** Decreased roof insulation (R-55 to R-40)
- **Alternative 2:** Removal of underslab insulation (vertical perimeter insulation only)
- **Alternative 3:** Decreased ERV effectiveness (75% heating, 70% cooling to 70% overall)
- **Alternative 4:** Reduced wall insulation (U-0.063 to U-0.07)

Please refer to Appendix B for model inputs.

2. Discussion of Results

The building performance analysis was conducted based on the 100% Schematic Design set demonstrating that the project meets the designated Heating and Cooling TEDI limits. Overall, the design team's commitment to energy efficiency has helped the BOD building meet the specified requirements in the Massachusetts Stretch Energy Code, Section C401.2.1(2).

- The model inputs for the Basis of Design (BOD) incorporated a derated U-value of 0.063 for the walls.
- The roof assembly comprises 9" rigid insulation, resulting in an assembly U-value of 0.018 (R-55)
- A window-to-wall ratio of 19% has been specified by the architects in tandem with an overall assembly U-value for the fenestration of 0.21.
- An infiltration rate of 0.175 cfm/sf at 75Pa has been assumed for the Basis of Design (BOD).
- For the Dedicated Outdoor Air Systems (DOAS), an energy recovery unit of 75% winter effectiveness was adopted for both sensible and latent heat exchange.

In summation, the aggregate of these inputs resulted in a **heating TEDI of 1.32** and a **cooling TEDI of 8.2**

Several other design alternatives have been assessed for the design team to consider. Each alternative explores how an individual component of the building impacts the TEDI results. It is important to note that the alternatives are **not cumulative** and that combining multiple strategies together will likely exhibit diminishing returns due to interactive effects. Therefore, load reduction strategies should be selected that yield sufficient margin to offset interactive effects.

Table 1. The various design specifications changed to measure their effect against the TEDI Values.

	BOD Specification	Reduced Roof Insulation (Alt 1)	Perimeter Insulation Only (Alt 2)	70% ERV	Reduced Wall Insulation	All Alts	Limits	
BOD Specification	N/A	U-0.0218	F-0.48	75%/70%	U-0.063	All		
Alternates	N/A	U-0.0125	F-0.36	70%	U-0.07			
Heating TEDI [kBtu/sf-yr]	1.32	1.44	1.48	1.69	1.41	2.14	***2.20***	
Cooling TEDI [kBtu/sf-yr]	8.20	7.98	7.93	7.71	8.03	7.18	***12.00***	

Figures 4 and 5 display how each design alternative impacts the project's heating and cooling TEDI values. Each graph is organized according to the alternative option.

Figure 4: Design Alternatives' Impact on the Heating TEDI

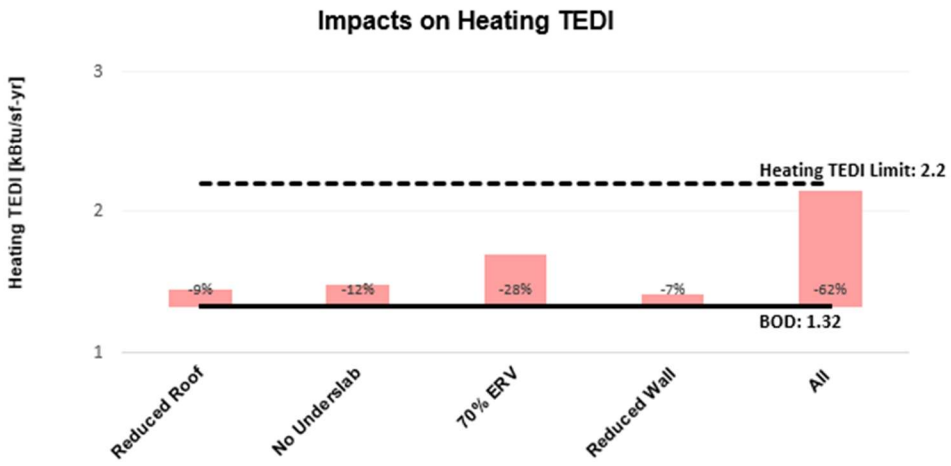
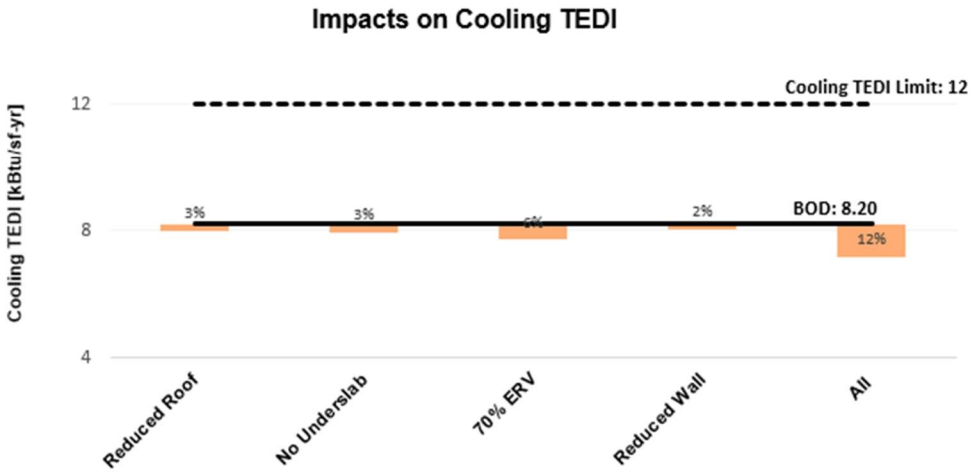


Figure 5: Design Alternatives' Impact on the Cooling TEDI



3. Recommendations

Key Performance Advantages:

- Improved building envelope, including foundation, walls, roof, and fenestration assemblies
- High-efficiency Energy Recovery Ventilators (ERV) to reduce heating and cooling loads
- Reduced air infiltration helps reduce excess heating and cooling losses
- Low window-to-wall ratio (WWR) helps reduce heating and cooling loads through fenestration

Further Recommendations:

- Provide mechanical code minimum ventilation rates and maintain design rates compared to TEDI requirements. Refer to Appendix A for more information.
- Maintain the targeted design strategies to ensure compliance and avoid value engineering of critical design components for TEDI compliance
- Include window assembly performance criteria into project specifications such as U-Value and SHGC.
- Include insulation thermal performance criteria into project specifications such as R-Value/Inch.
- Incorporate responsible parties into the air leakage verification effort and coordinate review of design envelope details, mockups, and construction phase testing protocols.

Appendix A: Analysis Methodology and Input Summary

This analysis follows the DOER Simulation Guidelines and the “default” thermal block and HVAC system options.

The energy analysis was conducted using DesignBuilder v2025. DesignBuilder uses the EnergyPlus simulation engine to estimate annual energy consumption by simulating a year of building operations based on a typical weather year and user inputs.

The geometry and the assessment of the building are based on the 02/26/2026 Design Development pricing set and supplemental information provided by the design team. The windows positions are simplified based on a percentage glazing in each zone and exposure.

The TEDI guidelines dictate most MEP system details, while the infiltration value, energy recovery effectiveness, and inputs for window and wall assemblies are derived from the design. This approach aims to enhance uniformity in compliance outcomes across various projects while emphasizing alignment with the building's energy requirements.

The TEDI guidelines also establish standardized ventilation requirements for the building. Ventilation rates are determined based on the OA CFM/ft² values specified in Tables 1-6 of the Schedules and Loads Guidelines Supplement, according to the building’s use type. If the actual design’s ventilation rate exceeds the minimum requirements of applicable codes and standards by more than 135% **and** surpasses the OA CFM/ft² values from Tables 1-6 for the building’s use type, then the design’s ventilation rates must be modeled. For additional details, refer to Table 3.

Based on this information, and the floor plan included in the 02/26/2026 Design Development pricing set, the DOER stipulated TEDI ventilation is 70,500 CFM. If design ventilation rates exceed this allowance, it may have a negative impact on TEDI compliance.

Table 3: Standardized Assumptions for School Buildings > 75,000-sf

Thermal Block Type	Ventilation Rate (CFM/ft²)
Cafeteria/kitchen	1.19*
Gymnasium	0.5
Auditorium	1.26
School	0.38

*Applies to cafeterias/kitchens less than or equal to 9,040 sf. For cafeterias/kitchens greater than 9,040 sf model use the following equations, where cafeteria,kitchen sf = the square footage of the cafeteria/kitchen area:
Ventilation Rate CFM/sf = [10,761 + ((cafeteria,kitchen sf - 9,040) * 0.45)]/(cafeteria,kitchen sf)

The energy analysis was conducted using DesignBuilder v2025, which serves as a graphical user interface for Energy Plus v2023, a simulation engine developed and supported continuously by the US Department of Energy. DesignBuilder estimates annual energy consumption by simulating a year of building operations based on a typical weather year and user-defined design specifications. This phase of analysis reflects design input provided by the project team in the form of design documents, specifications, conference call discussions, and email correspondence. The geometry of the building is based on the architectural floor plans, except that window configurations are simplified based on a percentage of glazing in each zone and exposure.

Appendix B: Energy Model Input Tables

Information marked in blue is based on design.

TEDI MODEL INPUTS		
Parameter Description	**TEDI Design**	**Design Alternate**
General Information		
Energy Modeling Software	DesignBuilder v2025, EnergyPlus simulation program	
Climate Zone	ASHRAE Climate Zone 5A	
TEDI Building Type	K-12 School >= 125,000-sf	
Gross Building Area (SF)		
Hours of Operation	Schedules according to DOER recommended TEDI Guidelines	
Building Envelope		
Roof Assembly U-value	U-Value: 0.0218 (R-55 c.i.) 9" polyisocyanurate over steel decking	**Alt-1:** U-Value: 0.025 Reduced roof insulation (R-40)
Above-Grade Wall Assembly U-value	Derated U-Value: 0.063	**Alt-4:** Derated U-value: 0.07
Ground floor slab (F-factor)	R-10 Fully insulated slab F-0.36	**Alt-2**: R-10 Perimeter only F-0.48
Fenestration Assembly U-value	Weighted Avg U-value: 0.22 SHGC: 0.237	
Window-to-Wall Ratio (%)	19%	
filtration (CFM/SF @75 Pa)	0.175	

Parameter Description	TEDI Design
Internal Loads	
Interior Lighting Power Calc Method	As per DOER recommended TEDI Guidelines
Interior Lighting Power Density (W/SF)	School: 0.63 Auditorium: 0.61 Gymnasium: 0.85 Cafeteria/Kitchen: 0.52
Daylight Dimming Controls	Included as per TEDI guidelines
Receptacle/Misc Loads (W/SF)	School: 0.89 Auditorium: 0.46 Gymnasium: 0.46 Cafeteria/Kitchen: 15.5
HVAC (Air-Side)	
HVAC Types	**System 2 FCU (4-pipe fan coil units with CHW and HW)** Cooling Type: Chilled water Heating Type: Hot-water electric boiler Fan control: Constant volume
T-Stat Setpoints (F)	Space temperature and humidity design setpoints: Summer: 75F DB, 55% RH maximum Winter: 70F DB Outdoor ambient design conditions: Summer: 87F DB; 71F WB Winter: 7F DB
Hours of Operation	Schedules according to DOER recommended TEDI Guidelines
HVAC Air-side Economizer Cycle	Not modeled as per TEDI guidelines
Design Airflow Rates	Supply airflow rates are auto-sized and based on a supply-air-to-room temperature set-point difference of 20°F, or the minimum outdoor airflow rate, whichever is greater.

Parameter Description	TEDI Design	Design Alternate
HVAC (Air-Side)		
Ventilation (CFM)	TEDI prescribed [1] School: 45,800 (0.38 CFM/SF) Auditorium: 13,500 (1.26 CFM/SF) Gymnasium: 5,300 (0.5 CFM/SF) Cafeteria/Kitchen: 8,300 (1.19 CFM/SF) Overall building ventilation: 72,900 (0.50 CFM/SF) **School space includes office/locker room areas for ventilation.*	
Fan Power (kW/CFM)	DOAS (School zones): 0.00063 Heating and cooling equipment (School FCU): 0.00024 Heating and cooling equipment (Single zones): 0.00050	
Exhaust Air Energy Recovery	Energy recovery effectiveness: 75% heating, 70% cooling	**Alt-3:** Energy recovery effectiveness: 70% heating, 70% cooling
Demand Control Ventilation	Demand control ventilation has not been modeled as per TEDI guidelines.	
HVAC (Water-Side)		
Chiller Efficiency	**COP: 6.6** Cooling coil capacities are auto-sized based on sizing runs and oversized by 15%	
CHW Loop Temperature	44F supply and 56F return temperature	
CHW Pump Power and Pump Flow	Primary pump: Secondary Pump: Constant flow Variable flow 9.0W/gpm 13.0W/gpm	
Heating Capacity and Efficiency	**100% efficient electric boilers** Heating coil capacities are auto-sized based on sizing runs and oversized by 25%	
HW Loop Temperature	180F supply and 130F return temperature	
HW Pump Power and Pump Flow	Primary pump: Variable flow 19.0W/gpm	

Note: 1: The total building-level ventilation as per the proposed design is around 70,500 CFM. Since the total building ventilation as prescribed by the TEDI standards is greater than the proposed design, the TEDI values will be used

- END OF REPORT -

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MASSACHUSETTS SCHOOL BUILDING AUTHORITY
DESIGNER EVALUATION NOTIFICATION FORM

Confirmation that the District has submitted all required Designer Evaluations to the Division of Capital Asset Management and Maintenance (DCAMM), using the DCAMM/DSB Autocene platform, pursuant to M.G.L. c. 7c, § 48(h)

Awarding Authority (District): *Town of Wilmington*

Project Name: *Wildwood Elementary School*

MSBA Project ID: *202003420015*

Designer Evaluation #1 - "Study" (at completion of schematic design)

10/31/2025 (Indicate the submission date of the Study Evaluation)

4.00 (Indicate the overall score for the Study Evaluation)

Signed by: Judith L. O'Connell 11/25/2025 ;and, Signed by: Craig DiCarlo 11/25/2025

District Signature **Date** **OPM Signature** **Date**

Designer Evaluation #2 - "Design" (at completion of 100% construction documents)

(Indicate the submission date of the Design Evaluation)

(Indicate the overall score for the Design Evaluation)

;and,

District Signature **Date** **OPM Signature** **Date**

Designer Evaluation #3 - "Construction" (at final GC/CM payment)

(Indicate the submission date of the Construction Evaluation)

(Indicate the overall score for the Construction Evaluation)

;and,

District Signature **Date** **OPM Signature** **Date**

The information submitted in this notification form represents, to the best of my knowledge, a true and accurate summary of the information submitted by the District to the DCAMM,using the DCAMM/DSB Autocene platform. Districts that need to update or correct any information submitted in this notification form shall contact the MSBA immediately. Districts are solely responsible for any false or misleading information submitted in this notification form.