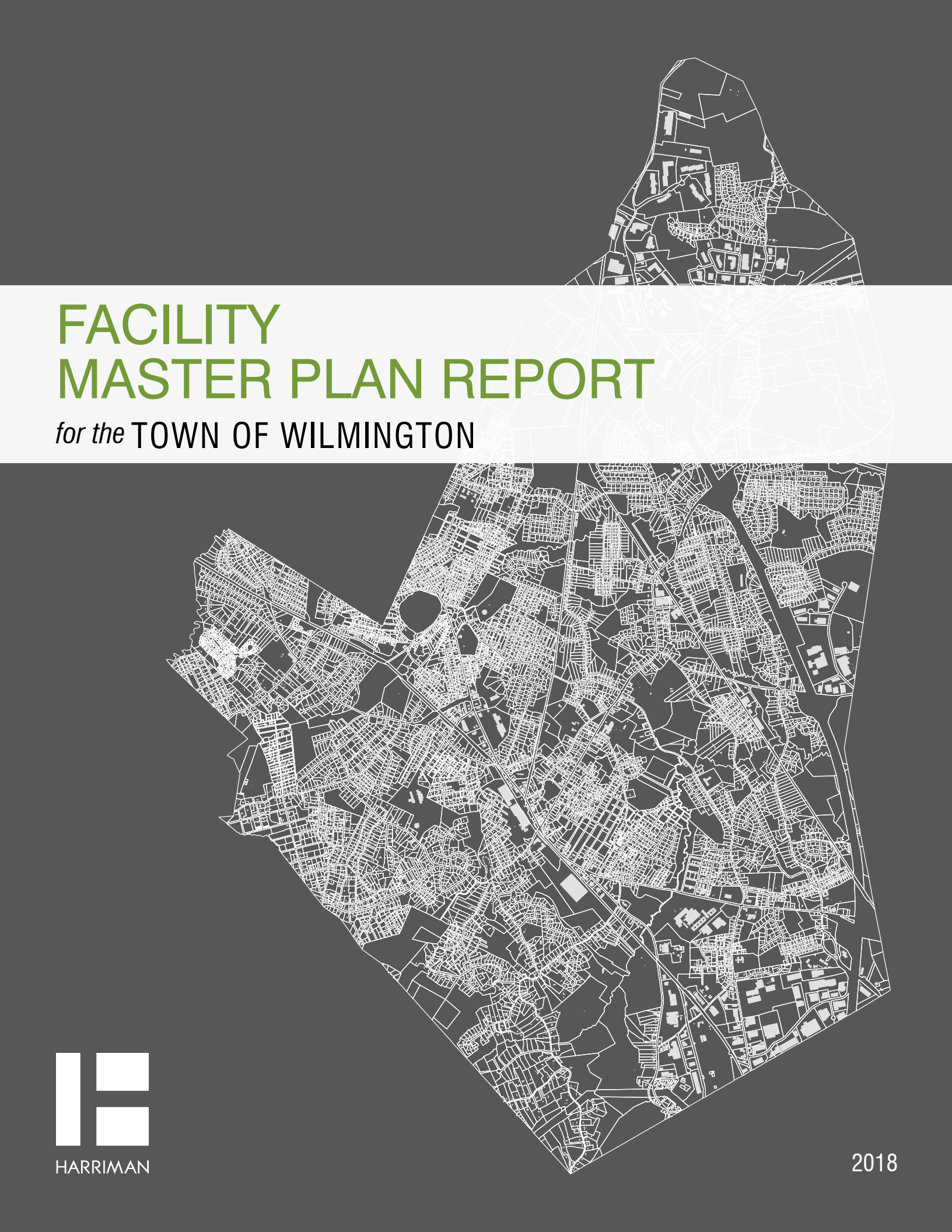




FACILITY MASTER PLAN REPORT

for the TOWN OF WILMINGTON



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EXECUTIVE SUMMARY

INTRODUCTION

This *Facility Master Plan* provides a strategy for the coordinated, efficient investment and maintenance of key Town buildings and sites that support municipal services and community needs in Wilmington. The *Master Plan* focuses on the future needs and allocation of uses for nearly thirty buildings and sites that were chosen for evaluation. It contains specific recommendations for future actions that the Town can take to provide cost-effective facilities and services. The recommendations describe a series of short-term, mid-term, and long-term investments that the Town can take to maintain and improve its stock of buildings and sites. This approach will help ensure that the Town's facilities are aligned with the uses they contain and can be operated efficiently.

The recommendations have been built upon professional analysis of the existing conditions of these facilities. They reflect the careful consideration of deficiencies and future needs for each of the facilities and services within the scope of the *Master Plan*. The planning process included extensive evaluation of alternative approaches to locations, improvements, and disposition of the buildings, sites and uses. The process engaged residents, elected officials, various Town Boards, and Town staff who contributed information, insights, and advice.

As a facility improvement strategy, this *Master Plan* can be used as a tool to advance individual projects in a logical sequence for detailed study and confirmation within an overall framework of budgeting and funding. Projects that move forward will progress through advanced design, approvals, funding, and implementation.

Each of the projects described in this document must be undertaken using established procedures that include required public reviews and participation in all the related municipal processes. These will include the Boards, Committees, and Town Meetings that all play various roles associated with capital improvement and facility decisions.

Purposes

The Wilmington Facility Master Plan was prepared to accomplish multiple purposes:

- Provide for long-term, coordinated budgeting and funding – This plan provides cost estimates and descriptions for a broad array of projects that will assist the Town in managing its capital improvement budgets, operating and maintenance budgets, grant applications, funding, and financing. By projecting future needs over an extended time period, the Town can more effectively anticipate and organize its decisions.
- Establish a strategy to support cost-effective operations and maintenance – The Town will benefit from cost-effective capital investments with a positive return by reducing energy costs, consolidating uses to reduce the number of facilities, and providing buildings and sites that efficiently match the space and operating needs of its various departments.
- Coordinate capital planning for schools and other municipal facilities – This Master Plan includes planning for school and other municipal facilities within a single, coordinated document so that future project funding, financing, phasing, and timing can be coordinated.

- Resolve facility locations – This *Master Plan* provides a thorough evaluation of the relative costs and benefits of potential relocation of several key facilities and use of existing municipal sites. This includes the School Administration, Memorial Library, Senior Center, and Town Hall, among other uses. The *Master Plan* includes specific recommendations for the long-term disposition of these facilities and key parcels.
- Identify critical issues and deficiencies through a comprehensive review – By reviewing many facilities simultaneously, this process identified key issues and deficiencies so that the Town can set priorities for resolving them in an orderly manner.
- Plan for future community needs and trends – Wilmington is subject to demographic changes and shifting demands for some of its services over time. By anticipating changing conditions, the Town can adapt its facilities in a timely, cost effective changes.
- Organize agenda for advancing projects – With this *Master Plan*, the Town’s leadership can better set annual agendas for assigning staff and aligning resources to advance projects.
- Assemble a facility information resource – The evaluations and documentation prepared for this *Master Plan* will provide an important reference resource regarding building and site conditions as future improvements and changes are undertaken.

Contents

The Facility Master Plan includes:

- Executive Summary – This section provides an overview of the scope, process, and recommendations within the Facility Master Plan. This section also includes the criteria that was used to shape the recommendations contained in this report.
- Facility Needs and Improvements – This section provides the specific description of future facility needs and recommendations on a facility-by-facility, site-by site basis. It also includes findings and observations on several related topics, including consideration of a potential future substation for the Fire Department/Public Safety use, and planning for future Senior Housing in Wilmington as it may relate to Town-owned land.
- Implementation – The final section provides information and recommendations regarding the implementation of this Facility Master Plan. It includes a compiled summary of estimated capital improvement costs, and describes overall strategies and approaches to phasing, funding, and other municipal actions.
- Appendices – The appendices contain documentation regarding alternative scenarios that were evaluated for the location of certain facilities relative to different sites, and the implications associated with adapting existing buildings or building new facilities. The appendices also include compilations of existing conditions analyses that were prepared in the initial phases of the planning process.

FACILITY MASTER PLAN SCOPE

The *Master Plan* has a time horizon of twenty years. It envisions improvements and corrections of existing deficiencies that extends the life of existing facilities to at least that horizon. It also identifies facilities within that period that will no longer be cost effective to operate or renovate relative to the long-term benefits associated with building new facilities.

The scope of this plan included evaluation and recommendations with the following specific facilities and their sites. For the purpose of categorization, “Municipal Facilities” consists of buildings that are not educational facilities, and includes the School Administration building and functions. “School Facilities” are the educational facilities that comprise the lower grade schools in Wilmington.

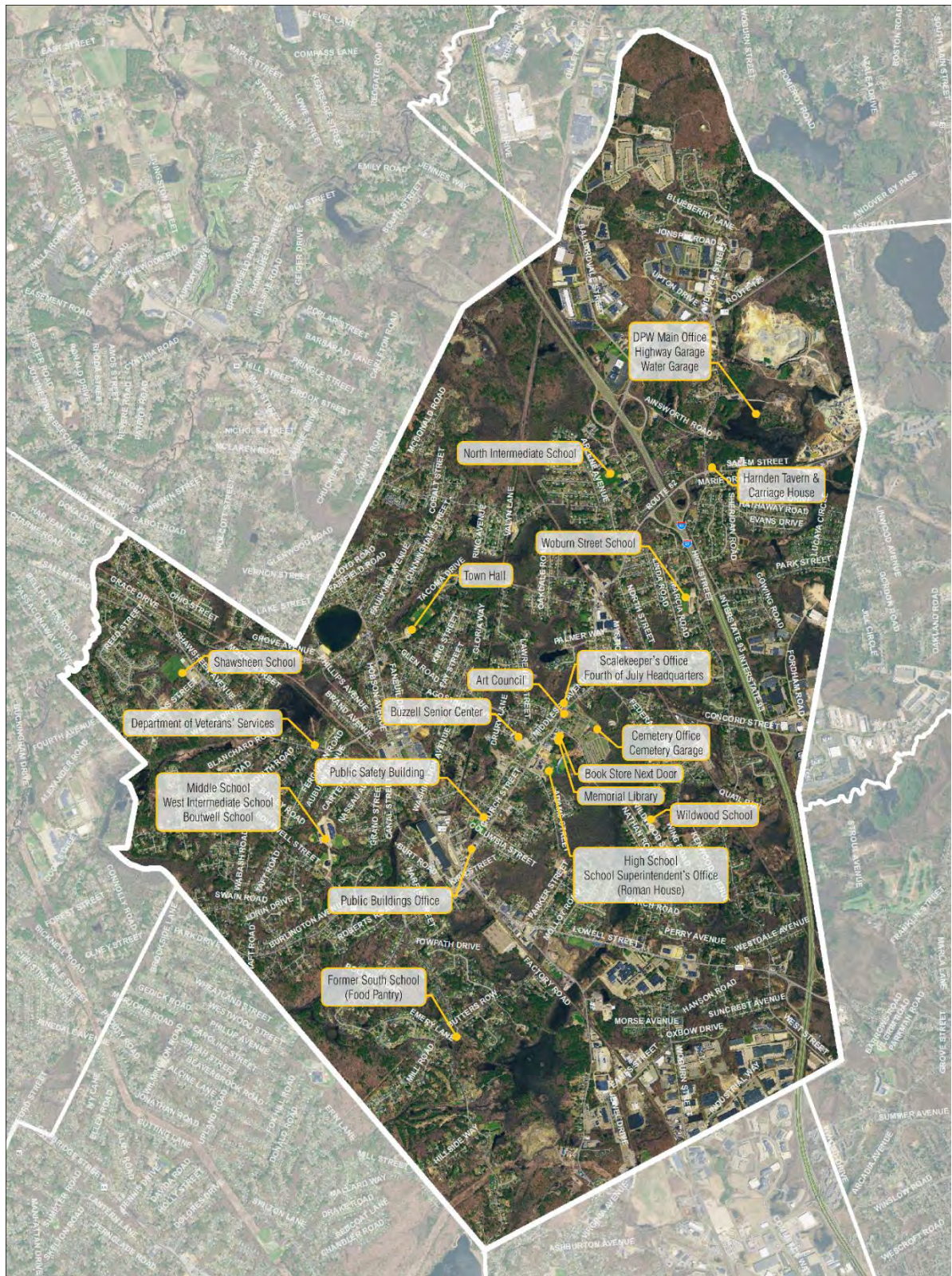
Municipal Facilities

1	Arts Council	219 Middlesex Avenue
2	Bath House	1 Grove Avenue
3	Book Store Next Door	183 Middlesex Avenue
4	Buzzell Senior Center	15 School Street
5	Cemetery Garage	60 Wildwood Street
6	Cemetery Office	233 Middlesex Avenue
7	Department of Public Works/ Highway Garage	135 Andover Street
8	Department of Public Works/ Water Division Garage	115 Andover Street
9	Department of Public Works/ Water Division Office	115 Andover Street
10	Department of Veteran’s Services (West School)	141 Shawsheen Avenue
11	Fourth of July Headquarters	150 Middlesex Avenue
12	Harnden Tavern Carriage House	430 Salem Street
13	Harnden Tavern Minuteman Headquarters	430 Salem Street
14	Harnden Tavern	430 Salem Street
15	Memorial Library	175 Middlesex Avenue
16	Moth House/Morse Barn	240 Middlesex Avenue
17	Public Buildings Office	30 Church Street
18	Public Safety Building	1 Adelaide Street
19	Scalekeeper’s Office	240 Middlesex Avenue
20	School Administration Building (Roman House)	161 Church Street
21	South School (Food Pantry)	142 Chestnut Street
22	Town Hall	121 Glen Road

School Facilities

23	Boutwell School	17 Boutwell Street
24	North Intermediate School	320 Salem Street
25	Shawsheen School	298 Shawsheen Avenue
26	West Intermediate School	22 Carter Lane
27	Wildwood School	182 Wildwood Street
28	Woburn Street School	227 Woburn Street

The following map indicates the location of the facilities that were the focus of this *Master Plan*.



Sites

Two municipally-owned sites were considered as potential sites for future Town facilities.

- Swain School Site – This site was formerly the Swain School and adjacent areas comprise a large parcel of land owned by the Town. Located at the intersection of School Street and Middlesex Avenue, this site currently contains a large lot used for High School related parking, the Buzzell Senior Center, and undeveloped, unimproved areas. The site is adequately large to be considered for a new facility without compromising the ability to maintain the High School’s parking or its use as part of the annual Fourth of July celebration.
- St. Dorothy’s Site – The Town acquired this site that consists of undeveloped land which was formerly part of a larger holding associated with the existing St. Dorothy’s Church. The site has an “L”-shaped configuration and has frontage on both Main Street and Glen Road. The site is adequately large to be a candidate for one or more of the facilities that are the subject of this *Master Plan*.

Senior Housing

As part of the Town Meeting authorization for this study, Town staff were directed to consider the potential for the use of Town-owned sites for senior housing that would fulfill an unmet need in the community.

The planning process considered the potential for the Town to convey land through long-term lease or sale to a private entity for the development and operation of senior housing. This was interpreted to include age-restricted housing, independent living facilities, or assisted living facilities. The planning process did not contemplate the Town developing, owning, or operating senior living facilities as a public service.

Facilities Outside of the Planning Scope

The Town owns other land and facilities that were not included within the scope of this *Master Plan*. These sites and facilities will be subject to other planning, operational, and maintenance considerations.

In general, the land and facilities associated with municipal parks and recreation uses were not included in the scope, because they are separately addressed within the scope of a separate planning document and process, the Wilmington Open Space, and Recreation Plan. The Bath House facilities at Silver Lake were included to provide an evaluation of potential deficiencies and capital improvements associated with that building.

This project also did not include facilities that provide or support Town utilities, other than the Water Division equipment that is housed in the former Water Division office building, which is now occupied by portions of the Department of Public Works.

The Town has other land holdings which were not considered in the process, because they were not considered to be reasonable candidates as sites for any of the Municipal or School Facilities that were the focus of the *Master Plan*.

PLANNING PROCESS

Participants

The *Master Plan* was guided by a special committee assembled for this purpose. It was prepared with the assistance of a multi-disciplinary planning team including planners, architects, engineers, and landscape architects. The process included a variety of opportunities for public input. It engaged directors of relevant Town departments and agencies. The process also included briefings and workshops with key boards and committees, including the Board of Selectmen and School Committee.

The Facility Master Plan Committee included a combination of Town staff and citizens, and consisted of the following members:

- George W. Hooper II, Chairman & Public Buildings Superintendent
- Diane M. Allan, Permanent Building Committee Member
- Valerie Gingrich, Director of Planning and Conservation
- John C. Holloway, Permanent Building Committee Member
- Jeffrey M. Hull, Town Manager
- Theresa M. Manganelli, Finance Committee Chairperson
- Paul J. Melaragni, Permanent Building Committee Member
- Joseph J. Parrella, Jr., Permanent Building Committee Member
- Paul Ruggiero, Interim School Superintendent

Town staff consisting of the Assistant Town Manager and the Town Planner coordinated the communications and interface with the consultant team for the preparation of this *Master Plan* which consisted of Harriman and DeSousa Consulting Engineers.

Harriman provided planning, architecture, landscape architecture and site civil engineering services. Harriman's services were managed and directed by its Planning Studio, which encompasses the practice of The Cecil Group, a subsidiary of Harriman. Cost estimating was accomplished by Harriman with assistance from Preferred Construction Management Company, Inc.

DeSousa Consulting Engineers provided assessments and recommendations for building systems (mechanical, electrical, plumbing and fire protection).

Planning Sequence

The planning was accomplished with sequential, progressive steps.

- Evaluation of Existing Conditions – The consultant team reviewed documents provided by the Town regarding existing facilities, and undertook facility visits to establish an overall understanding of the existing conditions. This included site and building visits by architects and engineers. The overall conditions of the facilities were noted and documented in a Facility Conditions Report, which noted prominent deficiencies or issues for consideration in the feasibility and cost of improvements. Relevant portions of the existing conditions evaluations have been included as an appendix to this report as a reference resource.

- Programming – This step created a list of functional space and facility needs for the uses that are the subject of this *Master Plan*. This was accomplished by evaluating the building space and site requirements for all existing functions, and projecting future space and site needs. This step included systematic interviews and surveys of participating departments and staff responsible for various functions, which contributed to the understanding of existing facility deficiencies and potential future changes. The methodology for projecting future needs varied by facility type, and included consideration of demographic data and comparisons with comparable communities. For the school component, the evaluation of future needs also included detailed space use calculations, school enrollment projections provided by the School Department, and benchmark comparisons to applicable Town and Commonwealth of Massachusetts standards.
- Planning Criteria – During this step, the Facility Master Plan Committee assembled a list of prioritized criteria to guide evaluation of alternative scenarios and provide the basis for assembling the recommendations in this report.
- Alternative Scenarios and Comparative Evaluations – At this stage in the process, the consultant team assembled a series of alternative scenarios for the potential locations and type of improvements that would fulfill the programmatic needs of the Town within the planning horizon. At the same time, the team prepared preliminary recommendations and initial cost evaluations for improvements that may be needed for those uses which are expected to remain at their current sites. A set of alternatives was prepared for Municipal Facilities, focusing on key functions that should be considered for relocation or reconstruction on their existing sites. Alternative School Scenarios focused on whether to retain the current number of lower grade schools, or how they might be consolidated into fewer schools.

The alternative evaluations for both the Municipal and School Facilities included “baseline scenarios.” The baseline scenarios projected the relative costs and benefits if the Town retains most of the existing uses in their existing buildings and sites. These scenarios considered the implications of repairs, renovations and in some cases substantial additions to accommodate projected needs. The other scenarios tested the implications of relocating and/or rebuilding some of the Town’s uses and facilities in cases where there are significant issues associated with their current site, capacity, and facility conditions. During this step, coordination meetings and public discussions were undertaken to gain input about the relative costs and benefits of the different alternatives. The evaluations included a comparative matrix of each alternative relative to weighted, prioritized decision criteria to assist in the discussions and deliberations.

A summary of the alternative scenarios is contained in the Appendices, including presentation material used as part of the public outreach process.

- Preferred Scenario – Based on the input and comparative evaluations, a preferred scenario of improvements and investments was established for documentation.
- Draft Facility Master Plan – The draft Facility Master Plan assembled all the relevant recommendations and rationale, and descriptions of future improvements and actions for all the facilities and sites. It includes an implementation strategy.
- Final Facility Master Plan – The final Facility Master Plan constitutes the findings and recommendations of the Facility Master Plan Committee for consideration by the Town and the Boards, Committees and Commissions that will be engaged in future facility decisions and capital improvements.

Outreach and Community Engagement

The planning process included a pro-active outreach and public information program, providing multiple opportunities for input. Components of the outreach and information program included:

- Website Information – The Town’s website was employed to post information about the process, provide notice of meetings and post progress reports and other documents during the planning process. Information posted on the website included: Draft Municipal Facilities Report, Facility Condition Report Executive Summary, Municipal Facility Evaluation, Scenario Display Boards, School Alternatives, School Facility Evaluations, and the agendas and minutes for all the Facility Master Plan Committee meetings.
- Facility Master Plan Committee Meetings – The Master Plan Committee meetings were posted and open to the public, and were used to solicit questions and comments from those attending. The meeting notes were posted on-line as part of the Town’s website.
- Community Survey – A survey was distributed to the citizens of the Town to understand their perspectives on Town services and the facilities that support them. The survey was conducted on-line and through written comments. A total of 461 responses were collected and the results were presented to the Facility Master Planning Committee and in a report made available to the public through the website. The Community Survey Report is included as an Appendix of this *Master Plan*.
- Workshop/Joint Board Meeting – The planning process involved a community workshop on the Facility Master Plan was held which included joint participation by the Board of Selectman and the School Committee at a mid-point in the process. This session included a briefing, followed by questions, discussion, and comments by the attendees. This session was broadcast through the local cable television outlet.
- School Committee Briefings – The Facility Master Plan and the topics related to the lower school facilities were included as agenda items at three meetings of the School Committee, which provided guidance regarding the alternatives to be considered, the evaluation of the alternative school scenarios, and preferences for the location and consolidation of the lower schools among the available sites and buildings.
- Facility Alternatives Displays – During the consideration of alternative scenarios for the location of key Municipal and school facilities, presentation boards were posted at the Library and Town Hall to provide information and solicit input. In addition, Town staff engaged several constituencies and interest groups in informal meetings to present the alternatives and solicit input. The input was assembled by Town staff and communicated to the Facility Master Plan Committee.
- Facility Alternatives Workshop/Joint Board Meeting – A workshop and joint meeting was held to review the alternatives and seek consensus and direction among the alternative scenarios for the location of key Municipal and school facilities. This meeting included public comment and input.

Planning Criteria

The evaluations of alternative choices and the subsequent recommendations within this report are based on planning criteria that articulate community goals and Municipal interests. The Facility Master Plan Committee utilized a weighting system to reflect the relative importance of each factor.

MUNICIPAL CRITERIA	WEIGHT	NOTES
Low Priority 1 High Priority 5		
COSTS AND BENEFITS		
Capital Cost	5	This is the relative value of the total project cost as currently estimated in categories as noted below
Operating Cost	5	These are relative operating costs that would be associated with the facility after completing improvements or new construction
Life Cycle Costs	2	This is the relative cost of the replacement or substantial upgrades over time. A facility with a short-expected life before replacement or upgrading will be relatively costlier than the same facility if its expected life cycle were longer.
Reuse Opportunity and Benefit	1	This factor refers to the prospective ability to convert the facility to different municipal or other uses.
FACILITY QUALITY		
Match between Use and Design	4	This factor considers whether the facility was effectively designed for the uses to which it is put.
Current Safety and Code Compliance	3	This factor considers whether the facility would meet current code and safety standards without additional upgrades.
Visitor/User Quality	5	This is a ranking of the match between a facility and the functions it provides for visitors or non-staff users.
Workplace Quality	1	This factor ranks a facility's characteristics as an appropriate and efficient workplace for municipal employees.
CIVIC CRITERIA		
Benefits Town Identity and Character	4	This factor provides a ranking of how a facility may be perceived as a visible part of the community quality and identity.
Location Convenience for Citizens	4	This is a location ranking relative to demographic concentrations and the Town roadway network.
ADAPTABILITY AND COMPATIBILITY		
Compatibility with Other Uses	3	This factor considers whether the facility as described in an alternative is likely to be perceived as an appropriate neighbor to existing uses.
Adaptable to Changing Use	3	This factor considers whether the facility would be adaptable to changes in the way its functions are fulfilled in the future to accommodate changing methods, technologies, or services.
Adaptable to Expansion	2	This factor considers whether future changes could be reasonably accommodated on-site through building or site changes.
Multiple Use in Facility	4	This factor favors facilities that accommodate multiple municipal uses because they are likely to be more efficient and more adaptable than single use facilities.
OTHER CRITERIA		
Proximity to Other Related Facilities	3	These criteria provide a ranking that favors facilities that are located close to related municipal facilities and functions, and would be more efficient than facilities where more travel time would be required.

EDUCATIONAL CRITERIA	WEIGHT	NOTES
Low Priority 1 High Priority 5		
COSTS AND BENEFITS		
Lowers Operations Costs	4	Improvements reduce operating costs relative to current conditions.
Reasonable Cost of Construction	4	Probable cost of construction would be considered reasonable relative to the size and quality of facilities provided because construction could be efficiently accomplished.
Improves Educational Space	5	The final space would be considered an improvement better meeting contemporary educational needs and practices.
Investment has Good Cost/Benefit	4	This factor ranks the probable cost effectiveness of improvements because of the amount and quality of improved educational facilities that would be created.
FACILITY QUALITY		
Existing Schools in Good Condition	5	Schools in good condition that do not require significant expenditures rank more highly than those in poor condition that need to be upgraded.
Reduces Student Transitions	3	Fewer transitions rank higher than alternatives with more transitions.
Brings Buildings Fully Up to Code	4	Alternatives where full code upgrades would be required because of the extent and character of the changes or new construction rank higher than scenarios with more limited upgrades.
Brings Mechanical and Electrical Systems Fully Up to Current Efficiency Codes	5	Alternatives where full building system efficiency upgrades would be required because of the extent and character of the changes or new construction rank higher than scenarios with more limited upgrades.
Aligns Student Capacity with Actual Student Population	5	Alternatives where there is a close match between the facilities provided and the projected distribution and number of students rank higher than options with surplus or deficits in projected space.
Reduces Busing Costs	2	Alternatives which match demographic distribution and efficient travel are highly rated.
Provides Good Geographic Distribution of Facilities	5	Alternatives that are more evenly distributed are ranked higher than those with less balance relative to the subareas of Town.
CIVIC CRITERIA		
Contribution to Community	0	This factor was not ranked but is provided for future consideration.
ADAPTABILITY AND COMPATIBILITY		
Potential for Future Expansion	3	Facilities that could be easily expanded rank higher than those where capacity changes cannot be easily accommodated in the future.
Potential for Reuse if School is Closed	2	Facilities that are more easily adapted to alternative uses rank higher.
Site Size is Adequate	5	Sites that can accommodate all parking and recreation needs are ranked more highly than constrained sites.
Site has Good Parking, Playfields, and Playgrounds	5	This factor ranks the potential quality of the site's uses.
Building and Site are Good Community Resources	4	This factor considers the potential of the facility to serve other community programs and activities.
OTHER CRITERIA		
Best Use of Building Limitations and Opportunities	4	This factor ranks the overall match between the proposed facility use and the underlying character of the building to serve educational uses and grade levels as listed in the alternative.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Findings

The recommendations in this *Facility Master Plan* have been based on analysis of many factors regarding the Town's facilities and future needs. The resulting findings have been documented as part of progress reports during the planning process, and which are either included directly or by reference in this report.

The following observations summarize key findings that have guided the overall approach to future facility improvements and investments.

DEMOGRAPHIC TRENDS

- Modest community growth –Town population growth is expected to be modest over the course of the next two decades, based on multiple demographic studies and projections. As a result, the overall demand for typical Town services can be expected to grow at a similar, modest pace. This will require some expansion need for some of the services and facilities over time.
- Disproportionate growth of the senior population – The senior population segment in Wilmington is expected to grow significantly and disproportionately relative to other segments of the population. It is reasonable to expect related growth in the demand programs and services associated with senior citizens and potentially veteran's services.
- No significant change in the school age population – For future enrollment levels for Town schools is not expected to significantly expand or contract in the future for any of the school levels, including the lower schools that are within the scope of this *Master Plan*. This is based on the projections employed by the Wilmington Public Schools which are generally consistent with other demographic projections.
- Development potential – There is some potential for redevelopment of low density parcels within Wilmington. The planning process noted the potential for redevelopment of large parcels in the northern segment of the community. If significant redevelopment occurs that shifts the projected population growth, the Town may experience associated impacts on Town services and facilities.

MUNICIPAL FACILITY CONDITIONS

- Reuse of buildings for other purposes – Many of Wilmington's municipal buildings were originally designed for purposes very different from their current use. As a result, the building layouts and their uses are subject to inefficiencies and deficiencies. Examples include the Town Hall (formerly an elementary school), the School Administration Building (formerly a Victorian-era residence), the Department of Veterans Affairs (formerly a school), and the Buzzell Senior Center. The Book Store Next Door is within a former residence which is unsuited to book stacks, storage, or its retail function. The Morse Barn serves as a storage shed, but was not designed for the purposes to which it is put.
- Varied building and site conditions – The overall condition of the buildings and the sites varies considerably. As would be expected, more recently constructed buildings, like the Public Safety Building, are in good condition. Aging buildings are more subject to deterioration, energy inefficiencies, and inconsistencies with current building code standards.
- Active Town maintenance and facility upgrades – The Town actively maintains and provides upgrades as an internal service that is funded, in part, through operations and maintenance

allocations. This internal service has been an effective method to adapt the existing building stock and sites to their current uses and enhance the cost effectiveness of operating the Town's many buildings and sites, reducing the need for capital expenditures.

- Aging building stock – In general, the Town's building stock is significantly aged relative to the typical useful life of similar municipal buildings. In many cases, the Town has acquired and is maintaining historic structures that are part of the community heritage and image. However, some buildings such as the Town Hall and Buzzell Senior Center are housed in buildings that are of limited historic value, but are significantly outdated.
- Adaptive reuse of historic structures – The adaptive reuse of historic structures for civic and municipal uses is a distinctive hallmark of Wilmington as a community, and provides a source of identity and character, but has resulted in deferred maintenance and deterioration is due to the limited maintenance and improvement allocations in some cases.
- Regulatory conditions and facility siting – Some of the Town's facilities and sites are significantly impacted by regulatory conditions including wetlands, flood plains, and wellhead protection zones. The buildings used by the Department of Public Works at the former Water Division offices and garage and main garage and office facilities are subject to significant regulatory and practical constraints due to the occasional flooding. The site of the DPW Garage also includes areas within the 100-year flood zone, and adjacent to wetlands. Portions of the Swain School site also appear to be low-lying and are likely to be regulated wetlands.
- Accessibility and Life Safety Systems – Many of the Town's facilities have not been fully upgraded to provide handicapped access and contemporary life safety systems.

MUNICIPAL FACILITY NEEDS

- Facilities requiring limited improvements – For several of the municipal functions evaluated in this process, the current sites and facilities reasonably match current uses and projected future needs. In these cases, minor modifications will allow adaptation to changing requirements that may arise. This is the case for the Public Buildings Office, the Public Safety Building, and the Bath House at Silver Lake.
- Town Hall functional requirements and future needs – The space requirements for the functions that are within the Town Hall exceed the available area within the existing building. The current facility has a shortage of meeting rooms, storage space, and an adequate facility for larger public meetings and civic events. A modest increase in building area can also be expected as the Town population grows over time, as well. Although the current functions have been fitted into a former school, the efficiency of the spaces and circulation is reduced because of the round geometry of the building. It would be desirable to add two other uses to the Town Hall program in the interest of efficiency. These include the School Administration functions (non-educational space) and the Department of Veterans Affairs, which are both currently housed in buildings that are inadequate for those purposes, as noted below.
- School administration space and facility needs – The current administrative functions are scattered among several locations, including the Roman House and school buildings. A consolidation of these functions is highly desirable, and the Roman House can accommodate approximately one-third of the administrative functions that would benefit from efficient office space.

- Department of Veterans Affairs– The Department of Veterans Affairs is housed in a small building that does not have the private office space and small meeting area that would be appropriate for this use.
- Library facility deficiencies and changing use patterns – The current facility does not provide adequate space for the library functions that are associated with contemporary community libraries, and is significantly less than libraries provided in comparable communities in the region. Additional space is needed for seating and reading areas, meeting spaces, staff, and for the variety of media and computer facilities associated with contemporary facilities and community life. The retail function of the Book Store Next Door is a distinctive dimension of the library use in Wilmington, and would benefit from being part of the library facility.
- Senior Center expansion needs – The floor area of the existing facility is below that provided for senior-oriented programs in comparable communities. The need to provide additional space and functionality will expand in pace with the significant increase in the senior population in Wilmington, as well.
- Department of Public Works deficiencies and issues – The DPW has unmet needs for additional vehicle service bays, staff and office space that cannot be accommodated within the existing buildings. The DPW also has a need for covered vehicle parking and storage areas.
- Buildings used for civic purposes – The buildings used for civic purposes are generally aligned with the amount of programmed space requirements associated with the current activities. This could change if there are substantial shifts in the type of activity offered by the non-profit and volunteer entities which manage and use them. No significant changes are currently contemplated. However, the extent of these building uses and future needs are not controlled by the Town.
- Facilities and locations for fire and emergency medical response – Concerns have been raised about the adequacy of the existing Town facilities to provide timely responses to fire and emergency medical calls within Wilmington. The fire and emergency medical response services operate from a single, central location (the Public Services Building). Relatively remote sections of the community require longer driving distances, and concerns were raised that the northern portions of Wilmington may be underserved. If this is the case, then a substation in that area of Town could improve service response times. The consultant team reviewed the available data on response times relative to recommended standards and the target response times used by other communities. Conclusive findings cannot be drawn from the currently available data, but the review did not reveal a clear pattern of excessive response times. However, there is potential need to maintain appropriate response times in the future through a substation or other measures. These conditions should be evaluated through improved data and analysis, and consider projected traffic patterns and new development that may occur in the northern areas of Wilmington.

SCHOOL FACILITY CONDITIONS

- Current school facilities at or near enrollment capacity – Based on class size and enrollment levels within the lower schools (grades Pre-K to grade 5), all six of the schools are effectively at their capacity. As a result, there is no excess space to allow consolidation of the existing school population into fewer buildings. This circumstance also limits flexibility in the allocation of students when schools are renovated or expanded in the future.
- Aging lower school facilities and contemporary space standards - The Town's lower school facilities are aging and do not meet contemporary educational standards for the amount and types of spaces. The age of the building stock varies, but all of the buildings were constructed to meet past practices

and standards rather than meeting current goals and standards. The gap between the existing facilities and desirable space and facilities varies from school to school.

- Functional maintenance and improvements to date - The Town has maintained the buildings and made improvements to support their current functions and provide a good educational environment. However, as the buildings age, they require costly upgrades and repairs and are relatively expensive to operate relative to buildings that are new or are renovated and have current energy and building systems.
- Varying building conditions – Of the stock of lower school buildings, the Wildwood and Boutwell would be most costly to bring up to current standards and operate efficiently because of their size, design, age, and condition.
- Costs of operating and maintaining six small schools – The Town currently operates six different schools. They accommodate different segments of the lower school enrollment. This includes two schools for the Pre-K and Kindergarten levels (Boutwell and Wildwood Early Childhood Centers), two schools for grades 1-3 (Shawsheen and Woburn Elementary Schools), and two schools for grades 4-5 (North and West Intermediate Schools). Operating so many relatively small schools is not as cost effective as operating larger schools. Larger schools would also be advantageous from both educational and space efficiency perspectives.

SCHOOL FACILITY NEEDS

- Enrollment projections – The current enrollment within the lower schools in Wilmington is not projected to significantly change within the planning horizon. Some fluctuation in the distribution among grade levels is likely to occur. Because the schools are at capacity and because of the distribution of grades among relatively small schools, the system cannot easily adapt to short-term shifts in grade level enrolment. The School Department needs increased flexibility in shifting classrooms and other facilities among grade levels.
- Reduced transitions associated with multiple, small schools – Because of the segmentation of the lower grade students among many small schools, children in the Wilmington system attend three different schools as they progress from pre-K through grade 5. There are educational benefits associated with fewer transitions.
- The size of elementary-level schools considered to be efficient and optimal – For elementary education, schools with student populations of between 400 and 600 are typically considered optimal in terms of effective use of space, allocation of common facilities, faculty size, operating costs, administration, and other factors. Four of the schools have populations below 300 students, and the Pre-K and K schools each have less than 200 students.
- Facilities and contemporary educational space standards – Contemporary space standards are used as a requirement for state funding of school improvements. To meet the related educational goals, the lower schools have a need for more and larger classrooms, expanded library and recreational spaces, lunchroom and other facilities.
- Geographic distribution – The geographic distribution should limit the amount of busing that is required and to provide convenience for both parents and students. Busing is required when threshold distances are exceeded between residences and schools, resulting in significant costs to the Town.

COMMUNITY CHARACTER

- Use of historic buildings for special programs and civic organizations – The Town provides facilities that house programs and organizations that are important and beneficial dimension of the character and identity of the entire community. The civic organizations use a variety of municipal buildings and employ their sites for activities, access and parking. These organizations and programs include the Fourth of July committee and the Fourth of July celebration, the historic museum, the Town's Minuteman organization, the non-profit book store, the Arts Council, and the Food Pantry. The future space needs associated with these uses is directly dependent upon the organizational goals and stewardship of the sponsoring groups.
- Geographic distribution of municipal and civic facilities – Relative to other communities, the Town's municipal facilities are widely distributed within the Town. There are potential benefits to grouping some of the facilities in closer proximity to other complementary uses.

Overall Recommendations

MUNICIPAL FACILITIES

The Town will benefit from the consolidation of several key functions in new and renovated structures that will solve existing deficiencies and provide many long-term benefits. This should include combining the Town Hall and School Administration functions within one building, which should also contain the Office of Veterans Affairs. The consolidation process should also assemble all of the Department of Public Works offices, storage facilities, and operations on one site. This will entail moving those offices and storage functions currently housed in the former Water Division buildings. They should be moved and combined with existing and expanded facilities on the existing DPW garage site. Key aspects of this consolidation include:

- New Town Hall and School Administration Building at the Swain School Site – The Town should invest in a composite Town Hall and School Administration Building that will consolidate compatible and related uses within a single structure. The Swain site location has a distinctive advantage of its proximity to the High School for the School Administration staff and functions. This consolidation will have space and operational efficiencies associated with shared use of meeting space, common space, and circulation, and building systems. As a new energy-efficient structure, operational costs will also be reduced. The Swain School site is adequately large to accommodate the new facility and its parking, while retaining the existing high school parking. There are several options for locating the new building within this large site.
- Consolidated and Improved DPW facilities – The Town should solve the problem associated with occasional significant flooding of the buildings and site of the former Water Division by moving the DPW functions over to the DPW garage site. The office functions would be housed in a replacement for the existing office and staff space in the DPW Garage, which is outdated and insufficient. The site improvements should include a new, larger storage shed that replaces the small existing shed. Additional service bays should be added to the DPW garage, and site improvements undertaken to improve outdoor storage and operating conditions. Because the existing site is constrained by regulated wetlands, flood plain conditions, and steep slopes, there will be a limit to the capacity of the site over the long term, and the Town should identify opportunities to provide adequate site areas for storage and operations that may exceed the site capacity.
- New Senior Center at the existing Town Hall site – A new, expanded senior center can best be provided at the site of the existing Town Hall. This site has several benefits, including the proximity to outdoor spaces and adjacency to the recreational facilities that will activate the area. The Town Hall site is adequately large to accommodate the Senior Center either prior to its relocation to the Swain School site, or after its relocation and demolition of the former school/Town Hall building.
- Memorial Library expansion – The Memorial Library should be renovated and expanded through a phased construction process. The expansion should extend into the site currently occupied by the Book Store Next Door. The expansion would absorb the book selling functions, and provide contemporary, accessible facilities. The site should be improved in concert with the addition to provide more parking than exists today.

Many of the buildings can be improved overtime to overcome deficiencies and provide for future needs. The Public Safety Building and its site will need incremental changes and modification to adapt to changing requirements associated with the services it supports. The Public Buildings Office and its site should be modified to provide appropriate space utilization. The Bath House at Silver Lake should be upgraded for handicapped access and be kept in good condition. The Cemetery Office and Garage should be maintained

in good operating conditions through relatively minor repairs and upgrades. The Moth House/Morse Barn should be restored where deterioration is occurring, so that it can continue in its use and remain as an historic asset. The Fourth of July Headquarters building should have accessibility upgrades and other minor enhancements to keep it in good operating condition.

The Town should continue to provide repairs and maintenance-level improvements to those facilities used by non-profit civic functions with the participation and contribution of resources in partnership with the entities that are using them.

SCHOOL FACILITIES

The Town should consolidate its lower schools into four schools. The schools should be organized as a pair of schools for the Pre-K through grade 2 levels, and a pair of schools serving grades 3 through 5.

This should be accomplished through a program of additions and upgrades to four schools that maintain a geographic balance and utilize buildings that are most adaptable to expanded enrollments and cost-effective construction. The improvements and reallocation of uses would be distributed as follows:

- Shawsheen and Woburn Elementary Schools – These schools would be expanded and upgraded to house Pre-Kindergarten through grade 2. The expansions and upgrades would entail building additions, the upgrade of all spaces to meet contemporary Massachusetts educational standards and building codes, and site improvements.
- North and West Intermediate Schools – These schools would be expanded to absorb grade 3, and continue to provide the facilities for grade 4 and 5. The expansions and upgrades would each entail building additions, the upgrade of all spaces to meet contemporary Massachusetts educational standards and building codes, and site improvements.
- Boutwell and Wildwood Early Childhood Centers - The result of this consolidation strategy will be the closing of the two existing Early Childhood Centers. The buildings and sites will be available for alternate use or disposition as may best meet community needs and interests.

EMERGENCY RESPONSE/PUBLIC SAFETY SUBSTATION

It is likely that a threshold will be reached in the future where additional measures will be needed to maintain acceptable response times for fire and emergency medical apparatus. Conditions for access to remote portions of Town, including its northern areas, are likely to worsen in conjunction with growth in the community and increase traffic. In particular, there is a potential for substantial new development on properties in the northern portions of Wilmington which would trigger a need for mitigating services, such as a fire/emergency vehicle substation. The Town can also consider the potential for increased community cooperation or joint facilities with neighboring communities to enhance available services.

SENIOR HOUSING

The St. Dorothy's site is a reasonable candidate for the location of senior housing facilities and has adequate frontage and potential access from both Main Street and Glen Road. This site does not appear to be a relatively advantageous location for any of the Municipal facilities evaluated within the scope of this *Master Plan*. The site is adequately large to absorb moderately scaled senior housing or assisted living facilities.

Summary of Recommendations by Facility

1. ARTS COUNCIL

- Description – The Arts Council building is a former Baptist Meeting House and Old Town Hall. It is an historic structure dating from 1860. The facility is used as a gallery, arts program space, offices, and houses Town storage in the basement.
- Programmatic Requirements – The current building and site are appropriately sized for its functions, unless there are substantial future changes in the programs offered here that are not currently anticipated.
- Actions – Improvement recommendations include updating the electrical system and electrical life safety systems and conforming with accessibility guidelines standards. The building will require ongoing maintenance and normal repairs.

2. BATH HOUSE

- Description – The Bath House is a swimming beach support facility located at the edge of the Silver Lake parking lot. It provides seasonal changing facilities, showers, restrooms, and space for the First Aid program.
- Programmatic Requirements – Currently there is no need to expand or change the uses and the overall facility organization unless services offered were to change in the future.
- Actions – To address deficiencies, plumbing and electrical fixtures will need upgrades or replacement and the exterior access path should be made accessible.

3. BOOK STORE NEXT DOOR

- Description – The facility is a repurposed residential building that was converted into a bookstore which supports and provides funding to the Wilmington Memorial Library.
- Programmatic Requirements – The current facility provides a desirable civic function, and no programmatic changes are anticipated.
- Actions – The Bookstore Next Door building should be demolished, and the site repurposed for the Wilmington Memorial Library expansion. The program functions should be absorbed into the future expansion.

4. BUZZELL SENIOR CENTER

- Description – The Buzzell Senior Center is located within a former school building of about 8,300 gross square feet. The senior center offers daily classes and provides a variety of activities to citizens of Wilmington with a focus on residents that are 60 years of age or older.
- Programmatic Requirements – Currently the facility use is limited in terms of the space, the facility offers many programs that it is especially difficult to accommodate large events or gatherings. Parking is also limited during special functions. Projected needs consist of a 14,000-gross square foot facility and approximately 84 parking spaces.

- Actions– To keep up with the increasing senior population of Wilmington, a new senior center and associated parking should be located at the existing Town Hall site to meet the projected future needs. Because of the scale and character of the Town Hall site, the landscape should be improved to provide exterior program functions, such as garden spaces or outdoor activity areas.

5. CEMETERY GARAGE

- Description – This is a facility that provides garage space for cemetery operations. The facility houses cemetery vehicles, maintenance areas and storage for the Wildwood Cemetery.
- Programmatic Requirements – The facilities program is fully utilized for maintenance operations; no significant reconfiguration appears to be needed for either the building or site in the future.
- Actions– Ongoing maintenance and minor enhancements will be required over time. It is recommended that enhanced vegetative screening be placed around the building where practical.

6. CEMETERY OFFICE

- Description – The Department of Public Works uses the cemetery office building for administrative functions and storage.
- Programmatic Requirements – It is assumed that the building will remain in its current use, and that no significant changes or expansion are required.
- Actions– The capital improvements should be focused on repairing deferred maintenance and extending the life of the building.

7. DEPARTMENT OF PUBLIC WORKS/ HIGHWAY GARAGE

- Description – The Department of Public Works Highway Garage facility provides space for vehicle storage and maintenance, a fueling station, and storage of materials and supporting equipment. The building provides offices and staff space, storage, and a sign production shop.
- Programmatic Requirements – The current facilities are fully utilized. Programmatic improvements are needed to properly serve existing functions, accommodate staff growth and the absorption of the adjacent Department of Public Works Water Division office and garage. The additional needs include replacement of the current office wing and new vehicle bays (approximately 6,800 gross square feet), covered parking and vehicle storage, and a new storage shed (approximately 2,500 gross square feet).
- Actions– The facility will require significant upgrades to address issues associated with its site, infrastructure, finishes, and accessibility to create improved facilities within a constrained site.

8. DEPARTMENT OF PUBLIC WORKS/ WATER DIVISION GARAGE

- Description – This structure consists of garage spaces for the water division of Department of Public Works, and includes space for storage and administrative functions.
- Programmatic Requirements – No significant changes or expansion of activities has been projected for this facility.

- Actions– Under the chosen scenario, the facility would be demolished, and the program functions would be absorbed into the expanded Department of Public Works Highway Garage.

9. DEPARTMENT OF PUBLIC WORKS/ WATER DIVISION OFFICE

- Description – This building is used for the Department of Public Works offices and shares a site with the Water Department Garage.
- Programmatic Requirements – Currently the facility does not have enough space to accommodate its staff or the needed administrative functions.
- Actions– Staff and program functions will be relocated into the renovated Department of Public Works Highway Garage office space. The building would be retained, flood-proofed to the extent practical, and continue to house water pump equipment.

10. DEPARTMENT OF VETERAN’S SERVICES (WEST SCHOOL)

- Description – The West Street School dates to 1790 and is a listed structure on the National Register of Historic Places. The building has been repurposed to serve as the office of the Town’s Veteran’s Affairs Services.
- Programmatic Requirements – The Department of Veteran Services (DVA) offers counseling, administrative and crisis assistance. The facility lacks essential private areas for counseling and administrative space. The Town is expected to have a growing senior population, and this may include an increasing number of veterans seeking support services.
- Actions– The building is deficient in the condition of its foundations, insulation, roofing and handicapped access. After relocation of the existing use to the future Town Hall/School Administration building, the building can be retained and offered for alternative use.

11. FOURTH OF JULY HEADQUARTERS

- Description – The facility is used as Town storage and is also actively used for meetings, preparations, and operations associated with the Town’s 4th of July celebration.
- Programmatic Requirements – No significant changes or expansion of activities has been projected for this facility.
- Actions– Current building deficiencies would require some capital improvements. However, If the Town were to expand the use of the building for more frequent or full-time occupancy, then alterations in the building layout and mechanical systems might be required.

12. HARNDEN TAVERN CARRIAGE HOUSE

- Description – This historic building is used as a display gallery and archive by the Wilmington Historic Commission as the Town Museum.
- Programmatic Requirements – The programmatic requirements for the building are not expected to change, based on the reviews and discussions undertaken as part of this study.

- Actions– This building requires repairs to replace rotting and deteriorating wood trim and exterior conditions. Additional improvements could be undertaken if grants or other resources are identified.

13. HARNDEN TAVERN MINUTEMAN HEADQUARTERS

- Description – This small structure is part of the cluster of buildings associated with the Harnden Tavern. It is used as the meeting place for the Wilmington Minutemen.
- Programmatic Requirements – The building is used by the Wilmington Minuteman organization. There are no planned changes in its use.
- Actions – Minor improvements can be achieved through the Town’s maintenance and operating budget administered by the Public Building Department, or by other means.

14. HARNDEN TAVERN

- Description – The Harnden Tavern was built in about 1770, it is on the National Register of Historic Places. This colonial-era tavern serves as the Town Museum. A number of visitors come to tour, attend lectures and events at the Tavern.
- Programmatic Requirements – The floor plans and interior spaces have been adapted to existing uses, but is not adequately serving existing or potential programmatic functions. A space study will be required to better allocate and equip the interior spaces to better match their current use.
- Actions – Improvements are needed to better meet life safety requirements, some building systems should be upgraded, and repairs should be undertaken on the interior and exterior. Enhanced parking with paving surfaces consistent with the historic character of the site should be provided to limit deterioration of lawn and plantings.

15. MEMORIAL LIBRARY

- Description – This building houses the Town’s library within a two-story building
- Programmatic Requirements – Wilmington Memorial Library needs to be significantly expanded and reorganized to support its current programmatic needs and the parking for the library is currently insufficient.
- Actions– The Library will receive an expansion to meet current and projected needs. Because the addition would likely require the use of the site occupied by the Bookstore Next Door, it has been assumed that this function would be absorbed within the library. Reconfiguration of the parking within the adjacent Town-owned parking lot would provide some overflow supply.

16. MOTH HOUSE/MORSE BARN

- Description – This is an historic outbuilding that has been converted into general storage use.
- Programmatic Requirements – The facility is unoccupied and used only for storage. If the facility were to be for used another purpose in the future other than storage, code compliance may come into play.

- Actions– To extend the life of this structure and preserve its historic character, exterior damage and deferred maintenance should be corrected with repairs to the exterior siding, trim, and structural components subject to deterioration.

17. PUBLIC BUILDINGS OFFICE

- Description – The Public Buildings Office is a repurposed fire station. This building houses Information Technology and the associated garage bays serve the Town’s Public Building Department and provides office space, maintenance support facilities, and storage.
- Programmatic Requirements – The functions that occur within this structure and site appear to be generally consistent with the overall size of the buildings, parking and site circulation. However, there are needs for additional site storage of vehicles and equipment, and some re-organization of the building interior.
- Actions– The building has some deferred maintenance that should be corrected. In addition, some interior improvements such as re-organized partitioning would provide a more effective working environment.

18. PUBLIC SAFETY BUILDING

- Description – The Public Safety Building currently houses the police, fire, animal control, as well as first response communication.
- Programmatic Requirements – The overall building and site sizes appear to be adequate to provide for police and fire functions but will require the re-organization of interior spaces and provision of additional technology to better accommodate existing and future needs.
- Actions– Vegetative screening and street access should be addressed with site improvements. Building systems should be improved and repairs should be undertaken on the exterior. Interior improvements will be needed to adapt to contemporary public safety practices and standards.

19. SCALEKEEPER’S OFFICE

- Description – This building is a small historic structure that is part of Wilmington’s visible heritage.
- Programmatic Requirements –The building is being used for storage. The program use is not expected to change. However, if it were to be for another purpose in the future other than storage, its code compliance might come into play.
- Actions– The electric power connection from the Moth House/Horse Barn to the Scalekeepers office should be replaced to meet current code standards, and the building maintained in its current condition.

20. SCHOOL ADMINISTRATION BUILDING (ROMAN HOUSE)

- Description – This former residence is an historic structure that has been adaptively reused as offices for portions of the School Department Administration.

- Programmatic Requirements – The existing space is not large enough to accommodate the full extent of the School Administration staff and functions, which require a building area approximately three times the size of this structure.
- Actions– The School Administration staff and functions should be relocated into the new Town Hall/School Administration facility to provide adequate and efficient space. The Roman House will become available for alternative use or disposition.

21. SOUTH SCHOOL (FOOD PANTRY)

- Description – This is a small, historic former school building that has been retained by the Town and is adaptively reused by a non-profit food pantry operation providing public services.
- Programmatic Requirements – The facility appears to be generally suited to its current functions, and there are no current anticipated significant changes in the type or extent of the programs offered here.
- Actions– The Town should provide accessibility and system upgrades to extend the life of the building and to reasonably accommodate the existing uses into the future.

22. TOWN HALL

- Description – The Town Hall is located on a former school site, in a circular shaped building originally designed as an elementary school.
- Programmatic Requirements – The Town Hall is not sufficient in size to accommodate current needs of the 11 departments it houses, based on an evaluation of space use for the constituent departments and anticipated needs.
- Actions– To address programmatic deficiencies the Town has chosen to have the Town Hall departments be combined with the School Administration functions and Veteran Services to create a composite municipal building sited in the same approximate location as the former Swain School, facing the Town Common.

23. BOUTWELL SCHOOL

- Description – The Boutwell School is a round building of the same design and vintage of the current Town Hall building. It shares a campus with the Middle School and the West Intermediate School.
- Programmatic Requirements – This facility has a student enrollment of about 160 pre-K and Kindergarten students, which is not expected to change significantly in the future.
- Actions– The enrollment capacity would be added to an expanded elementary school level facility, and the school and site would be repurposed.

24. NORTH INTERMEDIATE SCHOOL

- Description – This school is in fair to good condition, and has a capacity of about 290 students for grades 4 through 5 that it accommodates.

- Programmatic Requirements – This building would be expanded and re-organized to support the addition of grade 3 students as part of the school consolidation process.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

25. SHAWSHEEN SCHOOL

- Description – This school is in the best condition of the six schools, and has a capacity of approximately 390 students for grades 1 through 3 that it accommodates.
- Programmatic Requirements – The facility would require expansion adequate to absorb Pre-K and Kindergarten levels; the 3rd grade students would be relocated to an intermediate school.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

26. WEST INTERMEDIATE SCHOOL

- Description – This school is in fair to good condition, and has a capacity of about 210 students for grades 4 through 5 that it accommodates.
- Programmatic Requirements – This building would be expanded and re-organized to support the addition of grade 3 students as part of the school consolidation process.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

27. WILDWOOD SCHOOL

- Description – The Wildwood School is the oldest of the six lower school facilities, and is in relatively poor condition.
- Programmatic Requirements – This facility has a student enrollment of about 190 pre-K and Kindergarten students, which is not expected to change significantly in the future.
- Actions – The enrollment capacity would be added to an expanded elementary school level facility, and the school and site would be repurposed.

28. WOBURN STREET SCHOOL

- Description – This school is in fair condition, and has a capacity of approximately 470 students for grades 1 through 3 that it accommodates.
- Programmatic Requirements – The facility would require expansion adequate to absorb Pre-K and Kindergarten levels; the 3rd grade students would be relocated to an intermediate school.
- Actions – A project should be undertaken to expand the building and provide improvements that meet current state space and educational standards.

IMPLEMENTATION SUMMARY

Estimated Capital Improvement Costs

For the purposes of capital budgeting, preliminary costs were prepared for the facilities and improvements or changes described in the recommendations. These costs do not include upgrades, correction of deferred maintenance, repairs and ongoing maintenance for these facilities that can be accomplished with the annual appropriations and provided through the Town's own resources and services.

The costs for recommended demolition of existing facilities has also been included in this overall estimate.

Overall Cost Estimates	
Municipal Facility Name	Estimated Project Cost
Art Council	\$290,000
Bath House	\$104,000
Book Store Next Door	\$19,000
Buzzell Senior Center	\$6,707,000
Cemetery Garage	\$88,000
Cemetery Office	\$0
Department of Public Works Highway Garage	\$7,170,000
Department of Public Works Water Division Garage	\$46,000
Department of Public Works Water Division Office	\$0
Department of Veteran Services	\$20,000
Fourth of July Headquarters	\$64,000
Harnden Tavern Carriage House	\$110,000
Harnden Tavern Minuteman Headquarters	\$0
Harnden Tavern	\$747,000
Memorial Library	\$7,841,000
Moth House/Morse Barn	\$103,000
Public Buildings Offices	\$644,000
Public Safety Buildings	\$2,048,000
Scalekeeper' s Office	\$0
School Administration	\$0
Former South School (Food Pantry)	\$297,000
Town Hall	\$19,316,000
Subtotal Municipal Facilities Costs	\$45,614,000

Note: Estimates are 2017 costs. Costs based on prevailing wage rates.

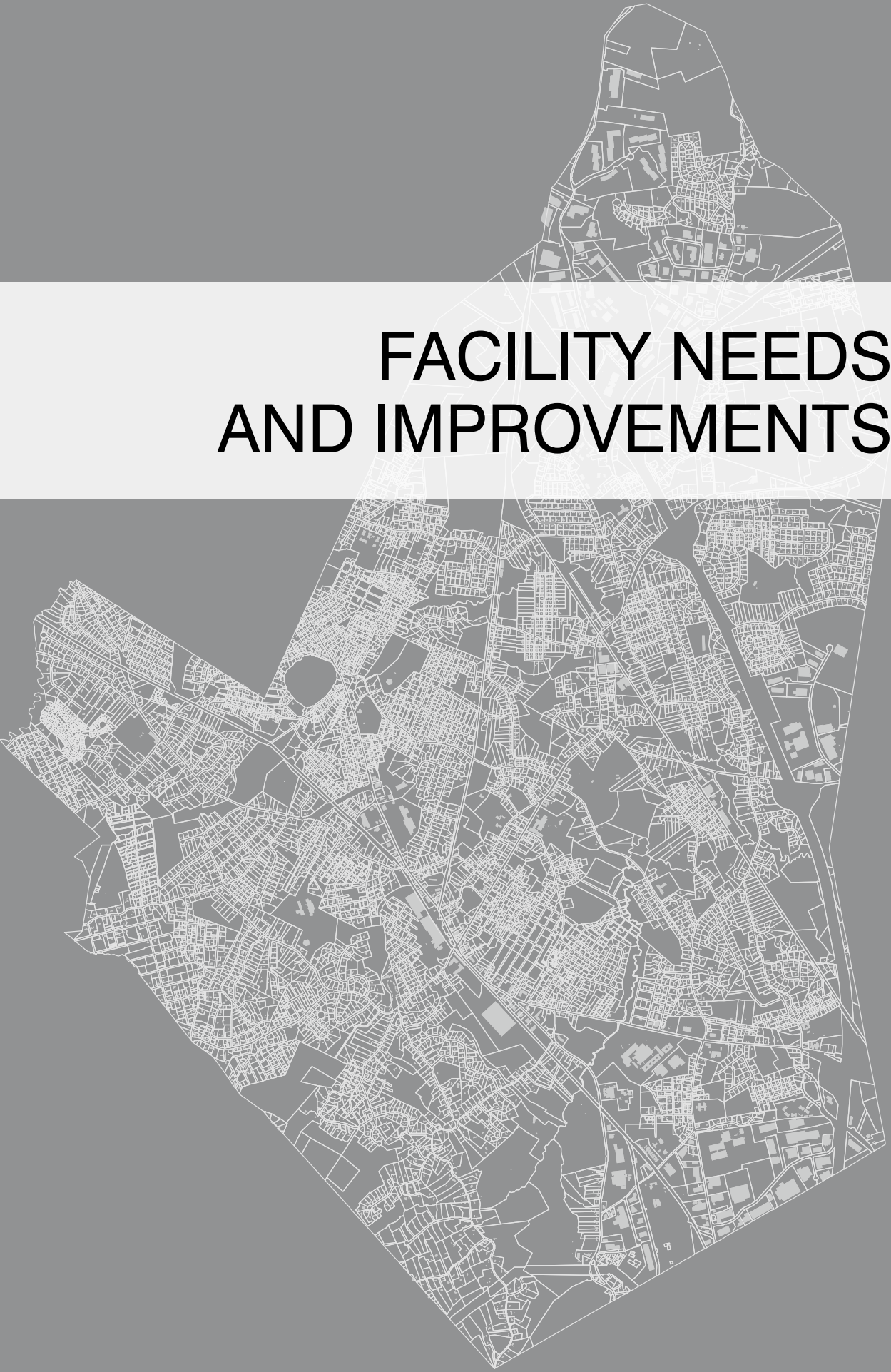
Educational Facility Name	Estimated 2017 Costs*
North Intermediate	\$22,870,000
West Intermediate	\$27,585,000
Shawsheen	\$24,964,000
Woburn	\$22,540,000
Subtotal Educational Facilities Costs	\$97,959,000
Estimated Total Facilities Costs	\$143,573,000

**Additional costs for temporary facilities or other phasing requirements will vary according to the sequence of projects and have not been included in these estimates.*

Actions

Implementation of the recommendations in this report will require a coordinated set of actions over many years. Aspects of the implementation approach include:

- Financial strategy – The financial strategy includes the distribution of projects in a phased sequence of expenditures and investments over a 20-year period. A limited portion of the capital expenses can be accomplished through capital outlays through the annual operating budgets. Most of the costs will be financed through long-term borrowing, accompanied by grants, and contributing funding from State sources for the school projects. This long-term borrowing will be timed with the intent of keeping the Town's debt ratio low relative to its operating costs.
- Improvements through annual operating and maintenance budgeting – The implementation strategy takes advantage of the Town's ability to accomplish small scale facility upgrades and deficiency corrections through its own staff and annual operating and maintenance budgets.
- Grants and other resources – The Town should monitor potential federal and state grants or special financing resources that may become available to support particular buildings or use types.
- Phasing of Municipal Facilities – The major municipal facility investments are expected to consist of the new Town and School Administration Building and new Senior Center to be advanced in 2022. The other projects can be phased according to changing needs and available resources.
- Phasing of School Facility additions and consolidations – The additions and improvements to the North and West Intermediate Schools would occur first, followed by the improvements and expansion of Woburn Schools and Shawsheen Schools. When those projects are completed, the Early Childhood Centers can be repurposed or demolished.
- Evaluation of emergency response conditions and planning for public safety substation - The Town should assemble a committee and resources to conduct a study that updates and evaluates the response time data, prepares projections of future conditions, and recommends Town policies. The Town should establish zoning conditions and other policies to help identify and require mitigation of negative impacts on emergency response times in the event of large scale development.
- Detailed study of DPW facility conditions and needs – The Town should commission a technical engineering and design study to assess the detailed site conditions, review the building conditions, refine the project needs, establish potential phasing, and assess the regulatory and permitting requirements.
- Use of municipal land for senior housing – The Town should finalize its strategy for provision of senior housing, beginning by conducting due diligence. Based on the results of the study, the Town can proceed to offer land for sale or long-term lease, solicit proposals, and advance a lease or disposition agreement for a Town Meeting vote.
- Repurposing or disposition of excess buildings or land – The Town should anticipate the abandonment or relocation of existing uses and prepare market and redevelopment use studies to establish the reuse potential to facilitate its decisions.



FACILITY NEEDS AND IMPROVEMENTS

FACILITY NEEDS AND IMPROVEMENTS

MUNICIPAL FACILITIES

Municipal Facility Recommendations

This section of the Facility Master Plan encompasses all of the buildings and sites associated with municipal functions, other than school facilities. The following descriptions provide a summary of relevant building conditions, programmatic assumptions, and recommendations regarding facility improvements or changes.

1 ARTS COUNCIL

LOCATION: 219 Middlesex Avenue

YEAR BUILT: 1860

BUILDING AREA: 2,755 GSF

The Arts Council building is a former Baptist Meeting House and Old Town Hall. The building is within the Wilmington Center Historic District. It is an historic structure dating from 1860.

SUMMARY:

The building adequately serves its current use and space requirements. Improvement recommendations include updating the electrical system and electrical life safety systems. Bathroom facilities and accessible routes will be required to conform with accessibility guidelines standards. Site improvements should include a code-compliant handicapped accessibility ramp. Recent improvements include a new roof, new flooring, and bathroom upgrades.



PROGRAMMATIC ASSUMPTIONS:

The facility is used as a gallery, arts program space, offices, and houses Town storage in the basement. The amount and general configuration of the spaces seems to be appropriate for the scale of current programs and activities. Although the types of programs and level of activity could change in the future, this would be dependent on shifts in the availability of grant or outside funding, which are not predictable. As a result, no programmatic improvements are recommended, but could be required if the Arts Council programs expand in the future.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Improvement recommendations include the replacement of the exterior lights which are in poor condition. There are also areas at the building perimeter where there is not adequate separation between the exterior siding and finish grade. Grading the site at the building perimeter to increase the separation as well as increasing the separation of the planted areas from the building façade with positively draining stone edge strips and new three-foot wide drip strip is recommended in order to improve the lifespan of the exterior and foundation. A new accessible ramp should be constructed to provide access to the facility as the existing one is beyond its expected service life and is not to current accessible standards.

Architectural and Structural Improvements

Building Exterior - The exterior walls should be insulated reduce operating costs and increase occupant comfort. The exterior siding, trim and windows require repairs. As previously noted, portions of the exterior perimeter wall are in contact with the ground at its base and have advanced siding and possibly sheathing as well as structural damage which will require replacement and repair as the perimeter grade is addressed. There are several apparent abandoned service connections remaining on the exterior façade which should be removed and capped. Replacing the sun-bleached plexiglass panels with new energy efficient storm windows with glass window panes will improve building appearance and window performance. Basement windows and window sills could also be replaced.

Basement - The storage use of the building's basement areas may exceed the ten percent limit for incidental accessory occupancies and will require a fire separation partition from the remaining assembly space. The Commonwealth of Massachusetts Municipal Records Retention Manual, outlines requirements for records handling practices and maintenance of dedicated records storage areas. The Town could also consider optional locations for records storage. More information on storage standards is available at https://www.sec.state.ma.us/arc/arcpdf/MA_Municipal_Records_Retention_Manual.pdf

Building Interior - Restrooms are currently not handicapped-compliant and should be modified to satisfy accessibility and ADA Guidelines. Door hardware will be required to be replaced with lever action hardware for accessibility. New flooring was recently installed.

Building System Improvements

Mechanical (HVAC) - Exhaust fans should be installed in the toilet rooms and the basement should be properly ventilated. A centralized mini-split air conditioning system would improve building appearance, allow the reclamation of window area and improve building envelope performance when insulated.

Plumbing - Plumbing fixtures in the building are not accessible and should be modified as toilet rooms are renovated. Water conserving fixtures should replace the current plumbing fixtures. Insulation needs to be added to the domestic water lines.

Fire Protection - A sprinkler system should be installed in the building.

Electrical - The existing 200-amperes electrical service and the electrical circuit breaker panel is in poor condition and should be updated. Emergency lighting and exit signs should be updated. Toilet room outlets are not GFI protected. Fire alarm systems need updating and currently lack strobes and horns. Cloth covered wiring needs to be removed and replaced. The building has abandoned electrical systems attached to the façade that could be removed to improve the historic appearance.

Additional Observations and Notes

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are projected for the purposes of baseline facility planning.

COST ANALYSIS:

ARTS COUNCIL	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$44,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior (New Windows)	1	-	LS	\$35,000
BUILDING SYSTEMS				
Mechanical (HVAC)	2,755	\$14.82	SF	\$44,000
Plumbing	2,755	\$15.24	SF	\$45,000
Fire Protection	2,755	\$6.30	SF	\$20,000
Electrical	2,755	\$11.70	SF	\$35,000
(3) TOTAL CONSTRUCTION COSTS				\$223,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$67,000
(4) TOTAL PROJECT COSTS				\$290,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

2 BATH HOUSE

LOCATION: 5 Burnap Street

YEAR BUILT: 1964

BUILDING AREA: 1,800 GSF

This is a restroom and swimming beach support facility located at the edge of the Silver Lake parking lot.

SUMMARY:

To address accessibility deficiencies, plumbing fixtures will need upgrades or replacement and accessible changing facilities should be added. A paved access apron to and from the parking lot should be added for accessibility. The facility would benefit from exterior aesthetic improvements such as signage and changes in the exterior painting scheme. The interior finishes would benefit from replacement and upgrades, of the ceiling tiles and ceiling light fixtures and louvers, and a new floor coating.



PROGRAMMATIC ASSUMPTIONS:

The facility provides seasonal changing, facilities shower, toilet, and programming space for the first aid program. The facility supports its current programmatic needs. Currently there is no need to expand or change the uses and the overall facility organization unless services offered were to change in the future.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - A paved access apron to and from the parking lot should be added for accessibility.

Architectural and Structural Improvements

Building Exterior - Exterior painted surfaces require refinishing including steel doors and CMU walls where significant peeling of paint was observed. Improved color scheme and signage would enhance the building's appearance. There are a few broken asphalt roof shingles that need repair.

Building Interior - Floors require new epoxy paint coating. Acoustical tile ceilings should be replaced, and new lighting installed. Interior doors are in fair condition but require refinishing. The changing stalls and areas are not accessible, the existing facilities should be renovated and have handicap fixtures installed.

Building System Improvements

Mechanical (HVAC) - There is no HVAC serving the building. A dedicated exhaust system is recommended to serve the toilet rooms, locker rooms and storage areas.

Plumbing - Drinking fountains should be provided, and the facility would also benefit from a janitor's closet with a mop sink. Generally, the plumbing fixtures do not meet accessible standards and are not water conserving and should be replaced. Visible domestic water piping is not insulated.

Electrical - The electric panel is in poor condition and no grounding could be identified. The electric panel should be replaced and grounded per code requirements. Interior lighting is dated. There is no emergency lighting and the exit signs are not lit. There is no fire alarm system. Interior and exterior emergency lighting and a fire alarm system will be required.

Additional Observations and Notes

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are needed.

COST ANALYSIS:

BATH HOUSE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$15,000
BUILDING SYSTEMS				
Plumbing	1,800	\$33.60	SF	\$65,000
(3) TOTAL CONSTRUCTION COSTS				\$80,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$24,000
(4) TOTAL PROJECT COSTS				\$104,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs

3 BOOKSTORE NEXT DOOR

LOCATION: 183 Middlesex Avenue

YEAR BUILT: 1900

BUILDING AREA: 1,248 GSF

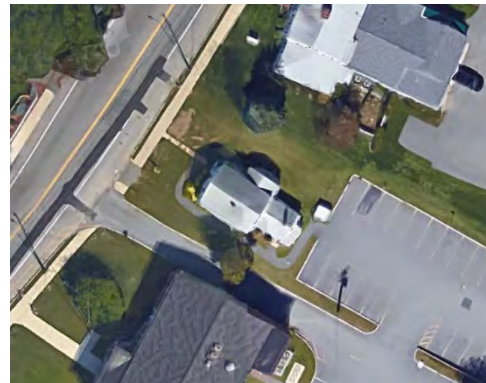
The facility is a repurposed residential building that was converted into a bookstore that supports and provides funding to the Wilmington Memorial Library next door. The books that are sold come primarily from donations; about 25% of those donations are kept to sell. The library uses the second floor of the facility for lightweight seasonal item storage. The bookstore facility and the library sit on the same site and share the existing 47 parking spaces.



SUMMARY:

This building would be demolished as an expansion site for the Library and its functions would be incorporated into the expanded facility.

In the event that the Library improvement program contained in this Facility Master Plan is deferred or not pursued, then the Town should consider basic improvements that could be made to make the building more compatible with its current use. This would include provision of an accessible entrance, accessible restrooms and fixtures. In addition, the existing structure is likely to be inconsistent with the floor loadings associated with book storage. The structural conditions would need to be checked, and enhancements provided if needed. Energy-related improvements could include proper venting of the furnace and insulation, if it is currently insufficient.



PROGRAMMATIC ASSUMPTIONS:

The current facility provides a desirable civic function, and no programmatic changes are anticipated. It is assumed that separate, additional facility parking is not required, but that the bookstore function can rely on parking provided for the Library. The need for parking associated with the Library is separately addressed in the projected needs for that facility. No changes in the operating space or storage requirements would be required unless there are changes in its operations, which have not been anticipated.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

(Note: the following improvements are contemplated in the event that the Town does not proceed with a project to significantly expand or relocate the existing Library.)

Site Improvements

Site and Landscape - The building is not accessible and a new ramp should be installed to accommodate handicap access.

Architectural and Structural Improvements

Building Exterior - Improvements necessary to bring the building to current standards for commercial use would include remodeling the entrance with a ramp access. The clapboard siding is damaged and will require repairs in some locations.

Roof - The roof sheathing and asphalt shingles on the ell should be replaced. Cornice and eave moldings have some repairs and when the building is reroofed they should be repaired fully. The chimney requires repointing.

Structure - The floor structure capacity should be increased to meet the current load requirements for book storage and should be designed by a licensed structural engineer.

Building Interior - The interior will require remodeling to provide accessible toilet rooms and general wheelchair access. Plaster repairs are likely to be required where ceilings have been covered with ACT.

Building System Improvements

Mechanical (HVAC) - The newer oil burner is not vented correctly.

Plumbing - The domestic water lines should be insulated for increased efficiency. Accessible plumbing fixtures need to be provided in new accessible toilet rooms.

Electrical - The electrical system is antiquated with a sub-standard 60-amp service and fused breakers. The electrical system will require an upgrade to contemporary standards and emergency lighting and a fire alarm system will also be required.

Additional Observations and Notes

The building dates from 1900 and is likely not insulated.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are projected.

COST ANALYSIS:

BOOK STORE NEXT DOOR	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
DEMOLITION				
Demolish Book Store Next Door	1,248	\$10.00	SF	\$14,000
(3) TOTAL CONSTRUCTION COSTS				\$14,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$5,000
(4) TOTAL PROJECT COSTS				\$19,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4 BUZZELL SENIOR CENTER

CURRENT LOCATION: 15 School Street

YEAR BUILT: 1935

BUILDING AREA: 8,308 GSF

RELOCATE TO: Town Hall Site



A new and enlarged Senior Center would be created at the site currently occupied by the Town Hall. In addition to the parking and site improvements associated with the Senior Center, access to existing recreational parking will be retained. Depending upon phasing, the facility could be constructed adjacent to the Town Hall or occupy its current site, if it is demolished prior to commencing construction.

SUMMARY:

The Buzzell Senior Center is located within a former school structure and activities are conducted in the available space. A need was identified for additional space and reorganization of the interior of the building during the evaluation of existing conditions. Because the senior population of Wilmington is expected to grow considerably in the future, the current facility would require a significant expansion to accommodate additional programs and greater participation. A new senior center should be located the Town Hall site. Access to existing recreational parking will be retained. The senior center might be best located where it would have to direct access to the open space and recreational fields. As depicted in the attached illustration, parking for the facility might be located near the end of the entrance road. The site is adequately large to allow the senior center to be constructed on one floor.

PROGRAMMATIC ASSUMPTIONS:

The Senior Center is housed within a building area of 8,308 gross square feet (GSF), and has 42 adjacent parking spaces. The baseline projection would require an expansion to about 14,000 GSF and an additional 42 spaces to accommodate future programs and activities. It should be noted that this estimate is based on the level of review appropriate for initial facility planning. The final size of the facility will be dependent upon choices that the community will make about the types of programs that should be supported and its priorities relative to the character of the facility that it provides. Detailed programming and facility needs assessment will need to be prepared as part of the planning process to expand the current facility.

The evaluation considered several information sources, including population models from Metropolitan Area Planning Council (MAPC) and UMass Donahue Center. The MAPC population model for Wilmington projects a population growth of 2,940 senior citizens by 2030 above 2010 levels, a 202% increase. MAPC also considered population trends that may occur if the greater Boston economy and demographic trends are more expansive. In their “stronger region” version model, the Wilmington senior population would reach a level of about 3,020 over the same time period (a 205% increase). The UMass Donahue Center model projects an increase of 3,177 senior citizens from a base year of 2010 (a 210% increase).

Because the UMass Donahue projections include a 2015 population estimate and is otherwise similar to the MAPC projections, it has been used as the basis for considering the future senior population facility needs for

Wilmington. The UMass Donahue Center projection reports a base population (65 years or older) of 2,881 in the 2010 census and estimates the senior population at 3,584 for 2015. It then projects the senior population at 6,058 in year 2030. This would be an increase of 169% from 2015 to 2030.

Based on the indication that the current center has some insufficiencies relative to potential demand but is generally serving the current population well, it is reasonable to conclude that an increase in population and associated growing programs and space needs could result in a desirable facility size approximately 169% larger than the current facility, which would also provide for current unmet needs. There would be some efficiency gained in the reconfiguration of office space, utility space, and some of the rooms and support uses, so the facility size would not need to follow a straight proportional increase relative to the population.

Other communities can serve as a benchmark to determine appropriate facility size for Wilmington's senior center. Dedham is planning an 18,000 GSF senior center to serve a population of approximately 25,000 citizens. Needham prepared a feasibility study for an 18,650 GSF facility to serve a population of approximately 29,000 citizens. Wakefield has a 26,000 GSF senior center to serve a population of approximately 25,000 citizens. Newburyport has a 16,000 GSF senior center to serve a population of approximately 18,000 citizens. For Wilmington's projected 2030 population of approximately 24,500 citizens, a facility size of about 14,000 GSF is a reasonable and perhaps somewhat conservative assumption, relative to benchmark communities.

The current facility is limited in terms of the space available to accommodate large events or gatherings. Based on a review of similar facilities, space for a large meeting of about 250 attendees would be desirable, which could be accommodated within a room about 2,500 to 3,000 square feet in area. Such a meeting space could result in parking demand of about 165 parking spaces. However, nearby spaces would be available for weekend and evening events because of the nearby high school parking lot. As a result, the provision of approximately 42 additional spaces are recommended, doubling the current parking lot capacity.

SITE PLAN:



COST ANALYSIS:

NEW BUZZELL SENIOR CENTER	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
DEMOLITION				
Demolish Town Hall	20,000	\$10.00	SF	\$212,000
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$1,158,000
NEW CONSTRUCTION				
Architecture	14,000	\$120.00	SF	\$1,781,000
Structure	14,000	\$45.60	SF	\$678,000
Mechanical (HVAC)	14,000	\$36.00	SF	\$535,000
Plumbing	14,000	\$14.40	SF	\$215,000
Fire Protection	14,000	\$9.00	SF	\$134,000
Electrical	14,000	\$30.00	SF	\$446,000
(3) TOTAL CONSTRUCTION COSTS				\$5,159,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$1,548,000
(4) TOTAL PROJECT COSTS				\$6,707,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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5 CEMETERY GARAGE

LOCATION: 60 Wildwood Street

YEAR BUILT: 1970

BUILDING AREA: 1,800 GSF

This is a facility that provides garage space for cemetery operations. The facility houses cemetery vehicles, maintenance areas and storage for the Wildwood Cemetery. The area around the building is paved, providing vehicle circulation and access to yard storage bins located against the rear of the building.



SUMMARY:

Enhanced vegetative screening around the building is recommended. Water infiltration behind exterior paint finishes suggest special consideration should be given to the selection of future CMU coatings and as most of the infiltration was observed below masonry openings, new windows with integral pitched sills may better protect the wall finishes. Recent improvements include a new roof, exterior paint and electrical upgrades.

PROGRAMMATIC ASSUMPTIONS:

The facilities program is fully utilized for maintenance operations, but there does not appear to be a need to expand or reconfigure the current building or site in the future.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - There is a lack of vegetative screening and landscaping around the building.

Architectural and Structural Improvements

Building Exterior – Facility has been recently painted. Windows and doors are in poor condition with apparent rust especially at door and door frame bases. Some windows are composed of plexi-glass sheets secured over existing steel window screens. The foundation is chipped in some areas and requires patching. Wood gable siding requires patching and paint in some locations including where it appears a former chimney was removed. Rake and eave trim require patching and new paint.

Roof - A new roof was recently installed.

Structure - The concrete floor should be patched. The roof requires repairs or replacement. Attic decking should be secured and assessed for safety. The attic stair requires a railing.

Building Interior - The stair to the attic has no railing and does not have clearances to meet current code. Attic decking is not secured and poses a risk to occupants.

Building System Improvements

Mechanical (HVAC) - It is recommended that an exhaust system be installed. The furnace should be replaced within five years. The oil storage tanks should be inspected. The oil supply line should be replaced and buried under the slab.

Plumbing - Cast iron drain piping should be replaced. Trench drains should be covered and a gas/oil separator installed.

Electrical – New electrical lateral has been put in. New lighting should be installed over garage bays. New exterior and interior emergency lighting, fire alarm system and exit signage will be required to bring the building to contemporary standards. Overhead doors should be equipped with safety switches.

Additional Observations and Notes

A new sand/soil storage bunker should be built away from the building exterior to protect the building from the abuse of soil storage contact and backhoe pressure. Similarly, an interior wall is used for this purpose where loam is stored inside.

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are projected.

COST ANALYSIS:

CEMETERY GARAGE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
BUILDING SYSTEMS				
Mechanical (HVAC)	1,800	\$16.80	SF	\$33,000
Plumbing	1,800	\$17.50	SF	\$34,000
(3) TOTAL CONSTRUCTION COSTS				\$67,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS AND CONTINGENCIES				\$21,000
(4) TOTAL PROJECT COSTS				\$88,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

6 CEMETERY OFFICE

LOCATION: 233 Middlesex Avenue

YEAR BUILT: 1938

BUILDING AREA: 960 GSF

This building is used by the Department of Public Works for administration and storage.

SUMMARY:

Deferred maintenance improvements should be undertaken for this facility. The window screens require updating. A new bathroom fan should be installed. Replacement of the original cast iron drainage piping will be required. Recent improvements have been made to the exterior façade and roof.

PROGRAMMATIC ASSUMPTIONS:

It is assumed that the building will remain in its current use, and that no significant changes or expansion are required. As a result, the improvements should be focused on repairing deferred maintenance and extending the life of the building.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Architectural and Structural Improvements

Building Exterior - First floor window and dormer window screens require replacement. Dormers require new shingle siding and cheek wall flashing. Wood finish trim over concrete lintel supports at garage doors require replacement. Although some recent work has been accomplished, the overall improvement budget retains an amount to reflect potential additional repair and replacement.

Roof - Exterior fascia and soffit trim require repairs and restoration of eave moldings where they were removed for now abandoned gutter blocking. The asphalt shingled roof was beyond its expected service life when initially observed. However, because recent work has been accomplished on the roof, additional improvements may not be required and have not been assumed. However, this assumption should be verified when specific capital improvement budgeting is advanced for this building.



Building System Improvements

Mechanical (HVAC) - Fuel oil lines are not encased in concrete. The bathroom fan is out of date and requires replacement. Thermostats are not programmable.

Plumbing - Domestic water piping is not insulated. Cast iron drainage piping is in poor condition.

PROGRAMMATIC IMPROVEMENTS:

No programmatic improvements are needed, unless the facility offers different services in the future.

COST ANALYSIS:

Note: Additional improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means. As a result, no allocation has been assumed for capital budgeting purposes.

7 DEPARTMENT OF PUBLIC WORKS HIGHWAY GARAGE

LOCATION: 135 Andover Street

YEAR BUILT: 1960

BUILDING AREA: 13,629 GSF

The Department of Public Works Garage facility provides space for vehicle storage and maintenance, fueling stations, a sign production shop and equipment storage.

It should be noted that the DPW facilities include a separate salt shed on Federal Street which has not been included in the scope of evaluations and recommendations for this study. As a result, potential facility deficiencies or future needs have not been including in this assessment or as part of the cost evaluations.



SUMMARY:

The facility requires several improvements and building alterations that likely can be accommodated within its current site, although some alterations in the site layout can be anticipated. Additional space and facilities will be needed to accommodate current and projected needs, and to absorb the relocation of the DPW facilities from the office building and garage at the former Water District site. The facility will require significant upgrades to address issues associated with its infrastructure, finishes, and accessibility to create a contemporary work environment.



PROGRAMMATIC ASSUMPTIONS:

The current facilities are fully utilized. Programmatic improvements are needed to properly serve existing functions and to accommodate growth.

For the purposes of this master plan, certain assumptions have been made about the extent and type of improvements that might be undertaken. However, the DPW garage has many different needs that must be evaluated in detail before finalizing a specific improvement program and budget, and could vary significantly depending upon decisions about the disposition of DPW functions among multiple sites and the cost/benefit of various specific improvements that have been requested by the DPW as part of this and other planning processes.

Site Program

The existing site uses are expected to remain, although they may be reorganized in concert with other changes and additional site requirements as noted below. The existing site uses include parking, vehicle storage, truck wash station, salt truck unit storage and staging, a truck scale, miscellaneous equipment storage, vehicle fuel stations including underground storage tanks.

Additional site requirements could include an increase in the number of stored vehicles and other equipment on the site, consolidating storage from other facilities used by the DPW. This consolidation has been noted as an important benefit if additional vehicles can be accommodated. In view of the significant site constraints, there are limited areas to expand paved storage areas. However, the number of parking spaces and areas for vehicle and equipment storage should be expanded to the extent practical through site reorganization and marginal enlargement of paved areas.

The DPW has noted that the existing underground storage tanks are approximately 30 years old and are likely to require replacement within the time horizon of this master plan. A technical evaluation would need to be accomplished to confirm the condition and replacement schedule. However, it is reasonable to plan for their replacement, which could be above ground storage tanks and would require associated land area, enclosures, and other regulatory measures.

For the purposes of this master plan, it is assumed that additional vehicle storage would not be accommodated within an expanded building envelope, but would be more cost effectively accommodated with an unheated, partially enclosed shed to afford additional weather protection. This will require some site reorganization and shed construction.

There is a small, deteriorate storage shed on the site that should be replaced with a larger, unheated facility. For purposes of planning, a replacement shed of approximately 2,500 square feet has been assumed. This would also accommodate storage that is currently contained in the garage at the former Water District facility.

The existing improved site is bordered by a 100-year flood plain, based on available FEMA mapping and survey information. However, the site topography provides limited elevation gain above those levels. As a result, site improvements should be designed to increase the finished grade where practical. Low protection walls or berms may be considered to reduce the flood risk and be resilient to climate change or extreme storm events.

The site is adjacent to environmentally sensitive areas and is within a Zone II protection area. The design and construction of any improvements may need special provisions, which can influence costs.

Building Program

The existing uses within the building and small garage structure are expected to remain, but some additional space and reorganization will be needed to accommodate current and future needs, including approximately 6,800 net square feet of new space. This would include demolition of the existing office/entrance area and its replacement with new construction containing additional functions.

- Additional shop area for Parks & Recreation functions
- Expansion of vehicle maintenance bays (2 bays, approximately 1,300 square feet)
- Additional multi-use space for meetings and training
- Additional staff space included expanded and improved restroom and shower facilities
- Additional circulation and miscellaneous space
- Alterations for separation of a small reception or waiting area for visitors
- Space to accommodate the DPW office functions that would be relocated from the former Water District building.

The DPW has noted the desirability of providing expanded service areas within the garage to accommodate the largest fire vehicle in the Town's inventory. Further study will be required to confirm the cost/benefit and dimensional requirements, and consider various approaches to providing such space. This evaluation should be part of the subsequent detailed programming and facility budgeting process, but the provision of such a facility is not contemplated within this *Facility Master Plan*.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - The current parking lot has undefined stalls and should be striped. Commercial truck wash runoff must be within a contained system, to comply with stormwater management guidelines. Improvements should be made to conform to current standards for the Zone II aquifer protection and other applicable water quality protection standards. The sander rack and salt sheds will need to be repaired and/or replaced.

Architectural and Structural Improvements

Building Interior - Toilet rooms need to be modified to be ADA compliant. The upper level staff changing and toilet rooms should be converted to storage space and provided with a code and OSHA compliant stair.

Structural - A bridge crane structural support should be analyzed, and either reinforced or replaced if required to meet current standards.

Building System Improvements

Mechanical (HVAC) – The garage exhaust system needs to be repaired or replaced. The system needs to be evaluated and altered as required to prevent migration of particulates from the garage and workshop areas into office areas, and to generally meet all current code air quality standards.

Plumbing – New ADA compliant plumbing fixtures should be installed.

Electrical - Electric fin tube is installed under electric outlets. Electric fin tube in toilet rooms is in poor condition.

Additional Observations and Notes

The site is largely paved providing large vehicle circulation, vehicle storage, and equipment storage. The sites yard program has substantial space to support its function. Due to the current high demand of Town vehicle service, improved and expanded vehicle washing facilities would benefit the facility's efficiency.

PROGRAMMATIC IMPROVEMENTS:

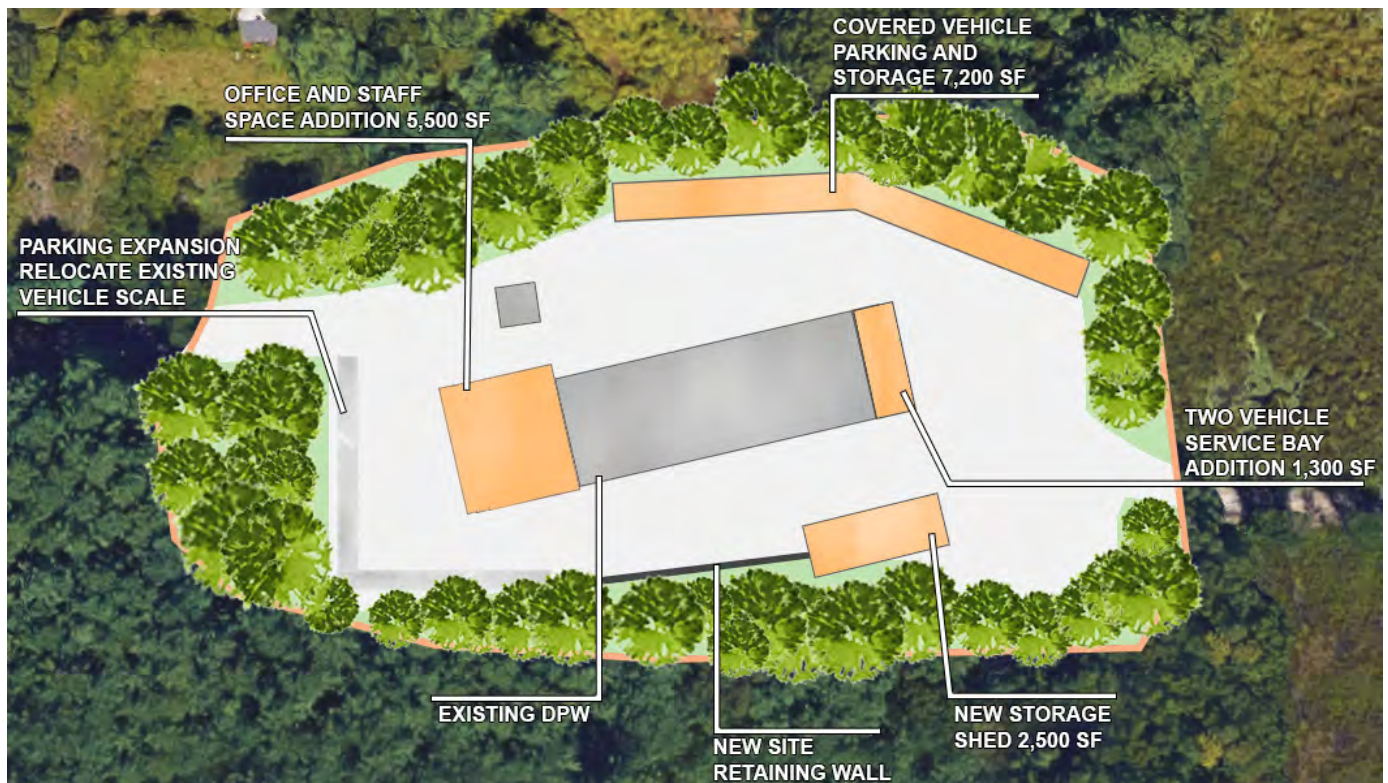
The programmatic improvements would include both site and building improvements based on the assumptions noted above.

The site would be reorganized with changes in the overall circulation and paved areas to optimize the available area for parking, staging, and storage within regulatory constraints. Provisions would be made for above ground storage and fuel operations if future replacement and utilization of underground tanks is found to be

less favorable for cost or environmental reasons. Parking and vehicle storage space would be properly laid out and striped, and provisions would be made for storage of approximately 10 vehicles in covered, unheated sheds.

Building improvements would consist of upgraded and reorganized spaces to accommodate additional staff space, shop space for Parks & Recreation purposes, and expanded service bays. It is assumed that the office and staff space would be created by demolishing the current office space, and providing an efficient addition in its place. The additional vehicle bays would be added to the existing bays.

SITE PLAN:



COST ANALYSIS:

DPW HIGHWAY GARAGE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Paving and Drainage	81,918	\$10.00	SF	\$812,000
Site Preparation / Unsuitable Soils	1	\$500,000.00	LS	\$500,000
Demolition - Shed	600	\$10.00	SF	\$6,000
WD Garage	3,475	\$10.00	SF	\$35,000
DPW Office	2,380	\$15.00	SF	\$36,000
Vehicle Shed	7,200	\$75.00	SF	\$540,000
Miscellaneous Site Improvements	1	\$250,000.00	LS	\$250,000
BUILDING IMPROVEMENTS				
New Storage Shed	2,500	\$100.00	SF	\$250,000
Service Bay Addition	1,300	\$300.00	SF	\$390,000
New Office Area	5,500	\$325.00	SF	\$1,788,000
Other Building Upgrades*	12,000	\$75.00	SF	\$900,000
(3) TOTAL CONSTRUCTION COSTS				\$5,515,000
CONTINGENCIES AND SOFT COSTS 30%				\$1,655,000
(4) TOTAL PROJECT COSTS				\$7,170,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

Note: *Other building upgrades, represents an allowance assuming that the building will not require any major building systems replacements or upgrades due to current code requirements.

*** The cost estimate for this facility is based on preliminary assumptions. It does not include special construction such as fuel tank construction, provisions due to environmental constraints, or systems associated with repair, replacement, materials storage and disposal typically associated with garage facilities of this type. Because of the complexity of this facility and its site constraints, additional evaluation will be undertaken prior to finalizing an estimate for the purposes of this Facility Master Plan.

8 DEPARTMENT OF PUBLIC WORKS WATER DIVISION GARAGE

LOCATION: 115 Andover Street

YEAR BUILT: 1968

BUILDING AREA: 3,475 GSF

This structure consists of garage spaces for the water division of DPW, and includes some storage and office space functions.



SUMMARY:

The facility will be demolished and its functions transferred to the DPW Garage site. There are significant constraints on continuing to use and operate this building because of its location on a Zone 1 Aquifer Protection district, and because it is within the 100-year flood plain of Martin's Brook. This has resulted in occasional flooding of the building and site. As reported by DPW, flooding has disrupted operations in the building 3 times in the last 20 years, with disruptions lasting approximately 2 weeks. There are limited options for creating a more flood resistant site and building.

PROGRAMMATIC ASSUMPTIONS:

The Water Department Garage shares a site with the Department of Public Works and Water Department Main Office building. The facility provides storage for various water tools, vehicles, maintenance and construction materials. No significant changes or expansion of activities has been projected for this facility.



Changes:

Site Improvements

The site should be restored with lawn or planting after demolition

Building Demolition

The building should be demolished.

PROGRAMMATIC IMPROVEMENTS:

No programmatic changes are anticipated, although relocating these uses to a new facility may provide some space and operational efficiencies.

COST ANALYSIS:

WATER DIVISION GARAGE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Demolition	3,475	\$10.00	SF	\$35,000
TOTAL CONSTRUCTION COSTS (3)				\$35,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$ 1,000
TOTAL PROJECT COSTS (4)				\$ 46,000

Abbreviation

SF Square Foot

LF Linear Foot

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4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

9 DEPARTMENT OF PUBLIC WORKS WATER DIVISION OFFICE

LOCATION: 115 Andover Street

YEAR BUILT: 1927

BUILDING AREA: 2,380 GSF

This building is used for the Department of Public Works offices and shares a site with the Water Division garage which is separately addressed, and a small storage shed. The administration building is located at an active drinking water wellfield and houses pumping equipment and associated piping. The garage building is used for miscellaneous storage and as a vehicle garage.



SUMMARY:

This building is in generally good condition. It is within the 100-year flood plain of Martin's Brook. This has resulted in occasional flooding of the building and site. As reported by DPW, flooding has disrupted operations in the building 3 times in the last 20 years, with disruptions lasting approximately 2 weeks. It is not practical to floodproof the building for the extended periods of time that would be required.

Development of a replacement building on this site is impractical because of its location on a Zone 1 Aquifer Protection district. As a result, this facility should be replaced and relocated, most likely as part of improvements and enhancements at the nearby DPW garage. The existing building would be retained because it houses pumping equipment. The entrance and ground floor could be provided with temporary barriers to reduce damage due to flooding, and the interior spaces and partitions cleared to facilitate cleaning and limit damage during flood events.

PROGRAMMATIC ASSUMPTIONS:

When the uses are relocated to the DPW Garage site, there will be opportunities to provide some efficiencies and improved facilities, including a meeting space for staff and reception counter.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Provisions should be made to partial demolition of the interiors and installation of flooding mitigation elements to reduce the intrusion and damage associated with flood conditions.

Cost Analysis

Changes made to building including flood mitigation are assumed to be accomplished within maintenance and operating budgets, and have not been assumed to represent a capital funding requirement.

10 DEPARTMENT OF VETERAN SERVICES

LOCATION: 219 Middlesex Avenue

YEAR BUILT: 1790

BUILDING AREA: 1,250 GSF

The West Street School dates to 1790 and is a listed structure on the National Register of Historic Places. The building currently serves as the office of the Town's Veteran's Affairs Services.

SUMMARY:

The uses within this building are assumed to be relocated into a new Town Hall/School Administration building. After relocation, the Town should maintain the historic structure and seek alternative uses.

PROGRAMMATIC ASSUMPTIONS:

The Department of Veteran Services (DVA) offers counseling, administrative and crisis assistance. It fully occupies the existing building, and appears to be of an appropriate size for its function. The interior is largely composed of a single, large space. The facility lacks a separated office for private counseling and administrative space. The site has 10 - 12 parking spaces which presently supports the facility needs. The Town is expected to have a growing senior population, and this may include an increasing number of veterans seeking support services. If this is the case, then the existing facility may prove to be inadequate. The amount and type of services can be monitored to confirm the future alignment of space requirements, the programs offered, and the population that the DVA serves.

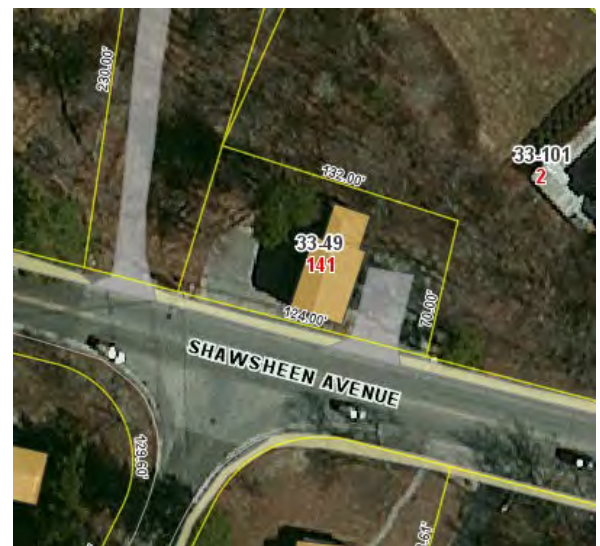
IMPROVEMENTS:

Basic safety and accessibility improvements should be accomplished for the interim period, prior to relocation of the current use.

The following observations are provided as a resource if the building is to be re-occupied with an active use.

DEFICIENCIES REQUIRING IMPROVEMENTS:

Architectural and Structural Improvements



Building Exterior - The structure is generally sound but will require significant upgrades to preserve it for use in the future. The brick chimney in the rear of the building requires pointing. The exterior siding finish is in fair condition, but requires small repairs. Cornices and fascia shadow boards require fastening and sealing, where fuel oil service pipes formerly entered the building, the holes should be sealed and the siding patched. The building is accessible with a ramp servicing a rear entrance. The ramp's railing is subject to movement and requires additional bracing. The ramp leads to a door with a threshold and door hardware that does not meet ADA standards. The hardware should be replaced with lever handles.

Crawl Space - There is a crawl space with a dirt floor below the main floor. An attempt to insulate the floor was made and unsecured insulation is falling away from between the floor joists. Best practice for heating the building and mitigating the effect of ground sourced moisture will include perimeter insulation at the foundation wall and a continuous vapor barrier across the entire space wrapping up the foundation wall and sealed continuously at the base of the sills. The abandoned fuel oil tank in the crawl space should be drained and removed and the gas meter penetration of the masonry foundation wall should be sealed.

Roof - The roof shingles on the rear addition appear to be at the end of their serviceable life. Damaged shingles at the eve line expose a rotting cedar shingle starter course and as there is no metal drip edge water has the potential to find its way behind the eve molding, siding and potentially into the wall cavity at the roof edge causing further damage. The main roofs drip edge is not properly shingled on the lower portion of the right front gable.

Structure - The original building has a stone foundation with a brick stem wall that requires repointing and some replacement brick. An addition on the rear of the building has a concrete masonry unit foundation that has been repointed in the past and requires repointing again. The CMU foundation wall appears to have been built over a combination of portions of concrete and stone foundations or footings. The footing of undetermined depth is likely subject to frost heaving as demonstrated in the working of the masonry joints.

Building Interior - The grab bars at the toilet do not meet ADA standard. ADA compliant grab bars will be required. It is likely that additional in wall blocking will be required. The ceiling grille in the main room should be examined to confirm heat is not escaping into the attic space. A wall patched with foil faced insulation at the entry to the kitchen should be replaced with plaster or drywall to match existing finishes and the wainscoting cap rail replaced.

Building System Improvements

Mechanical (HVAC) - The bathroom fan discharges into the attic and should be directed to a roof or wall cap equipped with a backdraft damper. The condensing unit serving the AC system is mounted flush with the ground. It should be raised on a curb to protect it from the elements.

Plumbing - The under-sink water heater should be replaced and domestic water piping requires insulation. Drain piping is a mix of PVC and Cast Iron. Only cast iron is permitted in commercial buildings. The condensate line from the condensing boiler is directed to the basement and should be run to a drain line.

Electrical - Emergency lighting inside and out and exit signage will be required. Temporary light strings in the basement should be removed.

PROGRAMMATIC IMPROVEMENTS:

It is assumed that approximately 1,000 net square feet of space can serve this use, if it is located within a new, multiple-use building as recommended.

COST ANALYSIS:

DEPARTMENT OF VETERAN SERVICES	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Safety and Accessibility Improvements	1	-	LS	\$15,000
(3) TOTAL CONSTRUCTION COSTS				\$15,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$5,000
(4) TOTAL PROJECT COSTS				\$20,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

Note: Additional improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means.

11 FOURTH OF JULY HEADQUARTERS

LOCATION: 150 Middlesex Avenue

YEAR BUILT: 1840

BUILDING AREA: 1,488 GSF

The facility is used as Town storage and is also actively used for meetings, preparations, and operations associated with the Town's 4th of July celebration.

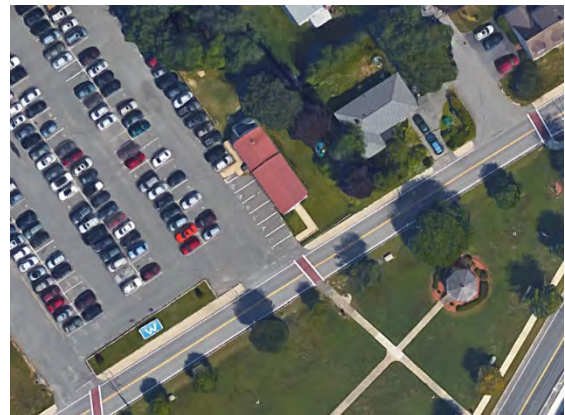


SUMMARY:

The building will benefit from repair of exterior siding and trim. Other building deficiencies would only require capital improvements if the building was used on a more regular basis and would include accessibility upgrades, life safety lighting and exit signage, a fire alarm, electrical service, wiring and lighting improvements.

PROGRAMMATIC ASSUMPTIONS:

The facility provides a convenient location for activities supporting the Town's 4th of July celebrations. The use of available space for storage may be a matter of convenience rather than necessity, but there were no suggestions that the storage function needs to be changed. If the Town were to expand the use of the building for more frequent or full time occupancy, then alterations in the building layout and mechanical systems might be required. However, no such changes have been requested or indicated in the discussions of this facility to date.



Parking is available within the adjacent high school lot, and is considered sufficient for the times and type of usage.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Architectural and Structural Improvements

Building Exterior - Exterior siding and trim requires repair and refinishing where it is decayed. To preserve the historic look of the building in the historic zone, the decorative shutters should be removed, the attic window should be restored and the exterior finishes should be restored to the earliest period. The existing decorative three board shutters are not appropriate to the historic period of the building and detract from its appearance. Earlier photos of the building do not suggest that it was equipped with shutters.

Additional Observations and Notes

Some of the suggested improvements could be accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements.

Currently the building is only occasionally used. However, if the Town decides to use the building on a regular basis the building should undergo a full renovation. Renovations would include updated life safety, mechanical, electrical and plumbing systems to meet current codes as well as toilet room upgrades for accessibility.

PROGRAMATIC IMPROVEMENTS:

No programmatic improvements are needed.

COST ANALYSIS:

FOURTH OF JULY HEADQUARTERS	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1,488	\$30.72	SF	\$49,000
(3) TOTAL CONSTRUCTION COSTS				\$49,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$15,000
(4) TOTAL PROJECT COSTS				\$64,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

12 HARNDEN TAVERN CARRIAGE HOUSE

LOCATION: 430 Salem Street

YEAR BUILT: 1800

BUILDING AREA:

This historic building is used as a display gallery and archive by the Wilmington Historic Commission as the Town Museum.

SUMMARY:

This building requires repairs to replace rotting and deteriorating wood trim and exterior conditions. Life safety systems such as emergency lighting, fire alarm, exit signage need to be installed. The roof will need to be replaced to extend the life of the facility. An improved parking area and enhanced landscaping would be appropriate, and the main entrance should be handicapped accessible. Recent improvements include the additions of LED lighting, code compliant outlets and new electrical service. Additional improvements could be undertaken to restore the building and expand its functionality if grants or other resources could be assembled for this purpose.

PROGRAMMATIC ASSUMPTIONS:

The building is currently part of a complex of historic structures and served as the Carriage House for the Harnden Tavern. It is used for meetings of the Historical Commission and for the storage and display of historic artifacts. The second floor is not accessible and should be used for storage purposes only. The programmatic requirements for the building are not expected to change, based on the reviews and discussions undertaken as part of this study. The frequency and type of use could change in the future if the Historical Commission expands or changes its mission, or if the Town chooses to use the building for other purposes.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Site improvements should be undertaken to create a more attractive presence. The parking area should be striped as it is currently unstriped asphalt that extends to the building front. An exterior ramp should be provided for handicap accessibility to the front door. Crushed stone drip strips will improve drainage along the south and west facades. Plantings should not be in contact with the building's exterior.



Architectural and Structural Improvements

Building Exterior - Significant rot was observed at exterior trim, fascia, and sliding door hardware shrouds should be repaired. The building should be repainted. Exterior siding and trim in direct contact with the ground should be modified to prevent decay.

Roof - Asphalt roofing shows signs of wear and a new asphalt roof will be required in the near future.

PROGRAMATIC IMPROVEMENTS:

No programmatic improvements are needed.

Additional Observations:

The cost estimates assume modest improvements to extend the life of the building and maintain its current level of use. Considerably higher costs could be incurred if restoration or expansion of code-compliant, useable space were contemplated.

COST ANALYSIS:

CARRIAGE HOUSE FACILITY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$17,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1	-	LS	\$47,000
Roof	1	-	LS	\$20,000
(3) TOTAL CONSTRUCTION COSTS				\$84,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$26,000
(4) TOTAL PROJECT COSTS				\$110,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

13 HARNDEN TAVERN MINUTEMAN HEADQUARTERS

LOCATION: 430 Salem Street

YEAR BUILT: 1770

BUILDING AREA: --

This small structure is part of the cluster of buildings associated with the Harnden Tavern. It is used as the meeting place for the Wilmington Minutemen.



SUMMARY:

This small building is reputed to have once served as a cow barn, and currently serves as the meeting place and headquarters for an organization that re-enacts and commemorates the Revolutionary War militia from Wilmington. Exterior maintenance and periodic improvements are recommended to extend the life of the structure. However, no major deficiencies on the exterior were observed. The interior includes non-code compliant conditions including an access stair and other elements. Site improvements could include expanded gravel parking areas. Ongoing maintenance and repair of the building and its interior are assumed to be the responsibility of the tenants

PROGRAMMATIC ASSUMPTIONS:

The Minuteman Headquarters shares a site with the Harnden Tavern and Carriage House, and is used by the Wilmington Minuteman organization. There are no planned changes in its use. Because the building is used for gatherings, it may be appropriate to expand the gravel parking area to accommodate additional vehicles for occasional use.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

No deficiencies were observed or noted. However, additional observation of the interior conditions should be performed to confirm whether there are interior deficiencies that should be corrected. The building will require periodic painting and may require a new roof, depending upon the age, type and manufacturer of the asphalt shingles currently in place. Fireplaces should be cleaned on a regular basis and installation meets code by confirmation with the Building Official. Responsibility for use and other improvements will fall onto the steward.

PROGRAMMATIC REQUIRING IMPROVEMENTS:

No programmatic improvements are needed, unless the facility is used for different purposes in the future.

COST ANALYSIS:

Minor improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means. Responsibility for use and other improvements and associated costs are assumed to be absorbed by the tenant organization. As a result, no allocation of capital funds has been assigned to this facility.

14 HARNDEN TAVERN

LOCATION: 430 Salem Street

YEAR BUILT: 1770

BUILDING AREA: 3,338 GSF

This colonial-era tavern serves as the Town Museum, in conjunction with the Carriage House that is on the same site.

SUMMARY:

The Harnden Tavern was built in about 1770, it is on the National Register of Historic Places. The preservation of the building's historic character and components is directly associated with the Town's use of the property and the civic value placed upon it by the community. Improvements are needed to better meet life safety requirements, some building systems should be upgraded, and repairs should be undertaken on the interior and exterior. Parking is currently accommodated in unpaved gravel areas. Enhanced parking with paving surfaces consistent with the historic character of the site should be provided to limit deterioration of lawn and plantings. Allocation of space for administrative and meeting uses should be accomplished, with appropriate interior improvements to accomplish these goals.



PROGRAMMATIC ASSUMPTIONS:

The Harnden Tavern serves as the Town's Museum and is operated by the Historical Commission. The floor plans and interior spaces have been adapted to existing uses but are not adequately serving existing or potential functions. There is a lack of administrative space to support storage, meeting and office program needs. For example, the kitchen of the building is used for clerical purposes. Archival space improvements are needed to support the preservation of historical artifacts. There is currently no existing meeting space that can hold up the number of visitors that could attend lectures and events. However, interior improvements should not degrade or remove historic elements or characteristics of the historic tavern. Site improvements are needed to create additional parking spaces and distinguish them from the lawn and planted areas.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - The parking area should be enhanced with paved surfaces.

Architectural and Structural Improvements

Building Exterior - The facilities gutter drains should be extended further from the foundation line than they currently are.

Building Interior - Some plaster ceilings need repair. In the ell, some plaster cracking on a wall and at adjacent ceiling areas may be due to some structural subsidence that should be investigated in greater detail and repaired. Basement plaster ceilings are in general disrepair and are unsecured in some areas taking surface mounted wiring with them therefore, those ceilings should be repaired or removed, and wiring secured to structure.

Building System Improvements

Mechanical (HVAC) - Oil fill and vent piping on the exterior should be extended to a serviceable elevation above anticipated snowfall. Programmable thermostats should replace the existing dial type thermostats. Locations where chimney clean-outs are missing should be sealed.

Plumbing - Domestic water lines should be insulated. Original cast iron drainage piping should be replaced.

Electrical - It is recommended that all remaining knob and tube wiring be replaced and or removed. Electrical service upgrade is recommended. Existing service is marginally adequate for current total load. Lighting should be extended to the attic.

Building Renovation

General Requirements - A space needs assessment should be undertaken, to determine the scope and magnitude of interior renovations required to accommodate, and enhance the function, and use of the building. For this study, we are budgeting \$100 per square foot for renovation costs which include mechanical, electrical, and plumbing improvements as well. However, the construction costs may be more or less, depending on the final solution.

PROGRAMATIC IMPROVEMENTS:

A space study will be required to better allocate and equip the interior spaces to better match their current use. Cost premiums can be expected to accomplish changes within the context of appropriate historic restoration. For the purposes of planning, the provision of a high-quality parking area along the street edge and within the site should be planned for approximately 20 vehicles. The estimated improvements would provide approximately 8,000 square feet of drive and parking area. This could be accomplished with a gravel-coated asphalt with an epoxy system to fix the gravel in place.

COST ANALYSIS:

HARNDEN TAVERN FACILITY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$26,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	3,388	\$1.80	SF	\$8,000
Building Interior	3,388	\$8.40	SF	\$31,000
BUILDING SYSTEMS				
Mechanical (HVAC)	3,388	\$3.12	SF	\$12,000
Plumbing	3,388	\$4.50	SF	\$17,000
Electrical	3,388	\$13.20	SF	\$48,000
BUILDING RENOVATION				
General Requirements	3,388	\$120.00	SF	\$432,000
(3) TOTAL CONSTRUCTION COSTS				\$574,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$173,000
(4) TOTAL PROJECT COSTS				\$747,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4. Project Costs include engineering and design fees, permitting fees, legal fees, and other soft costs.

15 WILMINGTON MEMORIAL LIBRARY

LOCATION: 175 Middlesex Avenue

YEAR BUILT: 1968

BUILDING AREA: 14,910 GSF

This building houses the Town's library within a two-story building. It is accompanied by a limited parking area that has been created on three adjacent land parcels owned by the Town.

SUMMARY:

To meet the contemporary needs and support the activities typically associated with municipal libraries, the Wilmington Memorial Library needs to be significantly expanded and reorganized. The current facility is composed of approximately 14,910 gross square feet (GSF) of building area on two levels. Based on the evaluations performed for this master plan, the library building area should be expanded to correct deficiencies and provide a facility more in keeping with the scale and capacity provided in Massachusetts communities of a similar size and circumstances. For the purposes of this Facility Master Plan, it is assumed that a facility of about 25,000 GSF should be planned.

Because the addition would likely require the use of the site occupied by the Bookstore Next Door, it has been assumed that this function would be absorbed within the library and require approximately 1,000 additional GSF.

As a result, an addition of approximately 10,090 GSF is projected as a baseline improvement.

Parking for the library is currently insufficient for the types of programs and use that would likely occur in the future. As a baseline standard, a parking area of approximately 72 spaces is recommended for library use. As currently configured, the current municipal parking areas adjacent to the library contain about 47 spaces. Reconfiguration of the parking within the Town-owned land could expand the supply to more than 80 spaces, which would provide some overflow supply.

PROGRAMMATIC ASSUMPTIONS:

The program evaluations for the Memorial Library included discussions with staff, reviews of survey forms they prepared, and review of the programming and concept design for a proposed expansion prepared in 2004. The overall conclusion was that the current staff is operating within a facility that is significantly undersized relative to the types of uses that are both desirable and consistent with contemporary municipal libraries, including those in peer communities.



Contemporary municipal libraries are providing a greater amount and proportion of informal reading and working areas with computer and internet access than is available within them. Libraries that have an assortment of meeting spaces also become a venue for various library and education-related events. The current library is not well suited for expanding programs of this sort.

In 2004, a professional evaluation of the library and its future needs was conducted in the context of a grant application and Town consideration of creating a new library in Wilmington. The resulting recommended program called for a library with an area of 34,930 GSF. That proposal did not achieve the approvals necessary to advance the project. For the purposes of current facility planning, it has been assumed that a reduced total program may be more appropriate for estimating future facility needs. Staff observations noted specific current deficiencies, which have been taken into account in recommending library expansion.

Benchmarking similar facilities in similar town settings has been used to set a programmatic goal for the future, while taking into account other considerations. This evaluation recognized that the size of libraries varies in size and is representative of many factors, including the heritage and civic culture of various communities, and public priorities. However, an estimated building area of approximately 24,000 GSF for the library appears to be a reasonable approximation for Wilmington's library. Final determination of the most appropriate library size and characteristics will need to be determined through a focused programming and budgeting process that should occur as the Town proceeds towards this investment.

Among 20 towns with a population of 15,000 to 25,000 people that have had library additions or reconstructions since 2000, the average facility area is 22,897 gross square feet (GSF). For the 10 towns of this size category with new libraries constructed since 1969, the average facility is 20,925 GSF. For all 53 communities of this size category, the average facility size is 20,656 GSF. With Wilmington's current population of about 23,500 people and limited projected growth, the estimate building area used for this study is appropriately somewhat higher than these averages.

Among the programmatic deficiencies, the following major problems with the facility include:

- The stack areas, restrooms, and elevator are not ADA accessible.
- The meeting rooms are not accessible after hours. Patrons attending a meeting or program must pass through public service areas.
- There is not enough meeting space to meet a variety of demands, such as meetings between two people or small collaborative meetings of 4 to 6 people.
- There is not enough quiet study and private space relative to existing demand and future needs.
- There is inadequate separation between high activity areas and quiet areas.
- There is not enough building area to expand the collection or add new kinds of collections and features such as telescopes, lawn games, board games, science kits or other activity centers.
- There is no separate exhibit space.
- No one uses main entrance off Middlesex Avenue in the current configuration. Because of the relationship to the parking lot, the "back" entrance is primary entrance to building.
- Hallway/lobby spaces are being used for storage, computers, coffee machine, and seating.
- Staff spaces have been retrofitted into areas previously employed for book stacks.
- Stack areas are butted against wall on first floor, which does not allow for easy browsing.

- The space in the Children's Room is inadequate to accommodate the needs of families: preschool computer and reference books are located in the hallway. Parents have to stand or sit on small chairs due to not enough seating space.
- The space for Teens is currently in the Children's Room. Teens need a larger space that is separated from young children.

The existing Bookstore Next Door is composed of about 1,250 GSF. If this use were provided within a re-designed library, the area allocated could reasonable be somewhat less. As a result, approximately 1,000 GSF of new and/or renovated space is assumed to be adequate to replace the existing facility.

The site has 47 parking spaces, which is shared with the Book Store Next Door staff and patrons. If there are more meeting rooms, events and overall patronage of the library, then parking demand will increase. For the purposes of overall planning, a ratio of approximately 3 spaces/1,000 GSF of parking area has been assumed for the library needs. This assumes that no additional parking would be required for the Bookstore Next Door. As a result, the parking demand is estimated at approximately 72 spaces. It should be noted that the front yard, curb, and sidewalk could be altered to provide for some parking spaces along the street to supplement the parking lots. However, this has not been assumed in the baseline scenario for the library.

The current library is located near a funeral home. During some time periods, visitors to the funeral home use public parking spaces. The degree and frequency of this conflict has not been measured, but is considered to be a significant inconvenience for library patrons during these time periods.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Because of the extent and value of the changes to the existing building, all aspects of the site and the building would need to be brought up to current building code standards.

Site Improvements

Site and Landscape - To accommodate an expanded library, additional parking will be required for a total capacity of 72 spaces. Site lighting, plantings and landscape elements should also be considered in the site development.

Architectural and Structural Improvements

Building Exterior - Exterior brick masonry requires repointing. Exterior wood trim requires refinishing.

Building Interior - Bathrooms are not ADA compliant. Stair railings are not to current standards. Building security is challenged by library planning and two entrances. The building does not have an intrusion system.

Building System Improvements

Mechanical (HVAC) - The original boiler is in place and should be replaced. The boiler breaching should be replaced when the boiler is replaced. Boiler combustion air supply is inadequate and needs to be enhanced. Building exhaust is limited and needs to be expanded throughout the facility.

Plumbing - A thermostatic mixing valve and expansion tank needs to be installed at the water heater. Water piping near the tank needs to be insulated. Cast iron drainage piping should be replaced.

Fire Protection - A sprinkler system will be required with an addition. The building area is 14,910 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings, in which renovations will exceed 7,500 square feet in area, or if in which major alterations are planned. Under these conditions an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A hydrant flow test, is required to determine adequate capacity for fire protection.

Electrical - Emergency lighting and exit signs need updating. Fire alarms, horn strobes, pull stations, and smoke detectors do not provide an appropriate amount of coverage for a non-sprinklered building, and will need to be re-evaluated with an addition, which will require that the building have a sprinkler system. The existing electrical equipment is beyond its useful life. The emergency standby generator, is due to be replaced. There is no separation of life safety equipment, and optional standby.

PROGRAMATIC IMPROVEMENTS:

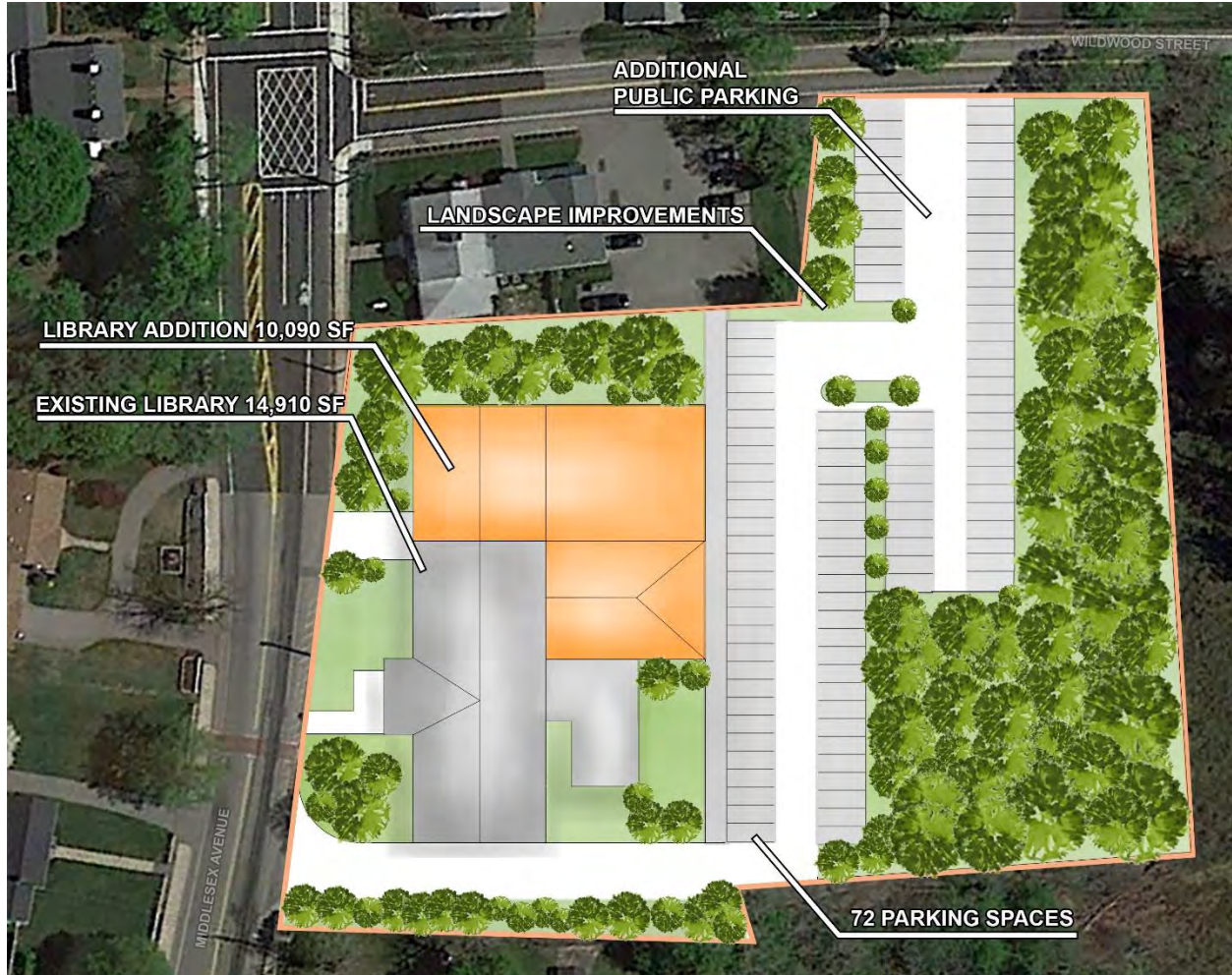
To accommodate the projected program of 25,000 GSF, a significant addition would be required to the existing library facility. To fit within the sites owned by the Town and provide adequate parking, the addition could be accomplished with a two-story addition to the north of the existing facility, using land currently occupied by the Bookstore Next Door. This building would be demolished, as a result.

The addition could include a re-organized circulation core to better accommodate those with handicaps, and would allow the re-organization of interior spaces in the existing building to better match the programmatic requirements of a contemporary municipal library. It is assumed that the existing interior would be substantially reconfigured and reconstructed with entirely new building systems, as part of the reconstruction.

The addition would be designed and constructed to allow phased improvements to allow ongoing operations to the extent practical. Phased construction will result in some cost premiums relative to new construction, as well as operational challenges.

The existing parking lots would be re-organized and expanded within the limits of the land owned by the Town while avoiding impacts on regulated wetlands which are behind the current library. A rationalized parking area should yield a total of over 80 parking spaces, somewhat in excess of the typical parking demand projected for the library, which would be about 72 parking spaces. The site would be improved with accessible pedestrian walkways and landscaping in keeping with its civic use and prominent location.

SITE PLAN:



COST ANALYSIS:

WILMINGTON MEMORIAL LIBRARY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$807,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	14,910	\$28.56	SF	\$452,000
Building Interior	14,910	\$5.70	SF	\$91,000
BUILDING SYSTEMS				
Mechanical (HVAC)	14,910	\$16.20	SF	\$257,000
Plumbing	14,910	\$4.02	SF	\$64,000
Fire Protection	14,910	\$9.00	SF	\$144,000
Electrical	14,910	\$23.04	SF	\$365,000
BUILDING ADDITION				
General Requirements	10,090	\$360.00	SF	\$3,851,000
(3) TOTAL CONSTRUCTION COSTS				\$6,031,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS				\$1,810,000
(4) TOTAL PROJECT COSTS				\$7,841,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4. Project Costs include engineering and design fees, permitting fees, legal fees, and other soft costs.

16 MOTH HOUSE/ MORSE BARN

LOCATION: 240 Middlesex Avenue

YEAR BUILT: 1920

BUILDING AREA: --

This is an historic outbuilding that has been converted into general storage use. The building is currently being used for general municipal storage.

SUMMARY:

To extend the life of this structure and preserve its historic character, exterior damage and deferred maintenance should be corrected with repairs to the exterior siding and trim. There is significant damage to the siding and trim due to rot and it is likely the wall sheathing is rotted as well. The associated structure in the corresponding areas of deterioration may also be in need of repair.

PROGRAMMATIC ASSUMPTIONS:

The facility is used only for storage. It is an unoccupied facility. The use is appropriate for the type of building as long as it is used for light weight storage. The facilities program is not expected to change. However, if it were to be for used another purpose in the future other than storage, code compliance may come into play.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

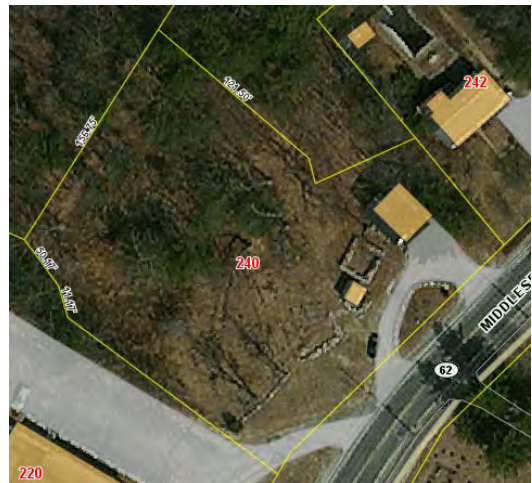
Site and Landscape - The grass area is in direct contact with the building siding, it should be regraded with a continuous crushed stone drip strip installed along the building perimeter.

Architectural and Structural Improvements

Building Exterior - Siding currently comes in direct contact with the ground at the bottom of the south west wall. The windows need repairs and re-glazing as well as the siding, trim and doors.

Roof - The south side of the roof appears to have been re-shingled which is apparent by newer metal drip edge flashing on that side of the gable and eve. The remaining portion of the roof should be anticipated to require re-roofing. The roof should be inspected and new roofing applied as required.

Structure - There is subsidence of the south west side wall evidenced by sloping clapboards flanking the southern-most garage door, this is suggestive of structural deterioration. The structure should be evaluated and any structural damage from rot or movement repaired.



Building System Improvements

Plumbing - Domestic water plumbing fixtures, wall hydrants, and hose bibs are non-compliant with current codes. Upgrades may be needed if these connections are to be used in the future.

Electrical - The 60-amp service and circuit breaker panel are beyond their expected useful life and should be replaced.

PROGRAMMATIC IMPROVEMENTS:

Currently there are no programmatic improvements needed.

Additional Observations:

Some of the suggested improvements are accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements to the amount indicated in this cost analysis.

COST ANALYSIS:

MOTH HOUSE/ MORSE BARN	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$4,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1	-	LS	\$45,000
Roof	1	-	LS	\$6,000
Structure	1	-	LS	\$7,000
BUILDING SYSTEMS				
Plumbing	1	-	LS	\$7,000
Electrical	1	-	LS	\$10,000
(3) TOTAL CONSTRUCTION COSTS				\$79,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$24,000
(4) TOTAL PROJECT COSTS				\$103,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

17 PUBLIC BUILDINGS OFFICE

LOCATION: 30 Church Street

YEAR BUILT: 1954

BUILDING AREA: 6,694 GSF

This building and associated garage bays serve the Town's Public Building Department and provides office space, maintenance support facilities and storage.

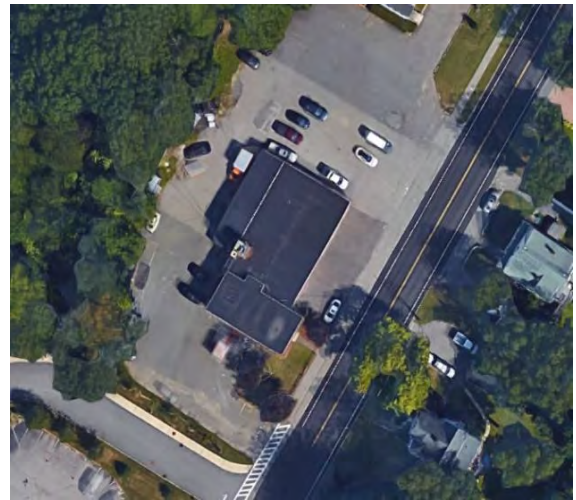
SUMMARY:

The Public Buildings Office is a repurposed fire station. The station house is used for administrative offices and work spaces. The vehicle bays are used for vehicles and miscellaneous equipment storage and operations. The building has some deferred maintenance that should be corrected. In addition, some interior improvements such as re-organized partitioning would provide a more effective working environment. Additional areas in the rear of the facility could be paved or otherwise improved to provide additional storage areas for equipment and provided with a pre-manufactured storage shed if needed for security purposes.



PROGRAMMATIC ASSUMPTIONS:

The functions that occur within this structure and site appear to be generally consistent with the overall size of the buildings, parking and site circulation. However, the functions have adapted to room and building layouts that were inherited from its previous use as a Fire Department facility. Additional partitioning and re-organization of the interior circulation would provide for better separation of different uses, such as the space currently shared by the Information Technologies administrative offices and department maps. Interior changes are also recommended to provide for improved, dedicated, well-organized storage spaces. The entrance area should be improved to provide space for visitors and to facilitate the interactions of the staff with visitors. The Department is in need of additional storage space for some equipment, such as snow blowers.



IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - A walkable route from the parking area to the main entrance in the front of the building needs to be provided. The parking area needs better defined parking spaces with handicapped parking identified. Signage that defines parking areas would improve site circulation and eliminate confusion.

Architectural and Structural Improvements

Building Exterior - The brick masonry façade requires repointing throughout with the greatest need at the back of the tower and at window openings. Garage windows are in poor condition and should be repaired or replaced. Wood window bucks around replacement window openings need to be painted. Wood trim at the main entrance is in need of repair. An abandoned flue penetration on the northeast façade needs to be covered or sealed on the exterior.

Building Interior - The interior finishes are generally in fair to poor condition and should be updated. The upper level kitchen flooring is in very poor condition and needs to be replaced. Interior level transitions are not compliant with current accessibility standards, and require upgrades. Toilet rooms should be upgraded to achieve current accessibility standards.

Building System Improvements

Plumbing - Domestic water pipes should be insulated and labeled. A thermostatic mixing valve should be installed at the outlet of the water heater. An expansion tank should be installed at the cold-water make-up for the water heater. Cast Iron drainage piping is in poor condition and should be replaced. Horizontal storm drainage piping should be insulated. The garage has floor drains that should be directed to an oil/gas separator.

Electrical - Electrical systems are generally in poor condition. Abandoned electrical wiring including a service entrance on the exterior of the building and it should be removed and penetrations in finish systems should be patched. Emergency lighting and exit signage is insufficient and needs updating. The fire alarm system should be updated to provide coverage for the building. The life safety equipment and the optional emergency standby power system should be separated.

PROGRAMMATIC IMPROVEMENTS:

A design evaluation will be required to establish the most appropriate interior improvements. For the purpose of this master plan, an approximate funding allocation has been estimated that would provide for typical re-organization and associated building systems and architectural improvements for the adaptive reuse of buildings of this age and type. The facility would benefit from a shed that would provide cover for vehicles, equipment and other materials.

The site can be adapted to provide more storage, if necessary, with a pre-manufactured shed and pavement improvements along the rear of the parcel. However, such improvements have not been specifically budgeted within the facility cost estimate.

Additional Observations:

Some of the suggested improvements are accomplished as ongoing maintenance, painting and repair projects within the purview of Town staff and associated budgets. This will reduce the need to apply capital funding for improvements to the amount indicated in this cost analysis.

COST ANALYSIS:

PUBLIC BUILDINGS OFFICE	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$59,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	6,694	\$14.00	SF	\$100,000
Building Interior	6,694	\$21.00	SF	\$150,000
BUILDING SYSTEMS				
Plumbing	6,694	\$9.72	SF	\$70,000
Electrical	6,694	\$16.20	SF	\$116,000
(3) TOTAL CONSTRUCTION COSTS				\$495,000
PLUS 30% FOR FEES AND ADMINISTRATION COSTS				\$149,000
(4) TOTAL PROJECT COSTS				\$644,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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18 WILMINGTON MEMORIAL PUBLIC SAFETY BUILDING

LOCATION: 1 Adelaide Street

YEAR BUILT: 2001

BUILDING AREA: 36,000 GSF

This building serves both the Police and Fire Departments with administrative and operational space and facilities.

SUMMARY:

This is a newer facility that is generally in good condition meeting most of the current space needs of the public safety departments of the Town. There are several specific deficiencies associated with deteriorating conditions that need to be remedied. Interior improvements will be needed to adapt to contemporary public safety practices and standards. The existing parking supply is somewhat constrained, and the Town should take steps to provide for additional nearby parking, if required.

As a separate topic, this master plan is considering trends and practices associated with the emergency response times for Fire Department equipment. This topic is independent of the requirements for the existing headquarters and primary station facility.

PROGRAMMATIC ASSUMPTIONS:

The Public Safety Building currently houses the police, fire, animal control and the associated Information Technology functions, as well as first response communication. Each department housed in this facility has different programmatic needs.

The departments will need to adapt existing building areas and circulation to meet current and projected needs. For example, the police station sally port, which is undersized for its use, would benefit from re-organization. There is an insufficient secure evidence storage. A new evidence storage area with a dedicated ventilation system needs to be created. The briefing room is in a poor location on the second floor and would be better located adjacent to the patrol supervisor with easy access to both patrol locker rooms and vehicle fleet. The Fire Department decontamination room is too small to meet needs.

Future needs would be dependent upon the expansion of services or provisions for new equipment not within the current fleet. If this were to occur, additional covered storage areas or parking bays might be needed. However, there are no specific current plans for equipment or program expansion.



The on-site parking lot is sometimes used to capacity, and staff and visitors use off-site parking spaces. Parking needs to serve staff, visitors, department vehicles and vehicles seized as part of police activities. There is no specific estimate or analytical basis for establishing the number of additional spaces that may be needed. However, the Town should be prepared to designate nearby on-street, and off-street spaces on municipal land for additional parking in the future.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Street access from the site does not include a traffic light to aid emergency vehicles to enter the street; provision of a signal is advisable. There is a lack of physical buffers, and vegetative screening between the site and adjacent lots, which should be addressed with site improvements.

Architectural and Structural Improvements

Building Exterior - Drywall soffit at the public entrance is failing and needs to be replaced. Air/vapor barrier in the attic needs to be repaired, as it is not continuous or sealed.

Building Interior - Carpet finishes are worn to failure in several locations, including the fitness room. Interior paint on steel surfaces in the apparatus room requires maintenance. Cold floors in the second floor office are in the zone above the first story arcade, this should be addressed by improving insulation above the arcade soffit. Doors throughout the facility need to be evaluated as they do not close properly. The main electric room, which is required to maintain a fire rating, requires fire stopping at the holes in the ceiling and minor penetrations.

Building System Improvements

Mechanical (HVAC) - Laboratory ventilation is inadequate and needs to be improved.

Plumbing - Booking area floor drains flood. The police department drains are possibly connected with the fire department kitchen drains. This should be investigated in greater detail and addressed.

Additional Observations and Notes

Building security and access control are an important aspect of the public safety functions. Upgrades should be budgeted and provided, in keeping with contemporary standards. For example, keypad controls are reported to be unreliable. Video monitoring may not be sufficient and is not centrally controlled. There is no security intrusion system.

PROGRAMMATIC IMPROVEMENTS:

The overall building and site sizes appear to be adequate to provide for police and fire functions, but will require the re-organization of interior spaces and provision of additional technology, to better accommodate existing and future needs. This is likely to include additional portioning, relocation of various internal functions, and potential site improvements, if additional equipment or functions are located at the site.

COST ANALYSIS:

WILMINGTON PUBLIC SAFETY BUILDING	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$287,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	36,000	\$4.56	SF	\$175,000
Building Interior	36,000	\$27.60	SF	\$1,054,000
BUILDING SYSTEMS				
Mechanical (HVAC)	36,000	\$0.90	SF	\$35,000
Plumbing	36,000	\$0.60	SF	\$24,000
(3) TOTAL CONSTRUCTION COSTS				\$1,575,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$473,000
(4) TOTAL PROJECT COSTS				\$2,048,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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19 SCALEKEEPER'S OFFICE

LOCATION: 240 Middlesex Avenue

YEAR BUILT: 1840

BUILDING AREA: 120 GSF

This building is a small historic structure that is part of Wilmington's visible heritage.

SUMMARY:

The building is in generally good condition. Other than periodic maintenance level improvements, there are limited additional requirements. It has been noted that the electric power line that extends from the adjacent Moth House/Horse Barn is in poor condition and would be advisable to be replaced.



PROGRAMMATIC ASSUMPTIONS:

The facility is an unoccupied building of historical significance. The building is also being used for a limited amount of municipal storage and serves as an antique showpiece. The use is appropriate as long as it is used for light-weight storage. The program use is not expected to change. However, if it were to be for another purpose in the future other than storage, its code compliance might come into play.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

All existing electrical power items should be replaced to meet current code standards. It is assumed that the expenditure could be covered through maintenance budgets rather than becoming a capital expenditure.

PROGRAMMATIC IMPROVEMENTS:

Currently there no programmatic improvements needed.



COST ANALYSIS:

Note: Improvements can be achieved through the Town's maintenance and operating budget administered by the Public Building Department, or by other means. As a result, this building is not expected to require capital improvement funds.

20 ROMAN HOUSE SCHOOL ADMINISTRATION

LOCATION: 161 Church Street

YEAR BUILT: 1900

BUILDING AREA: 4,498 GSF

This former residence is an historic structure that has been adaptively reused as offices for portions of the School Department Administration that can reasonably fit within it.



SUMMARY:

The school administration requirements are not well served by this building. It is not large enough to absorb the full extent of the School Administration staff and functions, which require a building area approximately three times the size of this structure. In order to consolidate all of the related functions within one structure, The uses within this building should be relocated within a new Town Hall/School Administration building or complex. As a result, the future use and disposition of this building and this site can be considered for non-municipal purposes.

PROGRAMMATIC ASSUMPTIONS:

Currently the Roman house has about 10 staff members. Each employee either has a work station or private office. They currently have a residential kitchen that would be better as a staff break room. They have a large conference room that accommodates 10-12, they need a room that seats 16. They do not have a small conference room. The copy work production area meets the need. The reception area accommodates 2 patrons, but would like to accommodate 4. They need a total of 22 parking spaces. There are 8 principles alone that must meet the school administration for meetings. Overall the facility lacks adequate storage space.



There are additional staff and space needs that are currently accommodated in locations within the School system because of a lack of available space in the Roman House. The program requirements for consolidated School Administration functions are described within the recommendations for a combined Town Hall/School Administration facility.

IMPROVEMENTS:

Not applicable

COST ANALYSIS:

Costs may be incurred upon determination of the future use of this structure, but have not been included in capital budget estimates.

21 SOUTH SCHOOL FOOD PANTRY

LOCATION: 142 Chestnut Street

YEAR BUILT: 1800

BUILDING AREA: 1,250 GSF

This is a small, historic former school building that has been retained by the Town and is adaptively reused by a non-profit food pantry operation providing public services.

SUMMARY:

This former school house was built around 1800. It is a wood framed structure in generally good condition on full fieldstone foundation. The current building does not meet current codes and is not adequately adapted to its existing use. Renovations to provide adequate food storage, handicapped accessibility, energy efficiency and other improvements to extend the life of the building and better serve its purpose are recommended, if the food pantry use continues. The Town should consider whether it wishes to maintain the use in a deficient and aging building, or whether the building should be upgraded to contemporary standards and its life significantly extended as a result. This scenario assumes that this longer-term approach is taken.

PROGRAMMATIC ASSUMPTIONS:

The building is used for distribution of food, including food storage, handling, and the operations and public interaction associated with this function. The facility appears to be generally suited to its current functions, and there are no current anticipated significant changes in the type or extent of the programs offered here. The area dedicated to parking appears to be adequate. However, the area dedicated to food storage is inadequate and includes an exterior freight container on the site. Basement access could be improved and an appropriate storage area created.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape - Existing perimeter concrete slabs should be removed, hardscape paving or landscaping should be separated from the building by a crushed stone perimeter strips 3' wide to allow proper drainage.

Architectural and Structural Improvements

Building Exterior - The entire exterior siding and trim should be refinished including the water table board and cap which have significant deterioration. Attic window openings have been covered with painted plywood, which should be removed and windows installed that are in keeping with the architectural aesthetic of the building. Wood framed window screens have been affixed over three windows on the north-east façade and need repair.



Concrete slab at front façade is heaved and should be repaired. Siding and trim repairs are required on the exterior, especially where it contacts stone foundation. Insulating the exterior walls and attic should be considered during the course of renovation as well as new insulated windows.

Structure - Also recommended is a new, full-depth insulated foundation with perimeter and basement and under-slab drainage system.

Roof - Gable vents should be installed above the insulated attic joists.

Basement - A bulkhead protected basement access stair and door should be provided. The basement storage area may be subject to freezing. Rubble infill at wood beam sills suggests that some sill rot may have been excavated and infilled.

Building Interior - Interior finishes are serviceable, but outdated. Wood floors require refinishing; tile floors are out of date and should be refreshed. The marble threshold to the bathroom is broken from subsidence and needs to be repaired. Deadbolt hardware on rear exit is non-conforming for an exit door and needs to be replaced with appropriate exit hardware. The original ceiling heights should be restored and attic insulation installed. The existing wood burning fireplace and chimney should be removed with the existing foundations and the floor infilled with compliant structure and finishes to match existing. All new plumbing and accessible bathrooms will be required. New interior fit-out tailored to the anticipated program occupancy (Food Pantry), will include appropriate wall and ceiling finishes, refinished floors, new window trim. Storage facilities and access routes should be appropriate to the configuration.

Building System Improvements

Mechanical (HVAC) - HVAC systems should be replaced with a new condensing boiler and insulated duct work with programmable thermostatic controls. The kitchen hood serves no equipment; it is recirculating air and is not protected; it could be removed. Bathroom fan discharges into the attic space and should extend to the roof.

Plumbing - Majority of plumbing systems are reaching their life expectancy and will need replacement. Plumbing fixtures do not meet ADA standards, and are not water-conserving, and will need to be replaced in the event of a renovation. Domestic water lines should be insulated and labeled. The water heater will need to be replaced as it has exceeded its life expectancy. The cast iron drainage piping is in poor condition and should be replaced and the PVC waste piping is non-compliant for commercial buildings and will require replacement as well during a renovation.

Electrical - Interior emergency lighting will need to be updated, it is deficient and exterior emergency lighting should be installed. There is only one exit sign and it is not functional. The miscellaneous wires dangling on the exterior and abandoned electric power hardware need to be removed from the façade. Kitchen outlets will need to be GFI protected.

PROGRAMMATIC IMPROVEMENTS

Additional food storage area should be created within the basement with access through a bulkhead or ramp for access.

COST ANALYSIS:

SOUTH SCHOOL FOOD PANTRY	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$9,000
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Building Exterior	1,250	\$52.80	SF	\$70,000
Structure	1,250	\$7.20	SF	\$10,000
Roof	1,250	\$0.96	SF	\$3,000
Basement	1,250	\$7.20	SF	\$10,000
Building Interior	1,250	\$36.72	SF	\$49,000
BUILDING SYSTEMS				
Mechanical (HVAC)	1,250	\$26.40	SF	\$35,000
Plumbing	1,250	\$21.84	SF	\$30,000
Electrical	1,250	\$8.40	SF	\$12,000
(3) TOTAL CONSTRUCTION COSTS				\$228,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION COSTS				\$69,000
(4) TOTAL PROJECT COSTS				\$297,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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22 TOWN HALL AND SCHOOL ADMINISTRATION

LOCATION: 121 Glen Road

BUILDING AREA: 20,000 GSF

RELOCATE TO: Swain Site and adjacent land

SUMMARY:

In the preferred scenario, the Town Hall departments would be combined with the School Administration and Veteran Services functions to create a composite municipal building sited in the same approximate location as the former Swain School, facing the Town Common.

The site circulation and parking would be combined with access to and from the High School parking area. The high school parking area would need to be expanded within the existing municipally-owned site to retain the same amount of parking as is currently dedicated to that purpose.

This new municipal building might best fit the site as a three-story structure with a footprint of about 14,000 square feet. The building would have a prominent entrance facing the Town Common, and would be set back from the adjacent streets to create generous landscaped areas. A secondary entrance would be located facing the parking that would serve the Town Hall.



PROGRAMMATIC ASSUMPTIONS:

The Town Hall would replace the existing structure and correct existing deficiencies in the amount and type of spaces. These have been quantified using typical space standards and comparisons with other facilities. In order to meet these needs, the Town Hall would require approximately 9,800 additional gross square feet (GSF) of additional area. Because the Town is expected to experience modest growth over the next two decades, it would be prudent to account for an additional 5% of floor area, resulting in a total projected program need for about 31,300 gross square feet. As separately documented, the School Administration functions, if relocated within an expanded or new Town Hall, would require approximately 10,900 gross square feet. Combined, the Town Hall, School Administration and the absorption of Veteran services will require approximately 1,000. This results in a projected facility size of approximately 42,200 gross square feet.

The allocation of parking assumes that there are no shared parking benefits associated with the adjacency of this new facility to the High School parking. Depending upon the outcome of decisions regarding the existing Buzzell Senior Center, additional parking or shared parking opportunities can be anticipated. If shared parking opportunities are identified, then the total amount of parking can be reduced from that indicated in this scenario.

SITE PLAN OPTION A:



SITE PLAN OPTION B:



COST ANALYSIS:

TOWN HALL/SCHOOL ADMINISTRATION	AREA	(1) COSTS	SF LF LS	(2) APPROXIMATE CONSTRUCTION COSTS 2017
DEMOLITION				
Demolish Buzzell Center	8,308	\$10.00	SF	\$90,000
SITE IMPROVEMENTS				
Site and Landscape	1	-	LS	\$2,729,000
NEW CONSTRUCTION				
Architecture	42,900	\$120.00	SF	\$5,457,000
Structure	42,900	\$45.60	SF	\$2,075,000
Mechanical (HVAC)	42,900	\$42.00	SF	\$1,911,000
Plumbing	42,900	\$14.40	SF	\$656,000
Fire Protection	42,900	\$9.00	SF	\$411,000
Electrical	42,900	\$33.60	SF	\$1,529,000
(3) TOTAL CONSTRUCTION COSTS				\$14,858,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION COSTS				\$4,458,000
(4) TOTAL PROJECT COSTS				\$19,316,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

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SCHOOL FACILITIES

Overview

The Wilmington Public School district currently operates six schools to serve the education needs of Pre-K – Grade 5. The six schools require students to make more facility transitions than is typically seen in elementary education. The number of facilities and required transitions in Wilmington creates a situation where expensive core program spaces like gymnasiums, libraries, cafeterias, and kitchens are duplicated. This duplication requires WPS to spend more money on support spaces rather than the learning spaces that directly support curriculum. Furthermore, the high number of transitions creates discontinuity, between students and teachers, as the student progresses from one facility to another.

The current school program structure requires a significant number of transitions for young students, as they advance through the lower school levels. In general, the transitions are found to be detrimental to the educational experience of students. School systems that offer fewer transitions provide an educational path that is less disruptive to students and teachers, and provides for greater continuity and familiarity between students, staff, and teachers. This helps the school system to better track students' academic and personal development. A more continuous program is more effective in providing benefits associated with programs that span several grades and the mentoring of younger students by older pupils.

Enrollment Projections

According to recent school population projections, enrollment within the WPS lower schools is not expected to change significantly over the next few years. Although longer term projections might be useful, the demographic projections for Wilmington generally indicate the probable gradual decline in school age children in the Town over the longer term.

From 2005-06 through 2015 –16, the Pre-K – 5 enrollments has slowly but steadily declined by 269 students or about 14.2%.

Student Enrollment 2005-2016 (Pre-K – Grade 5)										
2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
1,892	1,884	1,883	1,828	1,867	1,808	1,758	1,729	1,746	1,677	1,623
Source: Massachusetts School and District Profiles - Wilmington										

Looking forward, the Wilmington Public Schools are currently updating their 10-year student enrollment projections. The last projections end in 2020-2021 as follows:

Projected Student Enrollment 2016-2021 (Pre-K – Grade 5)				
2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
1,618	1,607	1,612	1,581	1,628

Source: Enrollment and Class Size, Wilmington Public Schools, FY' 17 Superintendent Recommended Budget

Student enrollments for the PreK to Grade 5 levels are projected to continue to decline by another 42 students through 2019-2020 and then increase. WPS should verify if the increase is the beginning of a trend or an anomaly in the new projections by creating new projections to 2026. Updated data and analysis will assist the Town's decisions regarding the recommended consolidation.

School Facility Recommendations

The following descriptions provide a summary of relevant building conditions, programmatic assumptions, and recommendations regarding facility improvements or changes.

23 BOUTWELL SCHOOL

LOCATION: 17 Boutwell Street, Built 1961

The Boutwell School is a round-shaped building of the same design and vintage of the current Town Hall building. It shares a campus with the Middle School and the West Intermediate School.

SUMMARY:

CURRENT GRADE LEVELS: Grades Pre-K and K

CURRENT NUMBER OF STUDENTS: 165 in 9 regular classrooms

STUDENT CAPACITY: 141

BUILDING AREA: 20,800 GSF, one story

BUILDING CONDITION: Fair Condition

SITE AREA: 41.3 acres shared with West Intermediate and the Middle School



PROGRAMMATIC ASSUMPTIONS:

The Boutwell School is very small and is less efficient to operate than larger schools. It is currently over capacity. Boutwell would be closed and the students redistributed to an enlarged school as part of the overall strategy for facilities recommended in this *Plan*.

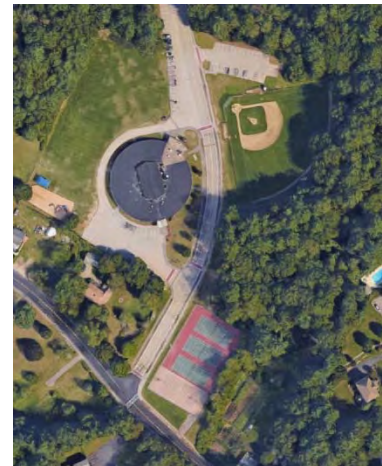
IMPROVEMENTS:

SITE AND BUILDING IMPROVEMENTS:

Depending upon the phasing and timing of construction of replacement facilities, the Town may need to provide interim improvements to maintain the operational quality and appropriate learning environment.

PROGRAMMATIC IMPROVEMENTS:

Using the Massachusetts School Building Authority (MSBA) standards, the area devoted to the relocation of Boutwell School should increase by about 8,900 square feet above the current 20,800 square feet within the facility.



COST ANALYSIS:

Based on the recommendation to close this facility, the program would be redistributed to an improved, consolidated elementary school. As a result, there would be no costs attributed to the Town's capital budget for this school, and the costs to expand other schools is separately estimated and allocated.

24 NORTH INTERMEDIATE SCHOOL

LOCATION: 320 Salem Street, Built 1962

SUMMARY:

CURRENT GRADE LEVELS: Grades 4 - 5

CURRENT NUMBER OF STUDENTS: 279 in 13 regular classrooms

STUDENT CAPACITY: 289

BUILDING AREA: 54,569 GSF, three stories including a partial daylight basement

BUILDING CONDITION: Fair to Good Condition. This facility was highly rated among the comparative evaluations of the schools included in this *Plan*.

SITE AREA: 13.98 acres



PROGRAMMATIC ASSUMPTIONS:

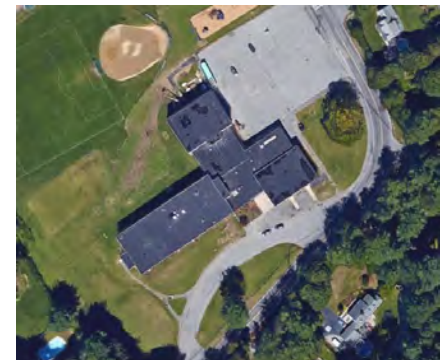
The North Intermediate School current enrollment matches its capacity. The school will need to expand to absorb third grade students, as part of the overall consolidation strategy.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The bus loop and the car parking systems are well separated for safety. The school has adequate parking at about 100 spaces, plus playfields and a playground. There does not appear to be a paved play area unless part of the parking lot is used, but the parking is inadequate for assemblies and events. There are four overlapping playfields, three public tennis courts, and a basketball court on campus.



Architectural and Structural Improvements

Building Exterior - The original architectural construction documents have not been found, but the structural drawings indicate solid masonry exterior walls with little to no wall insulation, which can be addressed with future improvements. The Wilmington School Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings. The window and exterior door systems were replaced in 2014. The roofs over the classroom wing are over 20 years old. Replacing the roofs

has been planned, with the Gym and Café scheduled for FY2017, and the classroom wing scheduled for FY2018. There is no thermal vestibule at the main entrance.

Partial Daylight Basement - The lowest floor level exits at grade to the rear because of the site configuration. It contains the old gym lockers, Instrumental Band, C.A.R.E.S Offices, mechanical and storage. Upgrades to this level should be accomplished as noted for the building interior, as described below.

Building Interior – Improvements should be accomplished to achieve accessibility standards within the building. Conditions that should be addressed include restrooms not fully accessible. Many doors have knob hardware instead of lever hardware to meet current standards. Several level changes are not accessible. Interior signage appears to be mounted too high relative to accessibility standards. There is no elevator linking the three floor levels. A wheelchair lift is used to move from floor to floor in this three-story building and is technically compliant. However, it will need to be in good operating condition to comply with applicable standards. The Town could consider providing an elevator if significant additions and renovations are planned. Handrails and guard rails at stairs are not all compliant and should be upgraded to full ADA compliance.

Other issues included vinyl asbestos tile remaining in several areas that should be removed, which is scheduled for FY2019. There is a need to upgrade the wall and floor finishes which are in fair to poor condition. Casework throughout the school is in need of repair, resurfacing, or replacement.

Building System Improvements

Mechanical (HVAC) – The boiler system was replaced in 2015. All associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. Ventilation improvements should be accomplished for interior rooms (those without windows) that have poor ventilation. There is no code-required ventilation at the corridors and administration offices, and this should be corrected. Future improvements should include replacement of toilet ventilation systems. Existing asbestos pipe insulation should be removed and replaced. As part of an addition and renovation project, the pneumatic mechanical system controls should be replaced with a DDC system. The kitchen hood over the cooking area has no make-up air and the dishwasher has no exhaust system, which should be provided in the future.

Plumbing - The school has municipal sewer service (as of 2015) and water service. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards, are not water conserving and should be replaced.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 54,569 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A sprinkler system should be provided in concert with major alterations. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems that effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the

assessed value of the building. Buildings for which sufficient water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection.

Electrical – The building has three phase power service. The main electrical switchboard and distribution panels should be upgraded and replaced. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Kitchen receptacles are not GFI protected and should be upgraded. The paging system should be updated. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as a security vestibule at the main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the North Intermediate School is to provide 36 square feet per student and a maximum of 25 students per classroom. When this review was undertaken, 25 students per classroom was noted in some cases, particularly clustered in the fifth grade. Special education students were included in the total allocation of students.

Using the MSBA standard, the school is slightly larger than the minimum sought by the state. The existing building area is 54,569 square feet. Using the enrollment of 279 students and 180 square feet of school area/student, the school area requirement would be 50,220 square feet. Existing regular classroom sizes are reasonably close to meeting the MSBA standards of PreK-K classrooms (1,100-1,300 square feet), and Grades 1-8 classrooms (900-1,000 square feet).

However, the allocation of space within the building does not conform with MSBA standards. For example, the North Intermediate library is 48% and the gym is 73% of the recommended MSBA standard size. There should be also be additional spaces for conference rooms, offices, small group meetings and special education programs.

Additional space will be need accommodate the consolidation changes associated with absorbing 3rd grade students. This will contribute to approximately 13,790 square feet of new construction.

COST ANALYSIS:

NORTH INTERMEDIATE	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	33,765	-	SF	-
Existing Site Area less building footprint	450,927	\$0.73	SF	\$330,000
Minor repairs and upgrade	55,281	\$2.00	SF	\$111,000
New parking	23,800	\$12.30	SF	\$293,000
New landscape improvements	395,646	\$1.00	SF	\$395,000
Utility improvements	-	Allowance	-	\$125,000
Sitework associated with Additions	13,790	\$8.45	SF	\$117,000
Total Site Area	474,727	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	54,569	-	SF	-
Renovated Area	54,569	\$105.74	SF	\$5,770,000
Additions/New Construction	13,790	\$239.40	SF	\$3,302,000
Total Building Area	68,359	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	68,359	\$47.88	SF	\$3,274,000
Plumbing	68,359	\$5.99	SF	\$410,000
Fire Protection	68,359	\$9.98	SF	\$682,000
Electrical	68,359	\$40.70	SF	\$2,783,000
TOTAL CONSTRUCTION COSTS (3)				\$17,592,000
PLUS 30% FOR FEES AND ADMINISTRATION				\$5,278,000
TOTAL PROJECT COSTS (4)				\$22,870,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

25 SHAWSHEEN SCHOOL

LOCATION: 298 Shawsheen Avenue, Built 1970

SUMMARY:

CURRENT GRADE LEVELS: Grades 1 - 3

CURRENT NUMBER OF STUDENTS: 350 in 17 regular classrooms

STUDENT CAPACITY: 389

BUILDING AREA: 56,253 GSF, three stories including a partial daylight basement.

BUILDING CONDITION: Good Condition. Shawsheen scored the highest in the preliminary facilities assessments.

SITE AREA: 20.51 acres



PROGRAMMATIC ASSUMPTIONS:

The Shawsheen School is within 39 students of its capacity. To meet MSBA standards for its current population, Shawsheen should be expanded. In addition, it would absorb a net increase in student population due to the school consolidation process recommended in this *Plan*. This would include absorption of Pre-K and Kindergarten students, and the reassignment of 3rd graders to an intermediate school.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The building is very close to Shawsheen Avenue which is a busy thoroughfare. The formal Main Entrance is on Shawsheen Avenue and does not face the parking and bus drop-off area which creates a potential supervision and security issue. The bus loop and the car parking systems are not separated for safety. The school has adequate parking with about 90 spaces, plus playfields and a playground. There is a large paved play area directly adjacent to the school. There are five overlapping playfields, three public tennis courts and a basketball court on campus. The fields are worn and drainage is poor. They should be reseeded with improved drainage.



Architectural and Structural Improvements

Building Exterior - The original construction documents indicate solid masonry exterior walls with little or no wall insulation. The window and exterior door systems were replaced in 2010. The roof over the Gym wing is 2 years old but all others are about 10 years old. There is no thermal vestibule at the main entrance. The Wilmington School Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings.

Partial Daylight Basement – The lowest floor level exits at grade to the rear because of the site topography. This level is only about half of the floor area of the two floors above it. Issues associated with egress from this part of the building are noted below.

Building Interior – Improvements should be accomplished to achieve accessibility standards within the building. Conditions that should be addressed include restrooms not fully accessible. Many doors have knob hardware instead of lever hardware to meet current standards. Interior signage may be mounted too high to meet current accessibility standards. There is no elevator linking the three floor levels. A wheelchair lift is used to move from floor to floor in this three-story building and is technically compliant. There are plans to replace the 1991 wheelchair lift (scheduled for FY 18). The front entrance on Shawsheen does not have a ramp. The only ramp to the main floor is on the Hopkins Street side. The back entrance facing the parking lot and bus drop-off where most people will enter requires a wheelchair lift to get to the main floor. The Wilmington School Department should consider providing an elevator if significant additions and renovations are planned, as well as upgrading the facility to meet full ADA and other accessibility standard compliance.

Changes could include removing the gym divider wall and installing a gym divider curtain. Several classrooms have poorly functioning moveable walls between them. It may be appropriate to remove these walls and provide new permanent walls with better acoustic separation. As part of these improvements, the need to have doors between classrooms should be confirmed. Other improvements include removing the vinyl asbestos tile remaining in several areas, and upgrading the floor finishes, which are in fair to poor condition. The casework throughout the school is in need of repair, resurfacing, or replacement. The walls were repainted in 2013 but will need periodic upkeep and repainting.

The Shawsheen School has a significant egress issue at the lower (A) level. An exit sign within a corridor leads into a storage room which has a marked exit door at the other end. This second door swings inwards, not in the direction of egress, and does not have panic hardware, both of which are standard requirements for egress routes from buildings. As a storage room, the exit path could be blocked by stored materials.

The exiting requirements for this portion of the building should be reviewed to provide either an alternate path or upgrade this path to meet appropriate current building code standards. It appears likely that the exit path can conform to code requirements, for example, by removing the door shown in the photograph and converting the room to serve as a corridor by removing the stored items.



Building System Improvements

Mechanical (HVAC) – The boiler system was replaced in 2016 and burns natural gas. This building has received significant mechanical upgrades in recent years. However, all associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. Most fully interior rooms have no windows and have poor ventilation. The kitchen hood is not code compliant and has no dedicated make-up air system. Classroom unit ventilators should be replaced. There is no code-required ventilation at the corridors and administration offices. Improvements should include replacing the toilet ventilation system. The asbestos pipe insulation should be removed and replaced. If an addition is contemplated, replacement of the pneumatic controls with a DDC system is recommended.

Plumbing - The school has on-site septic field and municipal water. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards and are not water conserving and should be replaced. Domestic hot water piping in the boiler room needs insulation.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 56,253 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection. A sprinkler system should be provided as part of building additions and renovations.

Electrical - The building has three phase power service. The main electrical switchboard and distribution panels should be upgraded and replaced. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Kitchen receptacles are not GFI protected and should be upgraded. The paging system should be updated. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as security vestibule at main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the Shawsheen School is to provide 45 square feet per student and a maximum of 20 students per classroom. When this review was undertaken, the 20-student maximum was exceeded some cases, particularly clustered in the third grade. Special education students were included in the total allocation of students.

Using the MSBA standard, the school is smaller than the minimum sought by the state. The existing building area is 56,253 square feet. Using the enrollment of 350 students and 174 square feet of school area/student, the school area requirement would be 60,900 square feet. Existing regular classroom sizes are reasonably close to meeting the MSBA standards of PreK-K classrooms (1,100-1,300 square feet), and Grades 1-8 classrooms (900-1,000 square feet). However, the allocation of space within the building does not conform with MSBA standards. For example, the ratios of existing areas to the recommended MSBA standard size at the Shawsheen School for the library is 71%, the music room is 74%, the art room is 88%, and for the gym is 60%. There should be also be additional spaces for conference rooms, offices, nurse, small group meetings, administration and special education programs.

Additional space will be need accommodate the consolidation changes associated with absorbing Pre-K and K level students, after taking into account the third-grade students that would be relocated. This will contribute to approximately 15,470 square feet of new construction.

COST ANALYSIS:

SHAWSHEEN	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	28,945	-	SF	-
Existing Site Area less building footprint	552,506	\$0.80	SF	\$441,000
Minor repairs and upgrade	400,000	\$2.46	SF	\$985,000
New parking	6,300	\$9.98	SF	\$63,000
New landscape improvements	434,798	\$1.00	SF	\$434,000
Utility improvements	-	Allowance	-	\$150,000
Sitework associated with Additions	15,470	\$8.58	SF	\$133,000
Total Site Area	841,098	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	56,253	-	SF	-
Renovated Area	56,253	\$102.41	SF	\$5,761,000
Additions/New Construction	15,470	\$226.10	SF	\$3,498,000
Total Building Area	71,723	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	71,723	\$48.01	SF	\$3,444,000
Plumbing	71,723	\$7.65	SF	\$549,000
Fire Protection	71,723	\$9.98	SF	\$716,000
Electrical	71,723	\$42.23	SF	\$3,029,000
TOTAL CONSTRUCTION COSTS (3)				\$19,203,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION				\$5,761,000
TOTAL PROJECT COSTS (4)				\$24,964,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

26 WEST INTERMEDIATE SCHOOL

LOCATION : 22 Carter Lane, Built 1964

SUMMARY:

CURRENT GRADE LEVELS: Grades 4 - 5

CURRENT NUMBER OF STUDENTS: 255 in 10 regular classrooms

STUDENT CAPACITY: 213

BUILDING AREA: 62,058 GSF, including two stories and a basement

BUILDING CONDITION: Fair to Good Condition.

SITE AREA: 41.3 acres shared with Boutwell and the Middle School



PROGRAMMATIC ASSUMPTIONS:

The West Intermediate School current capacity is greater than what would be required relative to applicable standards. The school would need to expand to absorb third grade students to accomplish the recommended consolidation strategy described in this Plan.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The West Intermediate School is located directly adjacent to and facing the Middle School (WMS). An access road separates the bus drop-off lanes for each school. The West Intermediate School bus drop-off is well separated from the parking areas for safety. Parking is shared between West Intermediate and the Middle School with a total combined count of about 205 spaces. The parking is not adequate if there are simultaneous events at the schools. There is a large paved play area directly behind the school. There is a softball field behind West and a baseball and soccer field next to WMS across the access road. There is no playground equipment area.



Architectural and Structural Improvements

Building Exterior – This facility will benefit from energy-saving improvements to insulation. The original construction documents indicate solid masonry exterior walls with little to no wall insulation. The window systems appear to be original with single glazed, non-insulated glass, in frames that are not thermally broken. Exterior doors are well worn and should be tested for air infiltration at the head and jambs. Sections of roofs have been replaced recently and the classroom section is over 25 years old and scheduled for replacement. The Wilmington Public Buildings Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings.

Basement – The Basement is under the Gym wing and is set a half level below grade, allowing for minimal natural light into some rooms. It does not appear that the Basement is accessible under current standards. It houses band/instrumental music, District O.I.T. offices and storage in the former locker rooms. The basement has a groundwater leak problem which needs correcting.

Building Interior – Improvements should be accomplished to achieve accessibility standards within the building. Conditions that should be addressed include restrooms not fully accessible. Many doors have knob hardware instead of lever hardware to meet current standards. Interior signage may be mounted too high to meet current accessibility standards. There is no elevator linking the three floor levels. Expansion and renovation plans should consider providing an elevator. There is a need to remove the vinyl asbestos tile remaining in several areas. Upgrades the wall and floor finishes are needed where they are in fair to poor condition. Casework throughout is very worn out and should be repaired or replaced.

Building System Improvements

Mechanical (HVAC) – One of two boilers was replaced in 2014. The other boiler needs replacement. All associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. There is no code-required ventilation at the corridors and administration offices. This should be provided, along with replacement of the toilet ventilation system. Remove and replace asbestos pipe insulation. The asbestos pipe insulation should be removed and replaced. As part of future additional and renovations, the replacement of the pneumatic controls with a DDC system is recommended. The kitchen hood over the cooking area has no make-up air and there is no dishwasher exhaust system, which should be corrected.

Plumbing - The school has municipal sewer and water. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards and are not water conserving and should be replaced.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 62,058 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water flow is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient

water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection. A sprinkler system should be provided as part of building additions and renovations.

Electrical – The building has three phase power service. Most electrical equipment is original to the building and is well beyond its useful life and should be replaced, and the system upgraded. Most fully interior rooms without windows have poor ventilation. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Kitchen receptacles are not GFI protected and should be upgraded. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as security vestibule at main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the West Intermediate School is to provide 36 square feet per student and a maximum of 25 students per classroom.

Using the MSBA standard, the school is larger than the minimum sought by the state. The existing building area is 62,058 square feet. Using the enrollment of 255 students and 180 square feet of school area/student, the school area requirement would be 45,900 square feet. Existing regular classroom sizes are somewhat smaller on average than the MSBA standards of PreK-K classrooms 1,100-1,300 square feet, and Grades 1-8 classrooms 900-1,000 square feet.

However, certain school components do not meet applicable standards. The Library is 52% and the Gym is 86% of the recommended MSBA standard size. It appears likely that additional small meeting/office/conference rooms are needed to support the current operations.

Additional space will be need accommodate the consolidation changes associated with absorbing third grade students. In addition to more full utilization of the existing building area, this larger enrollment will contribute to approximately 15,330 square feet of new construction.

COST ANALYSIS:

WEST INTERMEDIATE	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	38,260	-	SF	-
Existing Site Area less building footprint	185,964	\$1.20	SF	\$223,000
Minor repairs and upgrade	111,011	\$2.53	SF	\$281,000
New parking	26,250	\$10.51	SF	\$276,000
New landscape improvements	74,953	\$1.53	SF	\$115,000
Utility improvements	-	Allowance	-	\$100,000
Sitework associated with Additions	15,330	\$8.58	SF	\$132,000
Total Site Area	212,214	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	62,058	-	SF	-
Renovated Area	62,058	\$137.66	SF	\$8,543,000
Additions/New Construction	15,330	\$219.45	SF	\$3,365,000
Total Building Area	77,388	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	77,388	\$47.88	SF	\$3,706,000
Plumbing	77,388	\$6.98	SF	\$541,000
Fire Protection	77,388	\$9.98	SF	\$772,000
Electrical	77,388	\$40.90	SF	\$3,165,000
TOTAL CONSTRUCTION COSTS (3)				\$21,219,000
PLUS 30% FOR FEES, CONTINGENCIES, AND ADMINISTRATION				\$6,366,000
TOTAL PROJECT COSTS (4)				\$27,585,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

27 WILDWOOD SCHOOL

LOCATION: 182 Wildwood Street, Built 1955

SUMMARY:

CURRENT GRADE LEVELS: Grades Pre-K - K

CURRENT NUMBER OF STUDENTS: 186 in 10 regular classrooms

STUDENT CAPACITY: 156

BUILDING AREA: 29,160 GSF, One story



BUILDING CONDITION: Poor Condition. This is the oldest facility of the schools evaluated for this study.

SITE AREA: 7.5 acres

PROGRAMMATIC ASSUMPTIONS:

The Wildwood School is over capacity by 30 students. It is very small and is less efficient to operate than a larger school. Wildwood would be closed, and the students redistributed to an enlarged school as part of the overall strategy for facilities recommended in this *Plan*.

IMPROVEMENTS:

SITE AND BUILDING IMPROVEMENTS:

Depending upon the phasing and timing of construction of replacement facilities, the Town may need to provide interim improvements to maintain the operational quality and appropriate learning environment.

PROGRAMMATIC IMPROVEMENTS:

Using the MSBA standard the space provided to replace this school, the total school area should increase by 4,320 square feet to accommodate its enrollment. This is based on a calculation of 186 students and 180 square feet of area per student. The reallocated area would be 33,480 square feet.

COST ANALYSIS:

Based on the recommendation to close this facility, the program would be redistributed to an improved, consolidated elementary school. As a result, there would be no costs attributed to the Town's capital budget for this school, and the costs to expand other schools is separately estimated and allocated.

28 WOBURN SCHOOL

LOCATION: 227 Woburn Street, Built 1963

SUMMARY:

CURRENT GRADE LEVELS: Grades 1 - 3

CURRENT NUMBER OF STUDENTS: 403 in 21 regular classrooms

STUDENT CAPACITY: 471



BUILDING AREA: 53,450 GSF, three stories including a daylight basement.

BUILDING CONDITION: Fair Condition.

SITE AREA: 10 acres

PROGRAMMATIC ASSUMPTIONS:

Woburn has the largest student capacity of the schools with 21 regular classrooms. To meet MSBA standards for its current population Woburn should be expanded. In addition, it would absorb a net increase in student population due to the school consolidation process. This would include absorption of Pre-K and Kindergarten students, and the reassignment of 3rd graders to an intermediate school.

IMPROVEMENTS:

DEFICIENCIES REQUIRING IMPROVEMENTS:

Site Improvements

Site and Landscape – The formal main entrance faces Woburn Street but the parking is located at the left side and rear of the school which creates a potential supervision and security issue. The bus loop and the car parking systems are well separated for safety. The school appears to have adequate parking at the rear and the south side, although the spaces are not marked in all locations. There are two large playfields, a playground, and a large paved play area directly adjacent to the north of the school. There are two public tennis courts and a basketball court on campus.



Architectural and Structural Improvements

Building Exterior – Department has been steadily replacing roofs and window systems in the district to reduce energy consumption in their Capital Improvements Plan. These improvements are a good investment and should result in energy savings. Replacement of the window and exterior door systems has been scheduled for FY19. Additional insulation should be provided at this facility. The original construction documents

indicate solid masonry exterior walls with little to no wall insulation. The window systems appear to be original with single glazed, non-insulated glass, in frames that are not thermally broken. Exterior doors are well worn and should be tested for air infiltration at the head and jambs. There is a thermal vestibule at the main entrance which provides energy benefits. There are some rock-faced spandrel panels that should be replaced with a metal system when the windows and doors are replaced. The gym roof was replaced in 2015 but the others are 12 – 20 years old. These aging tar and gravel roofs will need to be replaced. The Wilmington School The pedestrian ramp at Main Entrance is not fully accessible and should be improved. Some rear entrances have steps and are not fully accessible.

Basement – There is a daylight basement that contains four classrooms, Art and Music. Access should be upgraded as described in the recommendations for the building interior, below.

Building Interior – Several classrooms have poorly functioning moveable walls between them. These should be replaced with new permanent walls with better acoustic separation and provided with doors between classrooms if they are needed. All flooring tile was replaced in 2010. The gym has a moveable wall that does not function well and should be replaced with a gym divider curtain. Gym floor boards are separating in some areas and will need to be repaired and refinished. Spacing of stairwell balusters does not meet current code standards and will need to be upgraded. There is no elevator linking the three floor levels. A wheelchair lift is used to move from floor to floor in this three-story building and is technically compliant. However, renovations could include an elevator as part of significant additions and renovations, which will require upgrades to achieve full accessibility compliance. The casework throughout the school is in need of repair, resurfacing, or replacement.

Building System Improvements

Mechanical (HVAC) – The boiler system is the original 1962 installation and should be replaced. Items of concern include breaching insulation and poor heat regulation. All associated systems – unit ventilators, air handlers and ductwork, piping – need upgrading or replacement. Most interior rooms (those without windows) have poor ventilation. The combustion air system does not meet code and should be upgraded. There is no code-required ventilation at the corridors and administration offices. Improvements should include replacing the toilet ventilation system. The asbestos pipe insulation should be removed and replaced. If an addition is contemplated, replacement of the pneumatic controls with a DDC system is recommended. The kitchen hood over the cooking area has no make-up air and there is no dishwasher exhaust system; these should be upgraded to meet code standard.

Plumbing - The school has a new on-site septic system under the playfields (2013) and municipal water. The majority of the plumbing fixtures are original. In general, the fixtures do not meet accessibility standards, are not water conserving, and should be replaced.

Fire Protection - The building does not have an automatic sprinkler system. The building area is 56,253 GSF. Compliance with Massachusetts General Law M.G.L. Chapter 148 Section 26G is required in all buildings in which renovations will exceed 7,500 square feet in area or if in which major alterations are planned. Under these conditions, an existing building must provide a full sprinkler fire protection system if sufficient water

flow is available. A major alteration is defined as a reconfiguration of walls, doors, windows, mechanical systems, etc., which effectively makes installation of sprinkler systems easier and which affects more than 33% of the building area or more than 33% of the assessed value of the building. Buildings for which sufficient water flow and pressure do not exist are exempt. A hydrant flow test is required to determine adequate capacity for fire protection. A sprinkler system should be provided as part of building additions and renovations.

Electrical - The building has three phase power service. The main electrical switchboard and distribution panels should be upgraded and replaced. Not all power panels have locked doors and should be secured. The system should have surge protection. Energy improvements include replacing all electrical lighting with LED fixtures. There are minimal power outlets in the classrooms, and more are needed. Teachers report that circuit breakers trip regularly. Kitchen receptacles are not GFI protected and should be upgraded. The paging system should be updated. Security consists of motion detectors and exterior door sensors plus one camera at the main entrance. The Wilmington Public Schools may consider whether they would like to add additional security systems, such as security vestibule at main entrance, additional cameras, or other improvements.

PROGRAMMATIC IMPROVEMENTS:

The Massachusetts School Building Authority (MSBA) standard for schools of this type includes a floor area minimum of 39 square feet of classroom space per student, and 23 students maximum per classroom, regardless of the floor area provided. The Wilmington Public School standard for the Woburn School is to provide 45 square feet per student and a maximum of 20 students per classroom. When this review was undertaken, the 20-student maximum was exceeded some cases, particularly clustered in the third grade. Special education students were included in the total allocation of students.

Using the MSBA standard, the school is smaller than the minimum sought by the state. The existing building area is 53,450 square feet. Using the enrollment of 403 students and 168 square feet of school area/student, the school area requirement would increase by 14,164 square feet, to a total of 67,704 square feet. Existing regular classroom sizes are reasonably close to meeting the MSBA standards of PreK-K classrooms (1,100-1,300 square feet), and Grades 1-8 classrooms (900-1,000 square feet).

However, the allocation of space within the building does not conform with MSBA standards. For example, the ratios of existing areas to the recommended MSBA standard size at the Woburn School for the library is 66%, the music room is 42%, the computer room is 31%, the kitchen is 47% and for the gym is 42%. There should be also be additional spaces for conference rooms, offices, small group meetings, storage, staff lounge, nurse, administration, and special education programs.

Additional space will be need accommodate the consolidation changes associated with absorbing the Pre-K and K levels, after taking into account the reduction in area allocated for the third grades that will relocate to intermediate school facilities. This will contribute to approximately 12,250 square feet of new construction.

COST ANALYSIS:

WOBURN	AREA	(1) COSTS	SF	(2) APPROXIMATE CONSTRUCTION 2017 COSTS
SITE IMPROVEMENTS				
Existing Building footprint	27,856	-	SF	-
Existing Site Area less building footprint	339,910	\$1.00	SF	\$340,000
Minor repairs and upgrade	66,636	\$2.66	SF	\$178,000
New parking	3,500	\$12.30	SF	\$44,000
New landscape improvements	273,274	\$1.20	SF	\$328,000
Utility improvements	-	Allowance	-	\$50,000
Sitework associated with Additions	12,250	\$9.31	SF	\$115,000
Total Site Area	343,410	-	SF	-
ARCHITECTURAL AND STRUCTURAL IMPROVEMENTS				
Existing Building Area	53,450	-	SF	-
Renovated Area	53,450	\$108.46	SF	\$5,798,000
Additions/New Construction	12,250	\$259.35	SF	\$3,178,000
Total Building Area	65,700	-	SF	-
BUILDING SYSTEMS				
Mechanical (HVAC)	65,700	\$53.20	SF	\$3,496,000
Plumbing	65,700	\$7.32	SF	\$481,000
Fire Protection	65,700	\$9.98	SF	\$656,000
Electrical	65,700	\$40.70	SF	\$2,674,000
TOTAL CONSTRUCTION COSTS (3)				\$17,338,000
PLUS 30% FOR FEES, CONTINGENCIES AND ADMINISTRATION				\$5,202,000
TOTAL PROJECT COSTS (4)				\$22,540,000

Abbreviation

SF Square Foot

LF Linear Foot

LS Lump Sum

1. Unit or lump sum has been estimated on an overall component or system basis by referenced to similar project types in similar circumstances.
2. Construction costs have been rounded to the nearest \$1,000.
3. Construction Costs include applicable design and construction contingencies, assuming public bidding (prevailing wages) in Massachusetts, in current 2017 dollars.
4. Project Costs include engineering and design fees, permitting fees, legal fees and other soft costs.

OTHER TOPICS

Emergency Response/ Substation

This study considered the potential need for improved response times for fire equipment and emergency medical services provided by the Town. These services are currently provided out of the Public Safety Building and are staffed on a 24-hour basis. Concerns have been raised about whether the services can achieve appropriate response times for remote portions of Town. A primary concern has been the ability to reach the most northerly areas of Wilmington. These areas have limited access routes from the southerly portions of Town due to the intervening interstate highway and commuter rail alignments.

The Harriman team examined several years of accumulated data on emergency calls and response time that has been compiled by the Town's first responders. Apparent response times to emergency calls were mapped to consider whether a pattern of long response times could be established. This evaluation considered benchmark response time goals and practices from several sources. These benchmarks ranged from 8 minutes to 15 minutes.

Evaluation of the existing data revealed that it has not been assembled and correlated in a manner that would allow an accurate assessment of the probable response times. As formatted, the data did not indicate a concentration of long response times and indicated that long response times represented a small proportion of incidents.

In order to establish a data base of information about actual response times, the Town will need to review the methodologies available and update its information and reporting methods. This evaluation can be used to determine the extent of problems that may exist and can take into account circumstances such as emergency responses provided by neighboring towns, more accurate information about the nature of the call, and other factors.

However, based on the layout of the Town and concentration of uses in the northern areas of Wilmington, it is likely that a threshold will be reached in the future where additional measures will be needed to maintain acceptable response times for fire and emergency medical apparatus, such as a substation. The Town can also consider the potential for increased community cooperation or joint facilities with neighboring communities to enhance available services.

Conditions for access to remote portions of Town, including its northern areas, are likely to worsen in conjunction with growth in the community and increase traffic. There are also significant tracks of land that could be developed, including the potential for "Chapter 40B" housing that could not be limited by zoning.

The Town should establish a policy and regulations for provision of offsetting public benefits for new developments that trigger significant impacts on public emergency services or other municipal services. Offsetting benefits could include contributions to the cost of providing equipment, crews, or land areas for an additional substation if it is shown to be necessary.

Senior Housing

Provision of additional senior housing in Wilmington is an important community interest considered in the context of this Facility Master Plan. Town property could be used as a site for senior housing if it is constructed and managed by private entities. To facilitate such housing, the Town would need to offer land for lease or sale through a competitive Request for Proposals process.

The potential for senior housing was considered for all of the candidate sites for municipal facilities. This process considered whether such housing could be co-located with municipal facilities. This process also allowed the consideration of trade-offs for possible locations of senior housing relative to municipal facilities.

The studies concluded that three sites could reasonably accommodate senior housing, among those sites evaluated within the scope of this Master Plan. Moderately scaled senior housing or assisted living facilities range in size from about 60 to 80 units within the Greater Boston region. The sites that could accommodate buildings, parking and site improvements include St. Dorothy's, the Swain School site, and the existing Town Hall site.

The evaluation of alternative siting scenarios for the Municipal Facilities concluded that the Swain School site and existing Town Hall site were best suited for the future Town Hall/School Administration complex and the future Senior Center. The capacity of the St. Dorothy's site was tested for the absorption of a senior housing development. The studies concluded that there is ample space for a facility of at least average size on that site.

As a result, the Town could consider offering that site for senior housing development without concern that it would preclude its use for a municipal facility in the foreseeable future.

The Town could issue a Request for Proposal with programmatic, design or other requirements. Approval of a disposition or sale would require a positive vote of Town Meeting.



IMPLEMENTATION

IMPLEMENTATION

SUMMARY OF ESTIMATED CAPITAL IMPROVEMENT COSTS

Municipal Facility Name	Estimated Project Cost
Art Council	\$290,000
Bath House	\$104,000
Book Store Next Door	\$19,000
Buzzell Senior Center	\$6,707,000
Cemetery Garage	\$88,000
Cemetery Office	\$0
Department of Public Works Highway Garage	\$7,170,000
Department of Public Works Water Division Garage	\$46,000
Department of Public Works Water Division Office	\$0
Department of Veteran Services	\$20,000
Fourth of July Headquarters	\$64,000
Harnden Tavern Carriage House	\$110,000
Harnden Tavern Minuteman Headquarters	\$0
Harnden Tavern	\$747,000
Memorial Library	\$7,841,000
Moth House/Morse Barn	\$103,000
Public Buildings Offices	\$644,000
Public Safety Buildings	\$2,048,000
Scalekeeper' s Office	\$0
School Administration	\$0
Former South School (Food Pantry)	\$297,000
Town Hall	\$19,316,000
Subtotal Municipal Facilities Costs	\$45,614,000

Note: Estimates are 2017 costs. Costs based on prevailing wage rates.

Educational Facility Name	Estimated 2017 Costs
North Intermediate	\$22,870,000
West Intermediate	\$27,585,000
Shawsheen	\$24,964,000
Woburn	\$22,540,000
Subtotal Educational Facilities Costs	\$97,959,000

*Additional costs for temporary facilities or other phasing requirements will vary according to the sequence of projects and have not been included in these estimates.

Estimated Total Facilities Costs	\$143,573,000
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FINANCIAL STRATEGY

Since 2001 Wilmington taxpayers made a significant investment in a new Middle School, Public Safety Building, and most recently in a state of the art High School which opened in February of 2015. However, the Town's remaining municipal building stock ranges in age from the former West School constructed in 1790 which serves as the office for Veterans' Services to the Shawsheen Elementary School, constructed in 1970, which provides education space for students in first through third grades. Significant efforts are ongoing to maintain functionality in these buildings, however the fact that the "newest" of the remaining Town facilities are approaching 50 years, raises a host of issues including space constraints, patron and occupant accessibility, in addition to cost effective heating and climate control.

The Town also maintains a variety of historic buildings including the former Town Hall "Arts Council", the Harnden Tavern and Carriage House and the South School which are used regularly although not to the same degree as spaces like the Town Hall or Roman House. Nevertheless, these facilities all require varying levels of attention and investment.

With the changing requirements and responsibilities for schools and general government, building spaces that once accommodated those functions are now challenged to meet the demands of the 21st century.

This *Facility Master Plan* identifies many of the deficiencies in the physical plant as well as the needs for functional improvements to spaces to accommodate the services expected by residents. This plan seeks to address many of the identified deficiencies over a 20-year time horizon. Projects from the *Facility Master Plan* will be incorporated into the Town's 5-year Capital Improvement Plan (CIP). The *Facility Master Plan* will be periodically updated and modified to reflect current conditions.

The following narrative is a summary of the proposed strategy for balancing the financial demands resulting from aging facilities with the ability of residents to pay for the investments required to repair, renovate or replace Town buildings. Financing these efforts will be done through a combination of drawing from annual operating revenue, tapping into one-time reserves notably the Capital Stabilization Fund and available funds "free cash," grants and borrowing.

The *Facility Master Plan* has an estimated \$143,570,069 in costs associated with twenty-six (26) facilities throughout Wilmington. Investment in these buildings can be distributed over the next sixteen years to improve functionality and begin to address the long-term capital improvements liability.

It is noteworthy that, for the first three years of the *Facility Master Plan*, no significant capital projects will be undertaken. Recognizing that residents continue to pay for the most expensive capital improvement project in the Town's history (the high school) this three-year period will provide additional time for the impact to taxpayers to diminish slightly as principle and interest payments continue to decline. The next three years also provides additional time to add to the Capital Stabilization Fund and possibly free cash to "save up" for capital improvements, expected to start in FY2022. Continuing to build up these reserves will enable the Town to draw from those reserves to offset a portion of future borrowing costs.

Costs for capital improvements that are identified in this plan will be addressed in one of two ways: (1) capital outlay through annual operating budget; (2) capital expenditures through long term borrowing.

Each year as part of the annual operating budget an amount is recommended for expenditure on capital outlay projects. These expenditures are supported by revenue generated within the limits of Proposition 2 1/2. Based upon current estimates roughly \$3,544,000 from the total *Facility Master Plan* estimate of

costs can be addressed through capital outlay over the course of the next twenty (20) years. The projects will be incorporated into annual funding along with other capital expenditures that already exist in the Town's CIP.

The second and far more significant classification of expenditures will require long term borrowing. Borrowing is expected to comprise about \$140,026,069 of the expenditures identified in this plan. Long Term Bonds will be issued for projects including the Town/School Administration Building and new Senior Center and for the expansion of the four (4) elementary schools, for example. The debt tables used to estimate these borrowing costs use a term of twenty-five years. The Town could borrow for any period up to thirty years for these projects in accordance with Massachusetts General Law (MGL) Chapter 44. The Town has generally used shorter terms when possible in funding prior Capital Projects. A final determination will be made regarding the term of the loans when the projects have been approved. Interest rates are based on a conservative estimate using current rates and increasing them by a quarter of a percent.

Ideally, as long-term debt from previously approved capital projects is retired, funds otherwise being expended on principal and interest from those projects would become available to spend on debt for new projects. However, Wilmington's debt ratio, as a percentage of annual operating budget, is quite low. Annual debt payments only comprise about 3% of the Town's annual operating budget. The vast majority of that debt is associated with the high school which is outside of the limits of Proposition 2 ½. As the High School debt is retired, the reduction in annual principle and interest payments cannot be replaced with new debt without the approval of another debt exclusion. As a result, future borrowing will result in increasing annual debt payments as part of the annual operating budget. To the greatest extent possible the Town will strive to keep borrowing costs within the levy limit.

As each of these large-scale projects are brought forward for consideration, options will be evaluated to offset the borrowing costs. The Town has established a Capital Stabilization Fund for the purpose of funding capital projects and large capital outlay items. The current balance in the account is \$6,000,000. The Town expects to continue to fund this account for the foreseeable future. Using money from the Capital Stabilization Fund to apply towards specific capital improvement projects will reduce the amount of borrowing required.

Available funds/free cash is another reserve of discretionary money that can be earmarked to specific capital projects for the purpose of reducing the scale of borrowing required. As with Capital Stabilization Funds these funds can also be applied towards future debt payments reducing the debt payment amounts that must be appropriated as part of the operating budget.

Another means to reduce borrowing costs for school related projects is through reimbursement grants from the Massachusetts School Building Authority (MSBA). The School administration has determined that consolidating schools and reducing the number of transitions between buildings as student progress through elementary school is a preferred strategy. Pursuing this strategy will require renovations and expansions to the North and West Intermediate Schools, the Shawsheen School and the Woburn Street School. Maintaining education equity is important so that students living in all areas of the community progress through the schools with the same number of transitions and through schools of comparable quality. This plan calls for seeking authorization to spend approximately \$97.9 million in today's dollars to expand and upgrade these four (4) school buildings. The Town would seek a single debt authorization for these school projects.

Grant funding is made available based upon formulas that account for factors like need and the type of project proposed. For the recently constructed high school the MSBA funded approximately 50%. The Town anticipates a 50% reimbursement of cost provided in this document. There will likely be variations in the percentage. As project specifics and timing become better known a more precise amount will be determined. The MSBA may also change the way the funding formulas are calculated. These variations could be significant. The Town expects to pursue MSBA grants for these school projects.

The final means available for funding capital projects that require borrowing would be through a “Debt Exclusion.” Such an effort will require Town meeting approval in addition to approval of a ballot question. The principle and interest payments associated with this type of borrowing would be from property taxes outside of the limits set by Proposition 2 1/2. Given the fact that this approach places an additional burden on taxpayers, this mechanism for financing capital projects will be used sparingly.

Items which are determined to be addressed as Capital Outlay will be included in budgets to be determined on a yearly basis in conjunction with other capital outlay items in the CIP and as part the annual budget. Capital Projects would be funded at least in part by the issuance of debt. These typically consist of larger projects which include construction of new or upgraded facilities. These long-term debt issues will be repaid over a term to be finalized at the time of issuance. For the purpose of this review, the term employed was twenty-five years. A year by year determination will establish the extent of any funding options that are available.

Establishment of a Town and School Administration Building and a new Senior Center are the first major projects proposed for 2022. This will create both operational and building efficiencies. There will be significant opportunities for shared space with a single administrative building. While the estimated cost of these projects is approximately \$25.4 million in today’s dollars, these projects are proposed to be funded through a combination of funds from the Capital Stabilization Account and available funds “free cash” and borrowing. The exact combination of financing will be determined when these projects are closer to consideration at Annual Town Meeting.

School funding is for four elementary school additions which would include renovations. This funding is proposed as a single debt authorization and it is anticipated that a debt exclusion would be included with MSBA funding. The funding for all school additions would be authorized simultaneously, but construction and related borrowing would span several years.

Financing Scenarios

The following two charts provide a projected scenario for the sequence of projects and associated financing for the facility improvements contained in this *Facility Master Plan*. The Town has considered the prospective timing of projects that may best correlated with future needs and management of its annual budgets and borrowing. The results are reflected in the following charts and tables.

- Table 1: Project Sequencing and Cash Flow Model - This table indicates the potential sequencing of projects and allocates the cash flow that would be associated with listed projects. It indicates whether the sources would be from the Town's capital operating budgets or through capital borrowing. Some projects would likely be funded through annual operating and maintenance budgets, as noted.
- Table 2: Debt Schedule, All Existing Projects Associated with Tax Levy – This is the projected debt schedule for all existing projects.
- Table 3: Debt Schedule, Projects within the Facility Master Plan – This is the proposed allocation of debt based on the borrowing for projects listed in this document.
- Table 4: Combined Debt Schedule – This table assembles the existing and proposed debt allocation.
- Chart 5: Existing, Proposed and Combined Debt by Year – This chart graphically displays the components from Table 4.

1. PROJECT SEQUENCING AND CASH FLOW MODEL

Facility Name	Estimated Costs	Fiscal Year															
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Art Council	\$290,000																
Bath House	\$104,000																
Book Store Next Door	\$19,000																
Buzzell Senior Center	\$6,707,000																
Cemetery Garage	\$88,000																
Cemetery Office **																	
Department of Public Works Garage	\$7,170,000																
DPW Water Division Garage	\$46,000																
DPW Water Division Office **																	
Department of Veteran Services	\$20,000																
Fourth of July Headquarters	\$64,000																
Harnden Carriage House	\$110,000																
Minuteman Headquarters **																	
Harnden Tavern	\$747,000																
Memorial Library	\$7,841,000																
Moth House/Morse Barn	\$103,000																
Public Buildings Offices	\$644,000																
Public Safety Buildings	\$2,048,000																
Scalekeeper' s Office **																	
School Administration (included with Town Hall)																	
Former South School (Food Pantry)	\$297,000																
Town Hall	\$19,316,000																
Subtotal Municipal Facilities Costs	\$45,614,000																

Capital Borrowing

Capital Operating

Facility Name	Estimated Costs	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
North Intermediate	\$22,870,000																
West Intermediate	\$27,585,000																
Shawsheen	\$24,964,000																
Woburn	\$22,540,000																
Subtotal Educational Facilities Costs	\$97,959,000																

Total Annual Operating Expenditures																	
Total Annual Borrowing Expenditures																	
Estimated Total Facilities Costs	\$143,573,000																

* The cost estimates included in this chart are in 2017 dollars

** Costs associated with improvements and correction of deficiencies are expected to be budgeted through ongoing annual building and repair budgets

TABLE 2. DEBT SCHEDULE, ALL EXISTING PROJECTS ASSOCIATED WITH TAX LEVY

	DEBT SCHEDULE ALL EXISTING PROJECTS ASSOCIATED WITH TAX LEVY						
	SEWER INTERCEPTOR REHAB (\$1,250,000)	REMODELING SHAWSHEEN (\$715,000)	WILMINGTON HIGH SCHOOL (\$44,190,00)	EQUIPMENT- LADDER TRUCK (\$975,000)	YENTILE FARMS (\$4,800,000)	FIRE PUMPER (\$650,000)	TOTAL EXISTING DEBT
	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT
2018	94,302.50	79,975.00	3,205,400.00	108,537.50	0.00	0.00	3,488,215.00
2019	91,540.00	77,000.00	3,111,650.00	104,500.00	512,000.00	91,000.00	3,987,690.00
2020	88,940.00	74,200.00	3,018,150.00	100,700.00	499,200.00	88,400.00	3,869,590.00
2021	86,340.00	71,400.00	2,929,800.00	96,900.00	486,400.00	85,800.00	3,756,640.00
2022	79,200.00	0.00	2,859,300.00	0.00	473,600.00	83,200.00	3,495,300.00
2023	77,460.00	0.00	2,771,050.00	0.00	460,800.00	80,600.00	3,389,910.00
2024	75,660.00	0.00	2,682,800.00	0.00	448,000.00	78,000.00	3,284,460.00
2025	73,822.50	0.00	2,594,550.00	0.00	435,200.00	75,400.00	3,178,972.50
2026	71,910.00	0.00	2,541,600.00	0.00	422,400.00	72,800.00	3,108,710.00
2027	69,930.00	0.00	2,488,650.00	0.00	409,600.00	70,200.00	3,038,380.00
2028	67,875.00	0.00	2,435,700.00	0.00	396,800.00	67,600.00	2,967,975.00
2029	65,737.50	0.00	2,365,100.00	0.00	384,000.00	0.00	2,814,837.50
2030	63,525.00	0.00	2,303,325.00	0.00	371,200.00	0.00	2,738,050.00
2031	61,200.00	0.00	2,241,550.00	0.00	358,400.00	0.00	2,661,150.00
2032	0.00	0.00	2,179,775.00	0.00	345,600.00	0.00	2,525,375.00
2033	0.00	0.00	2,118,000.00	0.00	332,800.00	0.00	2,450,800.00
2034	0.00	0.00	2,047,400.00	0.00	0.00	0.00	2,047,400.00
2035	0.00	0.00	1,976,800.00	0.00	0.00	0.00	1,976,800.00
2036	0.00	0.00	1,906,200.00	0.00	0.00	0.00	1,906,200.00
2037	0.00	0.00	1,835,600.00	0.00	0.00	0.00	1,835,600.00
2038	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2056	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1,067,442.50	302,575.00	49,612,400.00	410,637.50	6,336,000.00	793,000.00	58,522,055.00

TABLE 3. DEBT SCHEDULE, PROJECTS WITHIN THE FACILITY MASTER PLAN

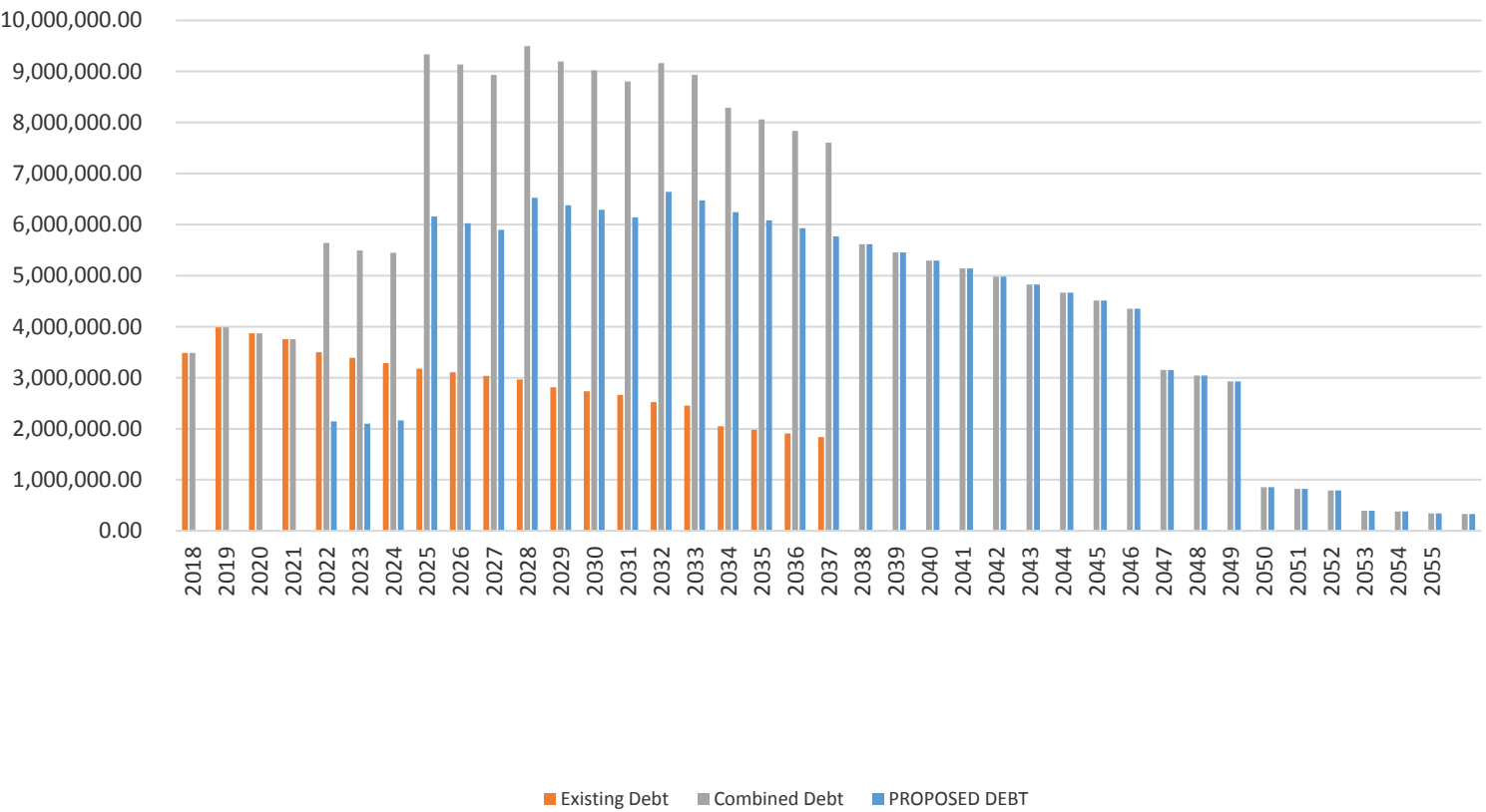
DEBT SCHEDULE							TOTAL PROPOSED DEBT
ALL PROPOSED PROJECTS TOTAL							
PRINCIPAL & INTEREST							
TOWN HALL, SCHOOL ADMIN BUILDING & SENIOR CENTER \$26,023,000	SCHOOL IMPROVEMENTS 50% \$48,979,500	HARNDEN TAVERN \$747,000	DPW GARAGE & PUBLIC SAFETY BUILDING \$9,218,000	PUBLIC BUILDINGS \$644,000	LIBRARY IMPROVEMENTS \$7,841,000		
TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	TOTAL DEBT	
2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2019	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	2,146,897.50	0.00	0.00	0.00	0.00	0.00	2,146,897.50
2023	2,102,658.40	0.00	0.00	0.00	0.00	0.00	2,102,658.40
2024	2,058,419.30	0.00	106,447.50	0.00	0.00	0.00	2,164,866.80
2025	2,014,180.20	4,040,808.75	103,272.75	0.00	0.00	0.00	6,158,261.70
2026	1,969,941.10	3,957,543.60	100,098.00	0.00	0.00	0.00	6,027,582.70
2027	1,925,702.00	3,874,278.45	96,923.25	0.00	0.00	0.00	5,896,903.70
2028	1,881,462.90	3,791,013.30	93,748.50	760,485.00	0.00	0.00	6,526,709.70
2029	1,837,223.80	3,707,748.15	90,573.75	744,814.40	0.00	0.00	6,380,360.10
2030	1,792,984.70	3,624,483.00	87,399.00	729,143.80	53,130.00	0.00	6,287,140.50
2031	1,748,745.60	3,541,217.85	84,224.25	713,473.20	52,035.20	0.00	6,139,696.10
2032	1,704,506.50	3,457,952.70	81,049.50	697,802.60	50,940.40	646,882.50	6,639,134.20
2033	1,660,267.40	3,374,687.55	77,874.75	682,132.00	49,845.60	633,552.80	6,478,360.10
2034	1,616,028.30	3,291,422.40	0.00	666,461.40	48,750.80	620,223.10	6,242,886.00
2035	1,571,789.20	3,208,157.25	0.00	650,790.80	47,656.00	606,893.40	6,085,286.65
2036	1,527,550.10	3,124,892.10	0.00	635,120.20	46,561.20	593,563.70	5,927,687.30
2037	1,483,311.00	3,041,626.95	0.00	619,449.60	45,466.40	580,234.00	5,770,087.95
2038	1,439,071.90	2,958,361.80	0.00	603,779.00	44,371.60	566,904.30	5,612,488.60
2039	1,394,832.80	2,875,096.65	0.00	588,108.40	43,276.80	553,574.60	5,454,889.25
2040	1,350,593.70	2,791,831.50	0.00	572,437.80	42,182.00	540,244.90	5,297,289.90
2041	1,306,354.60	2,708,566.35	0.00	556,767.20	41,087.20	526,915.20	5,139,690.55
2042	1,262,115.50	2,625,301.20	0.00	541,096.60	39,992.40	513,585.50	4,982,091.20
2043	1,217,876.40	2,542,036.05	0.00	525,426.00	38,897.60	500,255.80	4,824,491.85
2044	1,173,637.30	2,458,770.90	0.00	509,755.40	37,802.80	486,926.10	4,666,892.50
2045	1,129,398.20	2,375,505.75	0.00	494,084.80	36,708.00	473,596.40	4,509,293.15
2046	1,085,159.10	2,292,240.60	0.00	478,414.20	35,613.20	460,266.70	4,351,693.80
2047	0.00	2,208,975.45	0.00	462,743.60	34,518.40	446,937.00	3,153,174.45
2048	0.00	2,125,710.30	0.00	447,073.00	33,423.60	433,607.30	3,039,814.20
2049	0.00	2,042,445.15	0.00	431,402.40	32,328.80	420,277.60	2,926,453.95
2050	0.00	0.00	0.00	415,731.80	31,234.00	406,947.90	853,913.70
2051	0.00	0.00	0.00	400,061.20	30,139.20	393,618.20	823,818.60
2052	0.00	0.00	0.00	384,390.60	29,044.40	380,288.50	793,723.50
2053	0.00	0.00	0.00	0.00	27,949.60	366,958.80	394,908.40
2054	0.00	0.00	0.00	0.00	26,854.80	353,629.10	380,483.90
2055	0.00	0.00	0.00	0.00	0.00	340,299.40	340,299.40
2056	0.00	0.00	0.00	0.00	0.00	326,969.70	326,969.70
	40,400,707.50	76,040,673.75	921,611.25	14,310,945.00	999,810.00	12,173,152.50	144,846,900.00

TABLE 4. COMBINED DEBT SCHEDULE

DEBT SCHEDULE TOTAL PROPOSED, EXISTING & COMBINED DEBT			
	TOTAL PROPOSED DEBT	TOTAL EXISTING DEBT	TOTAL DEBT
2018	0.00	3,488,215.00	3,488,215.00
2019	0.00	3,987,690.00	3,987,690.00
2020	0.00	3,869,590.00	3,869,590.00
2021	0.00	3,756,640.00	3,756,640.00
2022	2,146,897.50	3,495,300.00	5,642,197.50
2023	2,102,658.40	3,389,910.00	5,492,568.40
2024	2,164,866.80	3,284,460.00	5,449,326.80
2025	6,158,261.70	3,178,972.50	9,337,234.20
2026	6,027,582.70	3,108,710.00	9,136,292.70
2027	5,896,903.70	3,038,380.00	8,935,283.70
2028	6,526,709.70	2,967,975.00	9,494,684.70
2029	6,380,360.10	2,814,837.50	9,195,197.60
2030	6,287,140.50	2,738,050.00	9,025,190.50
2031	6,139,696.10	2,661,150.00	8,800,846.10
2032	6,639,134.20	2,525,375.00	9,164,509.20
2033	6,478,360.10	2,450,800.00	8,929,160.10
2034	6,242,886.00	2,047,400.00	8,290,286.00
2035	6,085,286.65	1,976,800.00	8,062,086.65
2036	5,927,687.30	1,906,200.00	7,833,887.30
2037	5,770,087.95	1,835,600.00	7,605,687.95
2038	5,612,488.60	0.00	5,612,488.60
2039	5,454,889.25	0.00	5,454,889.25
2040	5,297,289.90	0.00	5,297,289.90
2041	5,139,690.55	0.00	5,139,690.55
2042	4,982,091.20	0.00	4,982,091.20
2043	4,824,491.85	0.00	4,824,491.85
2044	4,666,892.50	0.00	4,666,892.50
2045	4,509,293.15	0.00	4,509,293.15
2046	4,351,693.80	0.00	4,351,693.80
2047	3,153,174.45	0.00	3,153,174.45
2048	3,039,814.20	0.00	3,039,814.20
2049	2,926,453.95	0.00	2,926,453.95
2050	853,913.70	0.00	853,913.70
2051	823,818.60	0.00	823,818.60
2052	793,723.50	0.00	793,723.50
2053	394,908.40	0.00	394,908.40
2054	380,483.90	0.00	380,483.90
2055	340,299.40	0.00	340,299.40
2056	326,969.70	0.00	326,969.70
	<u>144,846,900.00</u>	<u>58,522,055.00</u>	<u>203,368,955.00</u>

CHART 5. EXISTING PROPOSED AND COMBINED DEBT BY YEAR

Proposed, Existing & Combined Debt
Payments By Fiscal Year



PHASING

Phasing for the Senior Center, New Town Hall and School Administration Facilities

The Town has several options for phasing the design and construction of the future Senior Center and the combined Town Hall and School Administration Buildings. Ideally, the detailed site planning and preliminary architectural design should occur simultaneously, so that the Town can consider the most beneficial approach to final locations and phasing.

The Town could construct both projects simultaneously, in which case the new Senior Center would need to be sited so that the Town Hall/School Administration Building could continue to operate at its current site. Similarly, the New Town Hall/School Administration Building would need to be sited so that the Buzzell Senior Center could continue to operate until construction of the new facility is completed. Once the new facilities would be available, the former buildings would be demolished, and their sites made available for open space or parking. The Town could also advance and complete either of the projects first, which would result in additional siting flexibility because the former buildings could be demolished, and the sites cleared for new construction.

School Phasing

Wilmington Public Schools have approximately 1,633 student's grades PreK – 5. The six existing schools have about 80 regular classrooms in use to accommodate these students. These numbers were used to assess consolidation options. When schools close due to consolidation, those students and regular classrooms must be relocated.

This report describes the overall recommended approach for consolidating and reconfiguring Wilmington Public Schools grades PreK – 5. This will require coordinated, phased improvements to allow continuous operation of the schools. The strategy for phasing the construction is based on these principles:

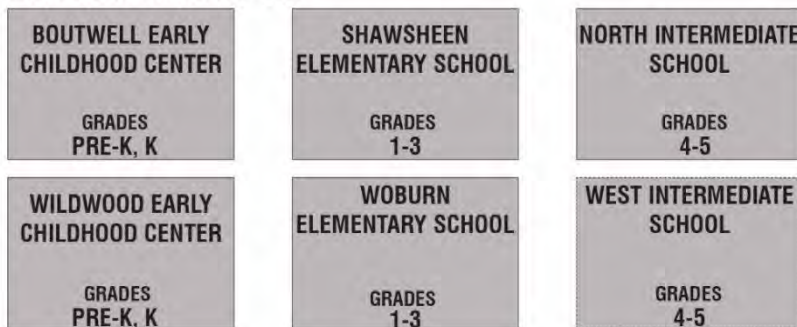
- Geographic equity within the Town – The phasing will renovate the schools in pairs by grade level to maintain equity in the completed facilities on each side of Town.
- Limited impacts – The phasing should minimize the impact on learning to students and teachers during construction and insure their safety.
- Continued operations – The Wilmington Public Schools must maintain operations at the schools during construction.
- Minimizing the cost of phasing – This will be accomplished by keeping the phasing plan simple and the length of construction as short as is reasonable to complete the construction properly.
- Financing – Dividing the overall construction into phases will help make the bonding schedule more manageable for the Wilmington Public Schools.

The phasing concept is expressed in the following diagram which illustrates a preferable scenario.

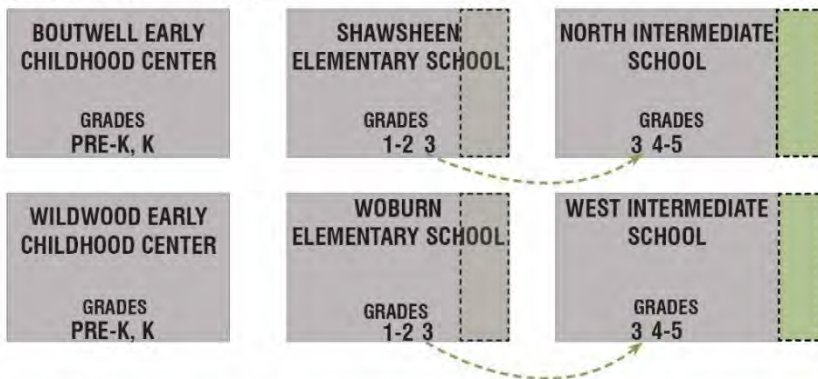
The first expansion would be provided for the intermediate schools. With additional capacity, they can absorb the third-grade students from the elementary schools. Renovations and expansions in the

elementary school will benefit from the smaller school population. When completed, the elementary schools will absorb the students from the early learning facilities, which can then be closed.

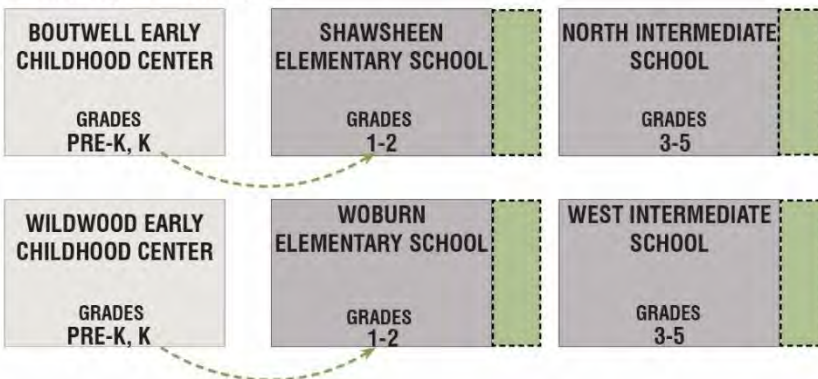
EXISTING CONDITIONS



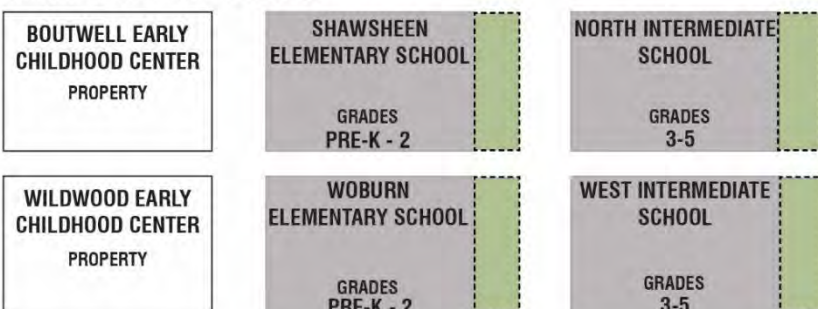
SCENARIO 1 - PHASE 1



SCENARIO 1 - PHASE 2



COMPLETED CONDITION



The following diagrams illustrate how additional space can be added to the existing buildings, expanding their capacity while limiting disturbance of the ongoing educational functions.



WOBURN



SHAWSHEEN



WEST INTERMEDIATE



NORTH INTERMEDIATE

PUBLIC SAFETY/EMERGENCY RESPONSE

As noted previously, the format and extent of existing data is insufficient to draw clear conclusions about the current effective response times for fire apparatus and emergency medical response teams. The need for additional facilities, apparatus, staff, or other measures is contingent upon establishing current and projected performance levels. It is also contingent upon the Town's policies and goals for this aspect of the community services.

It is likely that a threshold will be reached in the future where additional measures will be needed to maintain acceptable response times. Conditions for access to some portions of Town, including its northern areas, are likely to worsen in conjunction with growth in the community and increase traffic. In particular, there is a potential for substantial new development on properties in the northern portions of Wilmington.

Recommendations include the following:

- Emergency Response Planning Team – A committee should be assembled with resources provided to conduct a study that updates and evaluates the response time data, prepares projections of future conditions, and considers Town policies. The outcome of this effort should be recommendations for Town policies, with consideration of alternative methods to provide acceptable response targets, and methods for monitoring these conditions and triggering Town actions.
- Land Use and Development Regulations and Policies – The Town should establish zoning conditions and other policies to help identify and require mitigation of negative impacts on emergency response times in the event of large scale development in areas of Wilmington that would exacerbate current conditions.

SENIOR HOUSING AND MUNICIPAL LAND

The Town should finalize its strategy for provision of senior housing, with supporting planning and due diligence efforts of Town staff in coordination with the appropriate boards and committees. Technical assistance can be provided through non-profit organizations such as the Massachusetts Housing Partnership.

PROPERTY USE AND POTENTIAL DISPOSITIONS

The Town should anticipate the abandonment or relocation of existing uses and prepare market and redevelopment use studies to establish the reuse potential to facilitate its decisions.