



SUFFIELD FACILITIES MASTER PLAN

PROGRESS UPDATE MEETING

SUFFIELD, CT 5.6.2021

Agenda

- 1. Review discussion from kickoff meeting
- 2. Recap Project Goals/Work Completed to date
- 3. Presentation ~ Existing Conditions & Programming
 - Process, List of Buildings Studies, Summary of findings by building
- 4. Solicit Feedback
- 5. Demographic Update
- 6. Possible Next Steps
 - Communications Plan, Options Planning, Order of Magnitude Costs, Draft of Conditions Assessment, Schedule

Statement of the Project Goals

The overall objective of the Municipal Facilities Master Plan is to assess the current use and space needs of public facilities and establish a priority, schedule, and budget for replacement, consolidation, or improvement that will create a framework for the Town's Capital Plan and debt service in accordance with the Debt Management Policy. The evaluations and conclusion to the study will create a comprehensive master plan for public buildings that will serve the Town's needs for the coming ten (10) years.

WORK COMPLETED TO DATE



Town & Public Safety

- Completed: Conducted building & site walkthroughs ~ 2/23/2021 and held programming sessions ~ 3/2/2021
- **To do:** Complete DRAFT assessment report, possibly conduct additional program review with Park & Rec, Senior Center and Annex space

Schools

- Completed: Conducted building & site walkthroughs. Suffield High School and McAlister Intermediate School ~ 3/5/2021, Suffield Middle School and A. Ward Spaulding School ~ 3/16/2021.
- Completed: Held Programming Sessions for McAlister Intermediate School and Suffield Middle School ~ 3/23/2021, Suffield High School and A. Ward Spaulding School ~ 3/25/2021. Met with Food Service and Information Technology 4/8/2021. Lastly, met with district leadership on 4/8/2021 to recap programmatic findings.
- **To do:** Revisit schools for site & exterior items, Complete DRAFT assessment report.

Our Process Analysis of Existing Conditions & identification of Programmatic Needs

EXISTING CONDITIONS INVENTORY & ANALYSIS

SPAULDING ELEMENTARY SCHOOL

B. SUMMARY & ANALYSIS

Type:	Elementary School	Grade Structure:	PK-2
Enrollment (2020):		Pre-K:	Yes
Staff (approx):		Additional Programs:	
		Lunch Waves:	
Enrollment (10yr projection):			
Net enrollment change:		Start time:	
Leasthan (in terrin).	Central	Dismissal: Buses:	
Location (in town):	Central	Buses:	
The Facility:		General Condition:	
Total Building Area (SF):	71,406	Original Construction:	1953
Site Area (acres):	19.5	Additions (dates):	
Stories (above grade):	One	Construction Type(s):	
Building / Framing Materials:		Roof Types & Age:	
remaining / fromming materials.		Looi if per a rige.	
		_	
Split-level / ramps (interior):		Heating (types):	
Stairs (interior):		Fuel Types:	
Elevator:		Cooling (centralized):	
Basement:		Ventilation:	
Mezzanine (mechanical)		Electrical:	
Crawl Space / Tunnels:		Generator:	
Modular (classrooms):		Fire Alarm:	
Auxiliary Buildings: Full ADA Compliance:		Sewer / Septic Municipal Water / Well	
roll ADA Compliance:		Sprinklered (full / partial):	
		Other:	

Conditions Analysis

PROGRAMMING

- Statistical Information
 - a. Total Number of Students:

b. Total Number of Staff:

- General Questions
 - a. What works well, what doesn't?
 - i. Size of spaces
 - ii. Proximity of program elements
 - iii. Conditions of space and/or equipment
 - iv. Level of flexibility
 - v. Technology integration
 - vi. Noise/Acoustics
 - vii. Lighting Levels/Natural and Artificial
 - viii. Mechanical Systems/Conditions and Comfort of Space
 - ix. Are there enough spaces for socialization
 - x. Individual work vs. group work
 - xi. Class projects & Display
 - b. What spaces get the most use? The least? What is missing?
 - c. What affects quality of education of a daily basis?
 - d. What limits/reduces educational time? Are the adjacency relationships improved (locations of key programmatic functions)?
 - e. Biggest day to day challenge?
 - f. Do the conditions, configuration or capacity of the existing building pre achieving any of your programmatic goals? Consider the site amenitie classrooms, and specialized educational areas. Are there additional or you would integrate if there were no constraints on the physical environ
 - g. Are the sizes of the core instructional spaces adequate to achieve your programmatic goals? Provide an example of areas that work well and
 - h. How can this facility better support the students?
 - i. What is fundamental to the student experience that is currently working with the existing facility?
 - Teacher/Staff Satisfaction
 - What kinds of concerns do you typically hear from the teachers
 For new employees or those that choose to leave, are there any
 - patterns or concerns related to the physical condition or construction facility?
 - iii. Are there suggestions for improvements based upon past experi (precedents) that are commonly raised?

Program Discussions

PROGRAMMING SUFFIELD HIGH SCHOO

Programmatic Analysis by Space

- 1. Administration Space
 - a. Reception
 - Administrative Support
 Principal's Office
 - d. Asst. Principal's Office
 - e. Career Center
 - f. Guidance Counselor's Office
 - g. Security Office
 h. Parent/Volunteer Room
 - i. Conference Room
 - i. Work/Mail/Copy Room
 - k. Amin./Guidance Storage
 - I. Vault/Record Storage
 - m. Restrooms
 - n. Break Area
- Instructional Areas
 - a. Number of Classes/Grade Level:
- Instructional Support Areas
 - a. Teacher Prep Workroom
 - b. Staff Restrooms
 - c. Student Toilet Rooms
 d. Instructional Materials Storage
 - e. Small Group Room

4. Special Education Spaces

- a. Therapy/Resource Rooms
- b. OT/PT Room
- c. Workroom d. Math Interventionist
- e. Reading Interventionist
- f. Speech/Language Pathologist
 g. Instruction Coach/ literacy Coach
- Instruction Coach/ Ineracy Co . Zen/Sensory Room
- English Learner Program
- Social/Emotional Worker
- . Psychologist
- I. Testing
- m. Learning Centers (Amount, by grade configuration?)
- 5. Media Center
 - a. Reading Room/Circulation
- Multi-media and/or Production Room
- Conference Room
 Media Specialist Office
- e. Workroom/Storage

BUILDING LIST



Town & Public Safety

- FD Station #1 (HQ)
- FD Station #2
- FD Station #3
- FD Station #4
- Police Department
- Town Hall Annex
- Senior Center

Schools

- A. Ward Spaulding School
- McAlister Intermediate School
- Suffield Middle School
- Suffield High School



FD STATION #1 INITIAL FINDINGS

Mountain Rd



- 1962 Original Construction

2020 Additional Paving Added

Address	73 Mountain Road
Building Area/Site	4,200 sf / 3.49 acres
Age/Construction	1962(59)

Good



Site

- 1. Recent expansion to paved site area
- 2. Differential settlement and cracking in existing concrete sidewalks
- 3. Apparatus Bay apron is in good condition

Architectural Exterior

- 1. Masonry restoration required at chimney
- 2. Minor rot repair and repainting at wood trim work, railings, and louvers
- 3. Minor downspout repairs/replacement of downspout clips

Address	73 Mountain Road
Building Area/Site	4,200 sf / 3.49 acres
Age/Construction	1962(61)



Tecton ARCHITECTS

Architectural Interior

- 1. Vinyl asbestos tile present in the building
- 2. Wood fiber tile ceilings present throughout

Code ~ Accessibility/Life Safety

- 1. No accessible entrances
- 2. Non-accessible plumbing fixtures
- 3. Step at transition between apparatus bay and other program areas

Building Systems

- 1. All MEP Systems are old and past their useful life.
- 2. Needs full replacement of all systems

Address	73 Mountain Road
Building Area/Site	4,200 sf / 3.49 acres
Age/Construction	1962(61)



FD STATION #1 ~ PROGRAMMING

Tecton

- 1. No Public Lobby, Entry or restrooms
- 2. Insufficient Training Room, currently use Substation #2 for Training needs
- 3. Insufficient Administrative offices
- 4. Insufficient bunk and living quarters
- 5. Fitness equipment is currently in basement
- 6. Insufficient Apparatus Space and lacking physical training elements
- 7. Insufficient bay storage, decontamination, SCBA per NFPA standards
- 8. Lack of hot/cold transition zones
- 9. No segregated turnout gear storage

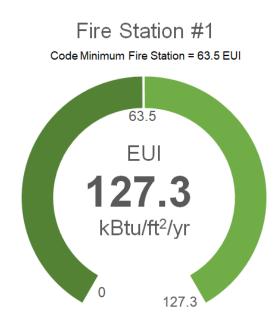
Address	73 Mountain Road
Building Area/Site	4,200 sf / 3.49 acres
Age/Construction	1962(61)



FIRE STATION #1 ~ BENCHMARKING



System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	N/A	
Plumbing Water Heater	25 Years	10 Years	40%
Plumbing Piping & Fixtures	40 Years	40 Years	100%
Mechanical Boiler Plant	30 Years	10 Years	33%
Mechanical Piping & Equipment	40 Years	40 Years	100%
Mechanical Air Conditioning	25 Years	20 Years	80%
Mechanical Controls	20 Years	N/A	
Electrical Service & Distribution	40 Years	20 Years	50%
Electrical Lighting	30 Years	40 Years	133%
Electrical Generator	40 Years	25 Years	63%
Fire Alarm	20 Years	30 Years	150%



FD STATION #2 INITIAL FINDINGS

Mountain Rd



2004 Original Construction

A sur	Address	9 Ratley Road
gle	Building Area/Site	3,906 sf / 6.89
lisat / Co ogle	Age/Construction	2004 (17)

Goo



Site

- 1. Newer station, well built, good apparatus space, in relatively good condition
- 2. Some ponding at transition between sidewalk and drive
- 3. Minor rusting at bottom of bollards

Architectural Exterior

- 1. Ice dams present at time of walkthrough, persistent issue for some time. May cause damage elsewhere if not properly addressed.
- 2. Exterior materials are in good condition.

Address	9 Ratley Road
Building Area/Site	3,906 sf / 6.89
Age/Construction	2004 (17)



Tecton Architects

Architectural Interior

- 1. Signs of moisture infiltration, possibly from ice dam
- 2. Ceiling tiles sagging throughout, possibly due to humidity issue
- 3. Currently used for department training

Code ~ Accessibility/Life Safety

- 1. Kitchen sink is non-accessible
- 2. Step at transition between apparatus bay and other program areas

Building Systems

- 1. Building is newer. All systems in good working condition.
- 2. Building is 15 years old and will need more maintenance in the next 5 10 years.

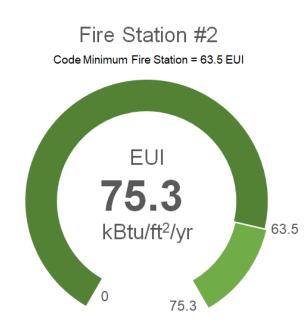
Address	9 Ratley Road
Building Area/Site	3,906 sf / 6.89
Age/Construction	2004 (17)



FIRE STATION #2 ~ BENCHMARKING



System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	15 Years	38%
Plumbing Water Heater	25 Years	15 Years	60%
Plumbing Piping & Fixtures	40 Years	15 Years	38%
Mechanical Furnace	25 Years	15 Years	60%
Mechanical Equipment	25 Years	15 Years	60%
Mechanical Air Conditioning	25 Years	15 Years	60%
Mechanical Controls	20 Years	15 Years	75%
Electrical Service & Distribution	40 Years	15 Years	38%
Electrical Lighting	30 Years	15 Years	50%
Electrical Generator	40 Years	15 Years	38%
Fire Alarm	20 Years	15 Years	75%



FD STATION #3 INITIAL FINDINGS

m.)

Balblos-Rd

Mountain-Rd



-1985 Original Construction

Address	3 Copperhill Road
Building Area/Site	3,256 sf / 1.08 acres
Age/Construction	1985 (36)



Site

- 1. Poor site drainage causing hazardous conditions with ice, grading revisions
- 2. Minor cracking at apparatus bay apron
- 3. Anecdotal reference to storm water infiltrating tight tank

Architectural Exterior

- 1. Older building but in relatively good condition for its age
- 2. Some signs of ice damming present
- 3. Minor staining on brick from water shed
- 4. Recommend preventative maintenance to extend useful life (caulking, sealants, etc.)

Address	3 Copperhill Road
Building Area/Site	3,256 sf / 1.08 acres
Age/Construction	1985 (36)



Tecton ARCHITECTS

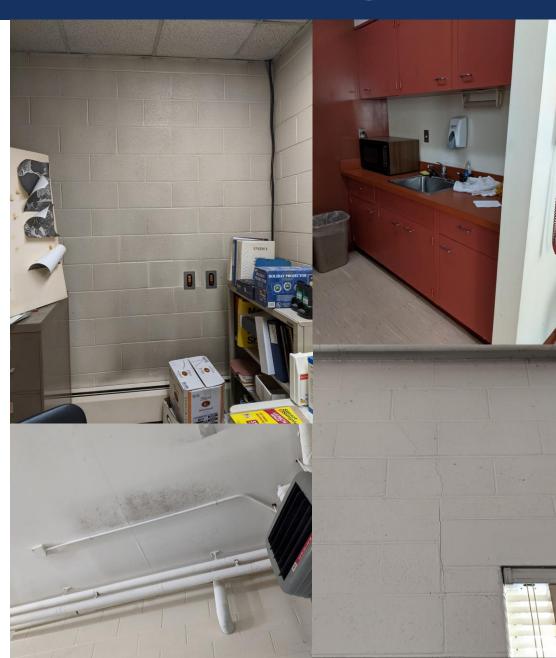
Architectural Interior

- 1. Suspected mold on apparatus bay ceiling, possible condensation buildup
- 2. Possible accumulation of exhaust from vehicles settling on radiant heater resulting in wall staining, lack of hot/cold transition zone

Code ~ Accessibility/Life Safety

- 1. Step at transition between apparatus bay and other program areas
- 2. Lack of pipe insulation below lavatory
- 3. Non-compliant grab bar at toilet
- 4. Non-accessible shower
- 5. Non-accessible sink at kitchenette

Address	3 Copperhill Road
Building Area/Site	3,256 sf / 1.08 acres
Age/Construction	1985 (36)





Structural

1. Minor cracking on interior side of exterior CMU walls

Building Systems

- 1. MEP systems are in acceptable working condition.
- 2. Nearing the end of their useful life.
- 3. Will need replacement in about 5 10 years.

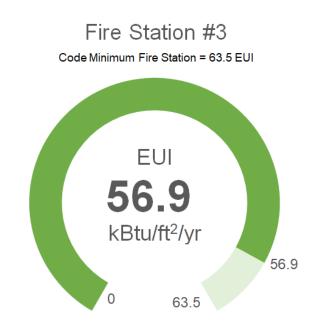
Address	3 Copperhill Road
Building Area/Site	3,256 sf / 1.08 acres
Age/Construction	1985 (36)



FIRE STATION #3 ~ BENCHMARKING



System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	N/A	
Plumbing Water Heater	25 Years	2 Years	8%
Plumbing Piping & Fixtures	40 Years	35 Years	87%
Mechanical Boiler Plant	30 Years	35 Years	116%
Mechanical Piping & Equipment	40 Years	35 Years	85%
Mechanical Air Conditioning	25 Years	35 Years	140%
Mechanical Controls	20 Years	N/A	
Electrical Service & Distribution	40 Years	35 Years	87%
Electrical Lighting	30 Years	35 Years	116%
Electrical Generator	40 Years	15 Years	38%
Fire Alarm	20 Years	35 Years	175%



FD STATION #4 INITIAL FINDINGS

St-North 159

Thompsonville Rd





—1975 Original Construction

Address	776 Thompsonville Road
Building Area/Site	2,702 sf / 3.46 acres
Age/Construction	1975 (46)



Site

- 1. Minor cracking in asphalt
- 2. Lack of tie-in or splash block at downspout causing soil erosion

Architectural Exterior

- 1. In good condition relative to its age.
- 2. Minor cracking at foundation/sidewalk
- 3. Improper fit of window air conditioning unit and staining of adjacent brick wall.

Address	776 Thompsonville Road
Building Area/Site	2,702 sf / 3.46 acres
Age/Construction	1975 (46)



Tecton ARCHITECTS

Architectural Interior

- 1. Finishes in fair condition considering age of building
- 2. Angle beginning to rust at apparatus bay doors

Code ~ Accessibility/Life Safety

- 1. Non-accessible toilet facilities
- 2. Non-accessible kitchenette

Building Systems

- 1. MEP systems are at the end of their useful life.
- 2. Should think about replacement in near future 2-3 Years.

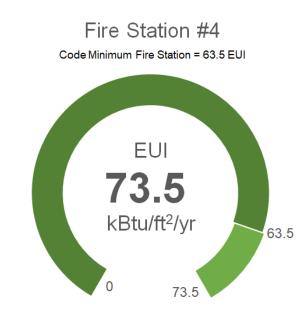
Address	776 Thompsonville Road
Building Area/Site	2,702 sf / 3.46 acres
Age/Construction	1975 (46)



FIRE STATION #4 ~ BENCHMARKING



System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	N/A	
Plumbing Water Heater	25 Years	5 Years	20%
Plumbing Piping & Fixtures	40 Years	45 Years	113%
Mechanical Boiler Plant	30 Years	25 Years	83%
Mechanical Piping & Equipment	40 Years	45 Years	113%
Mechanical Air Conditioning	25 Years	45 Years	180%
Mechanical Controls	20 Years	N/A	
Electrical Service & Distribution	40 Years	45 Years	113%
Electrical Lighting	30 Years	45 Years	150%
Electrical Generator	40 Years	45 Years	113%
Fire Alarm	20 Years	45 Years	225%

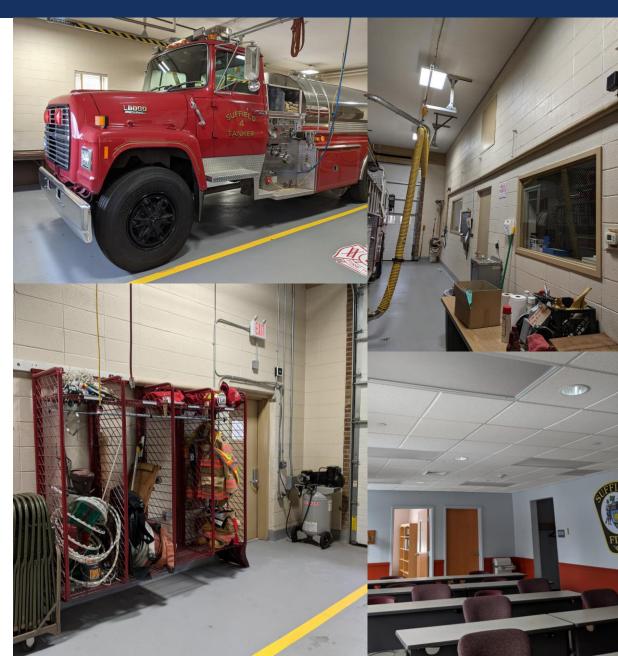


FIRE SUBSTATIONS~ PROGRAMMING



Common Observations throughout

- 1. Lack of storage space throughout all substations
- 2. Lack of hot/cold transition zone in all stations
- 3. All substations are suitable for on-call operations
- 4. Apparatus space is adequate for substations



POLICE DEPARTMENT INITIAL FINDINGS



N

1988 Original Construction

	Address	911 Mountain Road
	Building Area/Site	8,955 sf / 2.69 acres
e	Age/Construction	1988 (33)

900

Good



Site

- 1. Minor cracking at sidewalk control joints
- 2. Rust present at downspout boots
- 3. New paving and fence
- 4. Recommend preventative maintenance program to extend useful life.

Architectural Exterior

- 1. In good condition relative to its age well maintained and built.
- 2. Minor snow build up and possible damming at roof valleys
- 3. Exterior materials have been well maintained
- 4. Snow melt on roof uneven due to super heating of garage spaces

Address	911 Mountain Road
Building Area/Site	8,955 sf / 2.69 acres
Age/Construction	1988 (33)





Architectural Interior

- 1. Drywall cracking present at window lintels
- 2. Discoloration of ceiling tiles due to age.
- 3. Relatively minor cracking at multiple interior CMU walls, non structural issue.

Code ~ Accessibility/Life Safety

- 1. Non-accessible sink at kitchenette
- 2. Non-accessible toilet facilities throughout
- 3. Step down into showers
- 4. Step down into Sally Port

Address	911 Mountain Road
Building Area/Site	8,955 sf / 2.69 acres
Age/Construction	1988 (33)





Building Systems

- 1. MEP Systems all old and need to be upgraded.
- 2. Garage spaces overheating, temperature control issue?
- 3. Almost all systems original to building. 33 years old
- 4. No automatic sprinkler system within building.
- 5. Only 1 boiler. No redundancy. If boiler was to go down for repair or maintenance. No heat.
- 6. No exhaust systems in garages. Required by current code.

Address	911 Mountain Road
Building Area/Site	8,955 sf / 2.69 acres
Age/Construction	1988 (33)

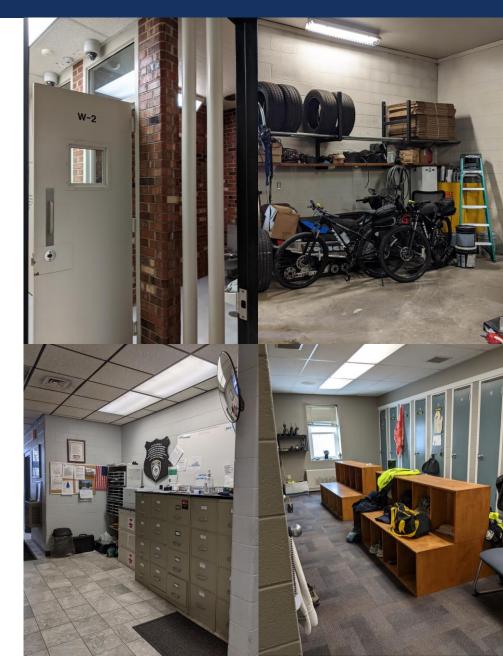


POLICE DEPARTMENT ~ PROGRAMMING



- 1. Undersized training space with access control vulnerabilities at training/lobby doors
- 2. Insufficient evidentiary storage
- 3. Dispatch restroom/break space to comply with NFPA 1221 Standards
- 4. Patrol offices repurposed to support Embedded Social Services
- 5. Patrol storage displaced by Communications Equipment
- 6. Insufficient Administrative Offices
- 7. Staff facilities; locker size and quantity, Arms Cleaning, Fitness facilities
- 8. Prisoner Processing workflow; no padded cell, no ambulance access in Sally Port
- 9. Vehicle Maintenance Bay desired

Address	911 Mountain Road
Building Area/Site	8,955 sf / 2.69 acres
Age/Construction	1988 (33)



POLICE DEPARTMENT ~ BENCHMARKING



System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	N/A	
Plumbing Water Heater	25 Years	15 Years	60%
Plumbing Piping & Fixtures	40 Years	33 Years	83%
Mechanical Boiler Plant	30 Years	15 Years	50%
Mechanical Piping & Equipment	40 Years	33 Years	83%
Mechanical Air Conditioning	25 Years	33 Years	132%
Mechanical Controls	20 Years	N/A	
Electrical Service & Distribution	40 Years	33 Years	83%
Electrical Lighting	30 Years	33 Years	110%
Electrical Generator	40 Years	20 Years	50%
Fire Alarm	20 Years	33 Years	165%



kBtu/ft²/yr

116.8

0

TOWN HALL ANNEX INITIAL FINDINGS

Mountain Rd

TOWN HALL ANNEX ~ EXISTING CONDITIONS



-1976 Original Construction

	Address	97 Mountain Road
	Building Area/Site	2,060 sf / 1.62 acres
e	Age/Construction	1976 (45)

TOWN HALL ANNEX ~ EXISTING CONDITIONS

Tecton ARCHITECTS

Site

- 1. Pavement cracking throughout parking lot
- 2. Cracking and deterioration at garage door aprons
- 3. Storm water ponding at exterior wall

Architectural Exterior

- 1. Appears to be pre-engineered structure with conventional wall framing
- 2. General cleaning of exterior masonry and foundation walls needed
- 3. Missing trim at joint between brick and siding
- 4. Corrosion of exterior hollow metal door
- 5. Damage to corner trim, trim between garage doors, and siding near grade
- 6. Re-caulk windows and clean up excess

Address	97 Mountain Road
Building Area/Site	2,060 sf / 1.62 acres
Age/Construction	1976 (45)



TOWN HALL ANNEX ~ EXISTING CONDITIONS

Tecton ARCHITECTS

Architectural Interior

- 1. Ripped insulation lining throughout garage
- 2. Moisture infiltration at exterior garage doors
- 3. Concrete slab chipping along control joint
- 4. Minor cracking in VCT

Code ~ Accessibility/Life Safety

1. Toilet facilities missing grab bar

Building Systems

- 1. No automatic sprinkler system within building.
- 2. Mechanical systems is small furnaces. OK Condition.
- 3. Electrical Older. OK Condition.
- 4. Plumbing Older. OK Condition.

Address	97 Mountain Road
Building Area/Site	2,060 sf / 1.62 acres
Age/Construction	1976 (45)



TOWN HALL ANNEX ~ PROGRAMMING



- 1. Need to identify possible future uses and/or discarded
- 2. Potential for centralized storage location to serve town needs
- 3. Could be removed to make room for higher priorities to possibly create "campus"



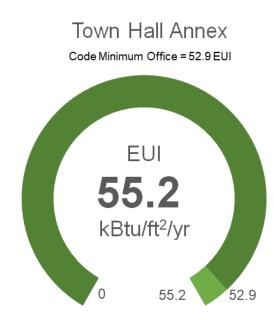
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TOWN HALL ANNEX ~ BENCHMARKING



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Plumbing Water Heater	25 Years	5 Years	20%
Plumbing Piping & Fixtures	40 Years	10 Years	25%
Mechanical Furnace	40 Years	10 Years	25%
Mechanical Equipment	40 Years	10 Years	25%
Mechanical Air Conditioning	25 Years	15 Years	60%
Mechanical Controls	20 Years	N/A	
Electrical Service & Distribution	40 Years	15 Years	38%
Electrical Lighting	30 Years	15 Years	50%
Electrical Generator	40 Years	15 Years	38%
Fire Alarm	20 Years	15 Years	75%



SENIOR CENTER INITIAL FINDINGS



Chapel possibly older

- 1950? Original Construction

2009 Converted to Senior Center 140 Bridge St

	ANNAL AND
Address	145 Bridge Street
Building Area/Site	11,702 sf / 3.27 acres
Age/Construction	1950 (71)

Tecton ARCHITECTS

Site

- 1. Cracking in pavement throughout
- 2. Uneven brick patio in courtyard

Architectural Exterior

- 1. Recent renovations (2009) in good condition.
- 2. Lack of gutters at large hip roof and main entrance
- 3. Brick staining at windows
- 4. Exterior wood windows may need replacement within 5-10 years
- 5. General brick cleaning needed
- 6. Lack of gutter causing ice building up at exterior wall

Address	145 Bridge Street
Building Area/Site	11,702 sf / 3.27 acres
Age/Construction	1950 (71)



Tecton ARCHITECTS

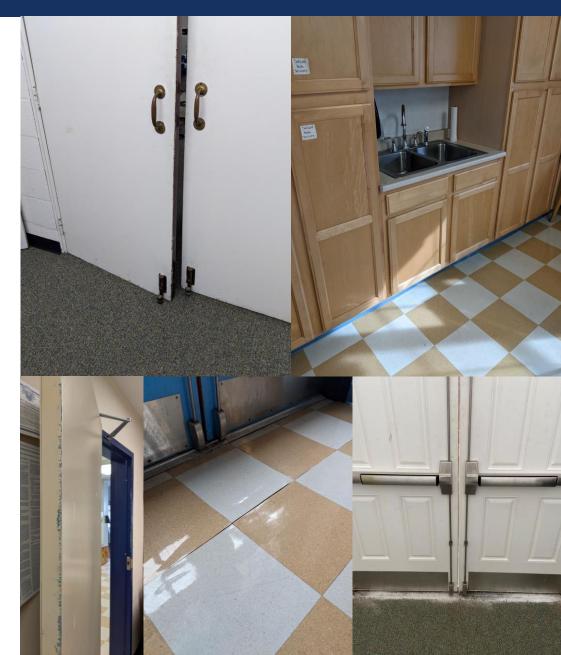
Architectural Interior

- 1. Hollow metal doors rubbing on frames, causing paint damage
- 2. Movement of VCT flooring near exterior door threshold causing separation
- 3. Lack of weatherstripping at chapel exterior door causing air infiltration

Code ~ Accessibility/Life Safety

- 1. Youth Services and Parks & Rec do not have accessible entrances from exterior
- 2. Non-accessible sink at Youth Services
- 3. Damaged VCT at Youth Services

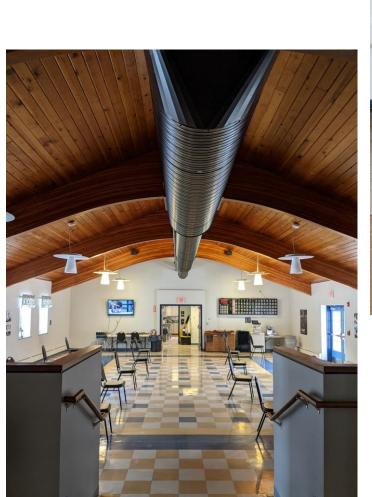
Address	145 Bridge Street
Building Area/Site	11,702 sf / 3.27 acres
Age/Construction	1950 (71)



Building Systems

- 1. No Automatic Sprinkler System.
- 2. Renovated recently.
- 3. Most MEP in good condition.
- Will start to need more maintenance in the next 5 – 10 years.
- 5. Perimeter radiant heating units leaking, causing damage to flooring

Address	145 Bridge Street
Building Area/Site	11,702 sf / 3.27 acres
Age/Construction	1950 (71)





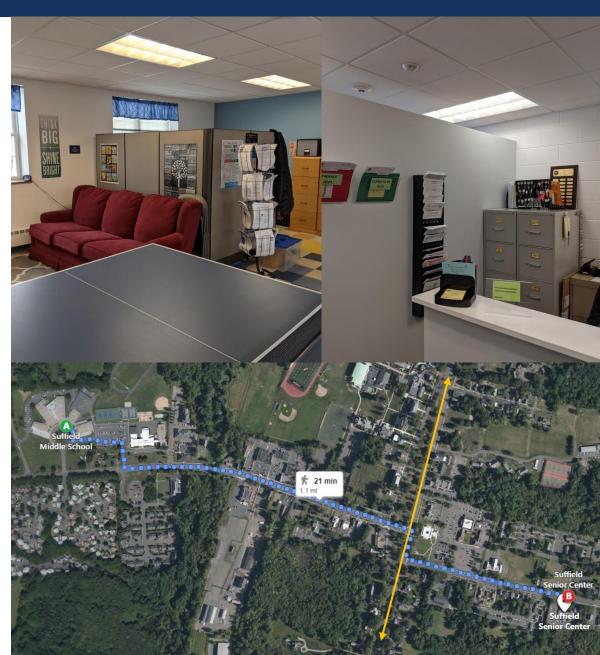
Tecton

SENIOR CENTER ~ *PROGRAMMING*



- 1. Youth Services current location remote from schools, must cross main road. Possible connection to Bridge Street property?
- 2. Youth Services offices co-mingled with activity space
- 3. Parks and Recreation prefer proximity to play fields and gymnasium resources
- 4. Parks and recreation prefers sound isolation between offices (walls do not extend to ceiling)
- 5. Senior Center has adequate space to meet current programming needs
- 6. Youth Services and Parks & Rec do not have accessible entrances from exterior

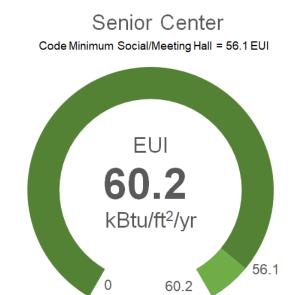
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SENIOR CENTER ~ BENCHMARKING



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Mechanical Piping & Equipment	40 Years	10 Years	25%
Mechanical Air Conditioning	25 Years	10 Years	40%
Mechanical Controls	20 Years	10 Years	50%
Electrical Service & Distribution	40 Years	10 Years	25%
Electrical Lighting	30 Years	10 Years	33%
Electrical Generator	40 Years	10 Years	25%
Fire Alarm	20 Years	10 Years	50%



A. WARD SPAULDING SCHOOL INITIAL FINDINGS

Rosewood

A. WARD SPAULDING SCHOOL~ EXISTING CONDITIONS



Tecton ARCHITECTS

1954 Original Construction

Intain Rd

1961 Addition —

1985 Modular

-1988 Addition

2004 Code and MEP Improvements

Rosewood Dr

Grade Level	РК-2
Building Area/Site	71,406 sf / 19.5 acres
Age/Construction	1954 (67), 1961(60), 1985 (36), 1988 (33)

A. WARD SPAULDING SCHOOL ~ EXISTING CONDITIONS



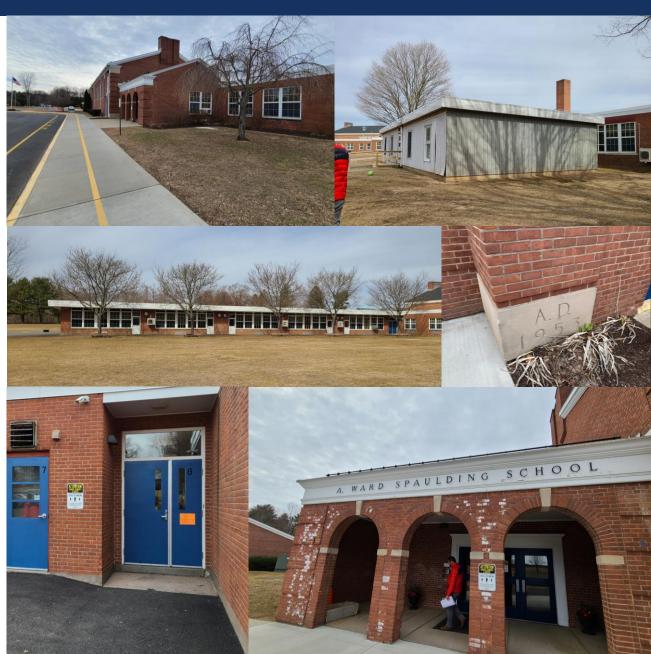
Site

- 1. Insufficient parking for events, parking immediately adjacent to building a safety concern.
- 2. Parent/Bus repayed 2020, remaining parking in fair condition. Remaining parking in need of replacement. Curb and sidewalks are in fair to poor condition overall with some portions recently replaced.
- 3. Poor definition of school boundary, remote/unprotected playground and playscapes

Architectural Exterior

- 1. Masonry in need of repointing/repair, efflorescence on portions of building
- 2. Remaining original exterior door, frames, soffits and trim in poor condition
- 3. Modular addition in poor condition

Grade Level	РК-2
Building Area/Site	71,406 sf / 19.5 acres
Age/Construction	1954 (67), 1961(60), 1985 (36), 1988 (33)



A. WARD SPAULDING SCHOOL ~ EXISTING CONDITIONS



Architectural Interior

- 1. Overall, well built, durable and well maintained, recent upgrades to PK classrooms, corridor floors, gym/Aud. floors.
- 2. Several components are past useful life ~ flooring, millwork, some toilet facilities, ceilings, doors, some hardware
- 3. Modular construction clearly past useful life

Code ~ Accessibility/Life Safety

1. Several accessibility compliance issues related to floor clearances and reach at entranceways, sinks, and millwork

Structural

- 1. Original masonry bearing, steel roof joist, truss & wood plank gym/Aud. In fair to good condition.
- 2. Addition(s) steel frame superstructure masonry infill.

Grade Level	РК-2
Building Area/Site	71,406 sf / 19.5 acres
Age/Construction	1954 (67), 1961(60), 1985 (36), 1988 (33)



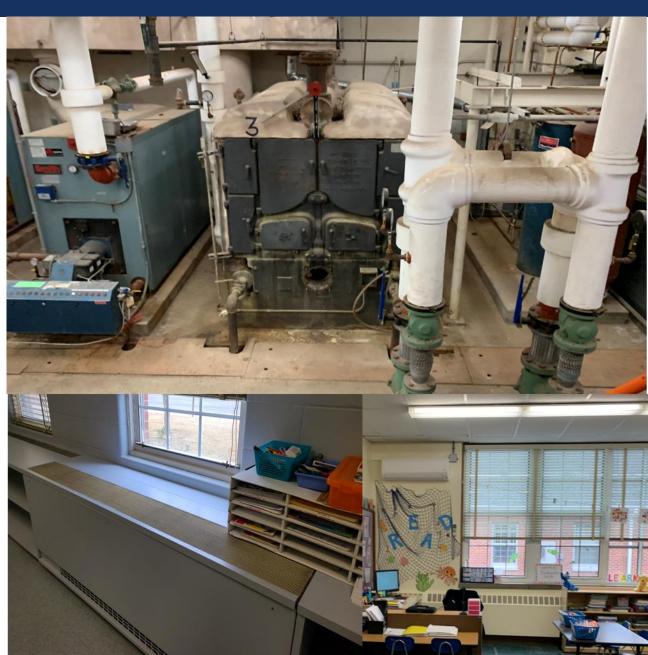
A. WARD SPAULDING SCHOOL ~ EXISTING CONDITIONS



Building Systems

- 1. No automatic sprinkler system within building.
- 2. Unit Vents are needing lots of repairs. Will all need to be replaced.
- 3. Unit Vents are not ventilation properly and need to be repaired.
- 4. Controls do not work. Town said will be replaced during the Summer of '21.
- 5. Electrical Lighting and Power Distribution are at the end or past their useful life.
- 6. Boiler plant needs to be replaced. At the end of its useful life.

Grade Level	РК-2
Building Area/Site	71,406 sf / 19.5 acres
Age/Construction	1954 (67), 1961(60), 1985 (36), 1988 (33)



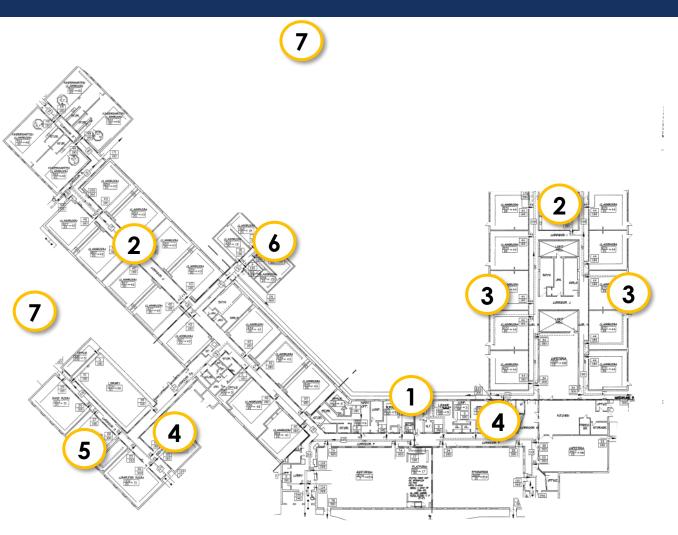
A. WARD SPAULDING SCHOOL ~ PROGRAMMING



Programmatic Observations

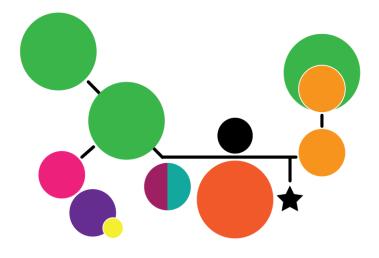
- 1. Poor visibility and adjacency of Administrative office to Main Entry
- 2. Classrooms are good size, meet educational needs, ideally setup in neighborhoods
- 3. Enjoy connection of some CRs to exterior
- 4. Limited specialized education, intervention, testing areas, poorly located, waste time due to travel, deescalation a concern, ideally adjacent to classrooms pods
- 5. Poor flow to specials (music, art, STEM, media center) results in more travel less educational time, should be centralized
- 6. Modular use ongoing concern, poor conditions
- 7. Site security, parking, & boundary ongoing concern
- 8. Limited to no outdoor classrooms, play area exposed

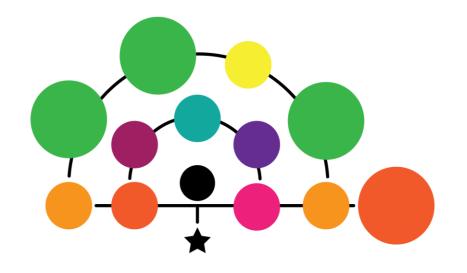
Grade Level	РК-2
Building Area/Site	71,406 sf / 19.5 acres
Age/Construction	1954 (67), 1961(60), 1985 (36), 1988 (33)



A. WARD SPAULDING SCHOOL ~ PROGRAMMING







- Entrance Office/Admin
- Classrooms
- Gym
- Cafeteria
- Science
- Special Education
- Media/Resource
- Art/Maker
- Auditorium/Music

What's Existing

- Admin removed from Main Entrance, have to be escorted
- Specials are disjointed, too far away
- Auditorium only used a few times per year
- Summer program is growing, Before & After uses Cafeteria – no dedicated entry
- Special Education too far from Sensory Rooms, program needs more space

What's Desired

- Admin relocated close to Main Entry
- Improved flow to Specials, bring to Main Hall
- Convert Auditorium to Learning Lab
- Dedicated amenity space for Summer
 Program and Before & After care
- Improved flow to Special Education and Sensory Rooms



State of CT ~ Max

Take highest student enrollment from 8-year projection (2021-22 High Projections from MMI/SLR

Updated April 2021)

Allowable Area Analysis



A Ward Spaulding Elementary School						
Item Description	2021-22 Enrollment (High)					
Grade Level	PK	K	1	2		
Student Pop. (6/2020)	50	150	149	144		
Subtotal	493					
	Current Space Standard					
SF/Student (Max.)	120	120	120	120		
SF/Grade Level (Max.)	6,000	18,000	18,029	17,568		

State Standard Space Specifications Grades

Projected	Pre-K												
Enrollment	and K	1	2	3	4	5	6	7	8	9	10	11	(Ζ
		A	Allow:	ble S	quare	Foota	ige pe	r Pup	i1				
0 - 350	124	124	124	124	124	156	156	180	180	180	194	194	194
351 - 750	120	120	120	120	120	152	152	176	176	176	190	190	190
751 - 1500	116	116	116	116	116	148	148	170	170	170	184	184	184
Over 1500	112	112	112	112	112	142	142	164	164	164	178	178	178

Sec. 10-287c-15. Standards (Reference: Section 10-283a)

(a) **State standard space specifications**. The standard space specifications identified this section shall apply to all school building project grants except code and heat violations, read replacements, site acquisitions, site improvements, leaging project, plant

purchases, vocational agriculture equipment, and administrative facilities. For any building constructed prior to 1950, the standard space specifications identified in this section shall be increased by twenty-five per cent.

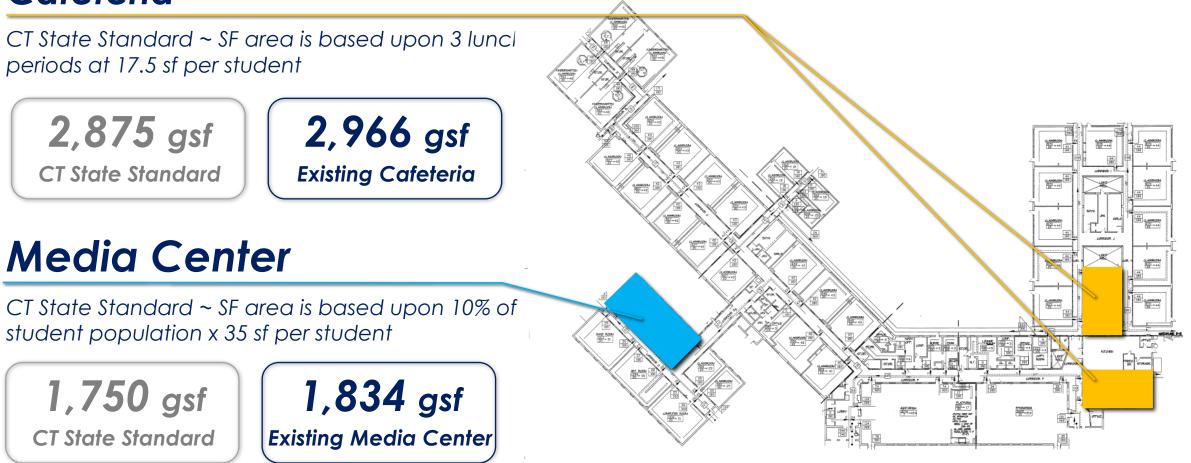
2 Multiply by max allowable as per state standard Space Specifications by grade level & total size of school

Review for applicable allowances (older building inefficiencies)

Max Allowable ~ 58,597 GSF vs. Existing ~ 71,406 GSF Existing is <u>16.5%</u> larger than max



Cafeteria





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233 a. 1999,234 233 a. 1999,234

AGREED ROTE TO

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The importance of Efficiency in a Building **Yellow Outline** Area ~ 71,406 SF **Blue Area Grade Level** ~ 16,575 SF Basement ~ 2,223 SF + Chases, wall thickness, etc (3.5%)... Blue Area (19,456 sF) >27.2% Yellow Outline (71,406 sr) Typical Efficiency Factor ~ 25-30% Meets Expectations



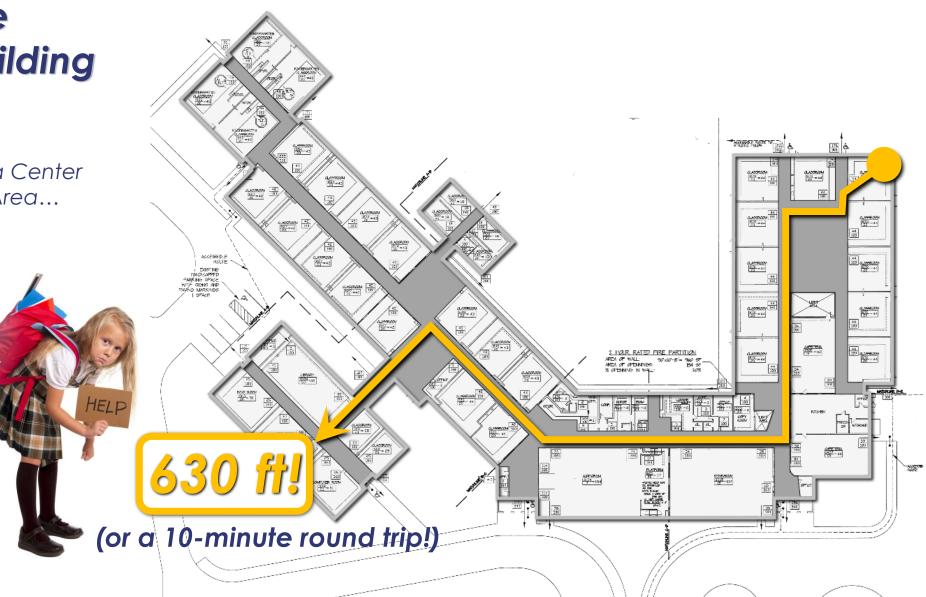
Understanding the impact of your Building

"The gift of time"

Distance of Classroom to Media Center and/or Specialized Education Area... Approximately 630 feet!

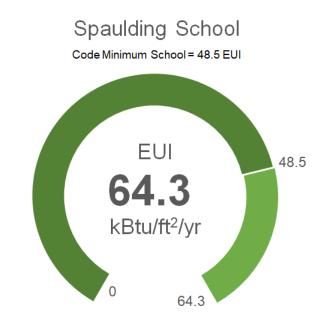
Average speed of a 5-yearold ~ 50 ft every 20 -25 seconds

About a 5 min. walk! Or... 10 minutes away from the classroom with <u>each</u> trip.





System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	N/A	
Plumbing Water Heater	25 Years	20 Years	80%
Plumbing Piping & Fixtures	40 Years	50 Years	125%
Mechanical Boiler Plant	40 Years	40 Years	100%
Mechanical Piping & Equipment	40 Years	50 Years	125%
Mechanical Air Conditioning	25 Years	10 Years	40%
Mechanical Controls	20 Years	N/A	
Electrical Service & Distribution	40 Years	30 Years	75%
Electrical Lighting	30 Years	30 Years	100%
Electrical Generator	40 Years	30 Years	75%
Fire Alarm	20 Years	20 Years	100%



MCALISTER INTERMEDIATE SCHOOL INITIAL FINDINGS

Mountain Rd



1972 Modifications and Updates 1987 (High School to Middle School) Original Addition 1939 2001 Code Alterations (Middle School to Intermediate School) 1994 Modular Elevator Addition & 📾 Building Chair Lift @ Stage 1988 & 1990 Code & Building 1956 Upgrades Addition 3-5 **Grade Level** Building Area/Site 72,263 sf / 32.4 acres (shared) 1939 (82), 1956 (65), 1987 (34), 1994 (27) Age/Construction



Site

- 1. Site traffic, parking and perimeter security major concerns for site (pedestrian and vehicular safety), no defined receiving area.
- 2. Play areas exposed, no definition of school boundary. Do not meet accessibility codes.
- 3. Parking/pavement directly adjacent to building, pavement in fair to poor condition overall.

Architectural Exterior

- 1. Roof replaced in sections, 1956 portion to be replaced to match. Masonry repointed and chimney repairs.
- 2. Many non or poorly functioning windows and exterior doors, persistent concerns/repairs (2001) and flashing/water infiltration issues.

Grade Level	3-5
Building Area/Site	72,263 sf / 32.4 acres (shared)
Age/Construction	1939 (82), 1956 (65), 1987 (34), 1994 (27)





Architectural Interior

- 1. Overall, well built, durable original construction and well maintained. Many important investments & preventative maintenance (roofs, A/C, isolated room renovations)
- 2. Many components (finishes, millwork, lockers) of original construction are past useful life and/or non accessible (ADA @ toilet rooms, ramp, doorways)
- 3. Inconsistent construction of various room modifications over the years. Ventilation concerns in portions of buildings related to construction of additions and encapsulation
- 4. Gym condition poor, bleachers to be removed currently a safety concern.
- 5. Lockers original poor condition throughout
- 6. Inadequate separation of specials areas.

Grade Level	3-5
Building Area/Site	72,263 sf / 32.4 acres (shared)
Age/Construction	1939 (82), 1956 (65), 1987 (34), 1994 (27)





Code ~ Accessibility/Life Safety

- 1. Many toilet facilities are non accessible, in very poor condition, and/or nonfunctioning.
- 2. Inaccessible in-classroom millwork and sinks.
- 3. No functioning accessibility to the stage
- 4. Various accessibility concerns related to door entryways and proper floor clearance

Structural

- 1. Original building and 1956 addition wall bearing, steel joist, wood plank flooring (original) concrete deck (1956).
- 2. Floor to floor noise transfer and acoustical concerns in original portion of the building.

Grade Level	3-5
Building Area/Site	72,263 sf / 32.4 acres (shared)
Age/Construction	1939 (82), 1956 (65), 1987 (34), 1994 (27)



Building Systems

- 1. Fresh air relies on window ventilation, limited to no mechanical ventilation
- 2. No automatic sprinkler system within building
- 3. No Building Management System in the school
- 4. Plumbing fixtures are old and are failing, many are non-compliant with code
- 5. Unit ventilation in majority of spaces do not meet current codes, difficult to control/maintain/repair, staffing/student comfort concerns
- 6. Issues with technology including paging and clocks. Need to be replaced.
- 7. Electrical power distribution and lighting are at the end or past their useful life.

Grade Level	3-5
Building Area/Site	72,263 sf / 32.4 acres (shared)
Age/Construction	1939 (82), 1956 (65), 1987 (34), 1994 (27)



Tecton

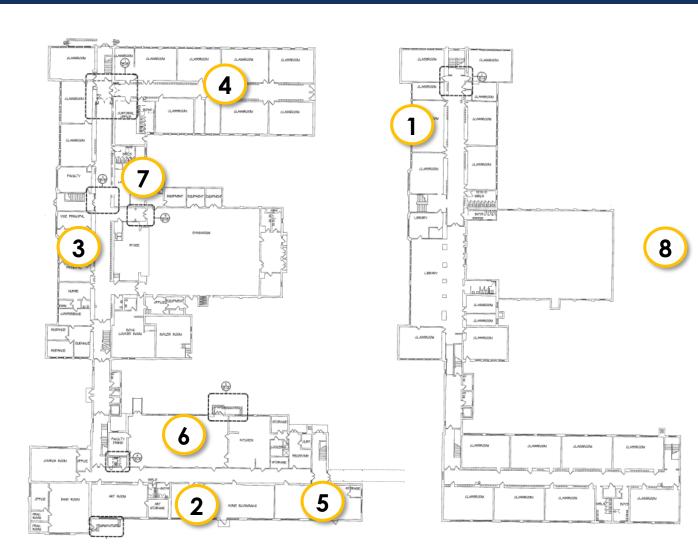
MCALISTER INTERMEDIATE ~ PROGRAMMING



Programmatic Observations

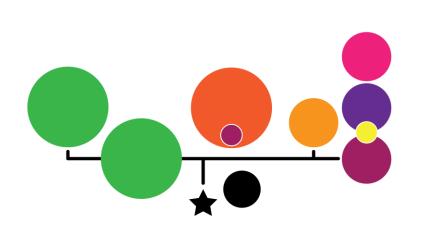
- Classrooms are good size, meet educational needs, although limited flexibility for grade level "pods", considering mixed grade pods
- 2. Good location for Admin Suite, Specials Classrooms (Music, Art, STEM), need appropriately size space
- 3. Noise/Acoustical transmission from 2nd floor
- 4. Lack of general classroom space on 1st floor
- 5. Poor location and setup for Media Center, should be the "heart" center of school
- 6. One cafeteria proves to be difficult scheduling
- 7. Limited space for conference/small group, specialized education, teacher prep, large group
- 8. Site security, parking, & boundary ongoing concern, limited opportunity for outdoor classrooms

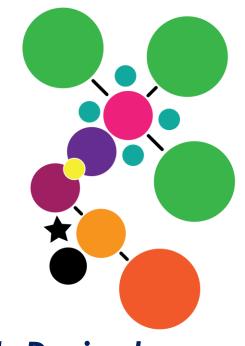
Grade Level	3-5
Building Area/Site	72,263 sf / 32.4 acres (shared)
Age/Construction	1939 (82), 1956 (65), 1987 (34), 1994 (27)



MCALISTER INTERMEDIATE ~ PROGRAMMING







- Entrance Office/Admin
 - Classrooms
- Gym
- Cafeteria
- Science
- Special Education
- Media/Resource
- Art/Maker
- Auditorium/Music

What's Existing

- Lack of Classroom space on 1st Floor
- Media Center at the back of the building
- Cafeteria as a band room isn't working & music program needs gathering space
- Currently no Sensory Rooms & OTPT does not have dedicated space
- Music, Art, STEM all together, but Spanish is separate

What's Desired

- More 1st Floor Classroom space and the flexibility to represent all 3 Grades on each floor
- Media Center at the heart of the school
- Room to grow the Music program
- Bring in Sensory Rooms and OTPT
- Create a "Specials Core"

MCALISTER INTERMEDIATE ~ AREA ANALYSIS





Suffield Inte <mark>rmediate School</mark>											
Item Description	2024-25 Enrollment (High)										
Grade Level	3	4	5								
Student Pop.	161	143									
Subtotal	453										
Current Space Standard											
SF/Student (Max.)	120	120	152								
SF/Grade Level (Max.)	19,320	17,880	21,736								

State Standard Space Specifications Grades

Projected Enrollment	Pre-K and K	1	2	3	4	5	5	7	8	9	10	11	2
Allow able Square Foota; e per Pupil													
0 - 350	124	124	124	124	124	156	156	180	180	180	194	194	194
351 - 750	120	120	120	120	120	152	152	176	176	176	190	190	190
751 - 1500	116	116	116	110	110	140	48	170	170	170	184	184	184
Over 1500	112	112	112	112	112	142	142	164	164	164	178	178	178

Sec. 10-287c-15. Standards (Reference: Section 10-283a)

(a) State standard space specifications. The standard space specifications identified this section shall apply to all school building project grants except code and heat violations, reaf replacements, site acquisitions, site improvements, lessing projects, plant

purchases, vocational agriculture equipment, and administrative facilities. For any building constructed prior to 1950, the standard space specifications identified in this section shall be increased by twenty-five per cent.

State of CT ~ Max Allowable Area Analysis

Take highest student enrollment from 8-year projection (2023-24 High Projections from MMI/SLR Updated April 2021)

Multiply by max allowable as per state standard Space Specifications by grade level & total size of school

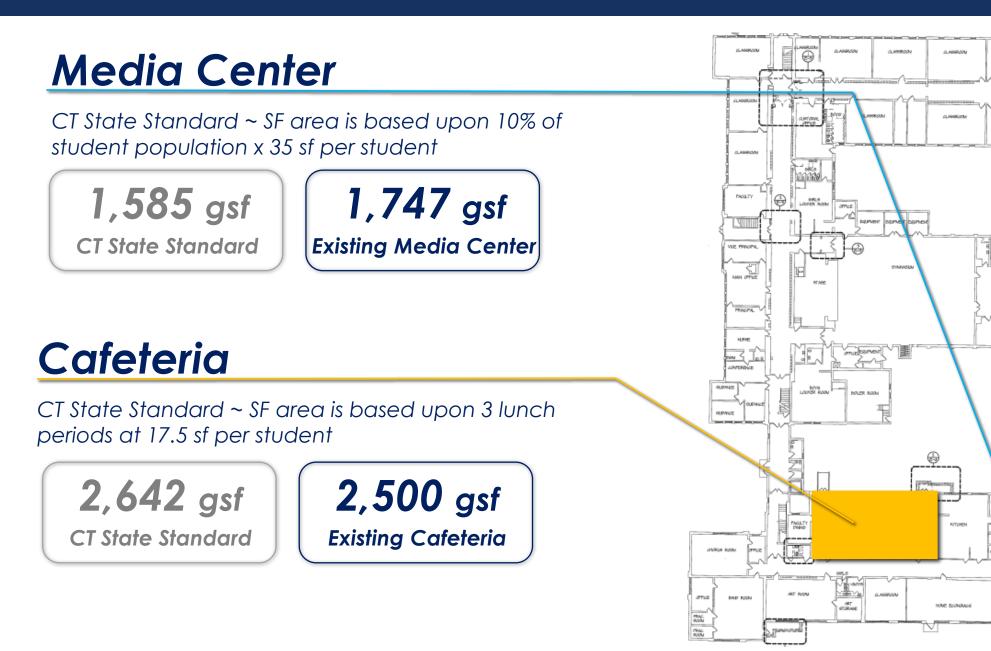
Review for applicable allowances (older building inefficiencies) **Original 1939 adds 25% to area.**

Max Allowable ~ 73,670 GSF vs. Existing ~ 73,764 GSF
Existing almost identical to Max. Allow

MCALISTER INTERMEDIATE ~ BENCHMARKING



0.4662.094



MCALISTER INTERMEDIATE ~ BENCHMARKING



The importance of Efficiency in a Building

Yellow Outline

Area ~ 73,764 SF

Blue Area

Basement ~ 2,548 SF Grade Level ~ 12,833 SF Upper Level ~ 9,016 SF + Chases, wall thickness, etc (3.5%)...

Blue Area (25,250 sF) Yellow Outline (73,764 sF) 34.2%

Typical Efficiency Factor ~ 25-30% Loss of Education Space is 2,800 – 6,500 sf



MCALISTER INTERMEDIATE ~ BENCHMARKING



Understanding the impact of your Building

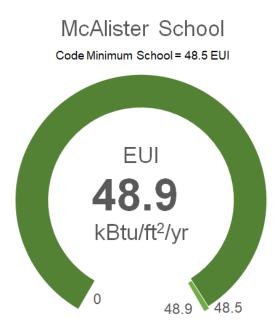
- 1. Classroom type and size varies + distribution makes it difficult to arrange by grade level, exploring alternative arrangements
- 2. Benefit of specials grouped together however ideally location should be centralized
- 3. Poor distribution of specialty support spaces, ideally located within "classroom neighborhood"



MCALISTER INTERMEDIATE SCHOOL ~ BENCHMARKING

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DCONNE	

System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	N/A	
Plumbing Water Heater	25 Years	10 Years	40%
Plumbing Piping & Fixtures	40 Years	50 Years	125%
Mechanical Boiler Plant	40 Years	40 Years	100%
Mechanical Piping & Equipment	40 Years	40 Years	100%
Mechanical Air Conditioning	25 Years	10 Years	40%
Mechanical Controls	20 Years	N/A	
Electrical Service & Distribution	40 Years	25 Years	63%
Electrical Lighting	30 Years	40 Years	133%
Electrical Generator	40 Years	25 Years	62%
Fire Alarm	20 Years	20 Years	100%



SUFFIELD MIDDLE SCHOOL INITIAL FINDINGS

S-TIME



1964 Original – Construction

* Property Card has 286,843 sf

Grade Level	6-8
Building Area/Site	128,489 sf / 32.4 acres (shared)
Age/Construction	1964, 1965 (Vo-Ag), 1972, 2002

—1972 Additions & Alterations 2002 Conversion from High School to Middle School

1965 Vo-Ag



Site

- 1. Site conditions are in fair to poor condition ~ sidewalks, curbs, paving, drainage issues,
- 2. Site traffic flow, parking, security major concerns. Unsecured perimeter access & parking a security concern.
- 3. Fields are remote from building with limited outdoor opportunities for education. Areas of poor drainage on west/southwest side of site.

Architectural Exterior

- 1. Consistent roof leaks, roof replaced in phases by different contractors, various warranties, other envelope concerns ~ pointing of masonry, doors, etc.
- 2. Majority of building contain brick veneer in fair to good condition with areas of isolated spalling at base of wall/ exposed concrete foundation wall. Existing lintels are in fair to poor condition.

Grade Level	6-8
Building Area/Site	128,489 sf / 32.4 acres (shared)
Age/Construction	1964, 1965 (Vo-Ag), 1972, 2002





Architectural Interior

- 1. Overall, well maintained, original building well built, but many areas poorly constructed.
- 2. Observed significant inefficiencies due to additions/renovations over time.
- 3. Noise/Acoustical concerns in 70's additions renovations due to "modular" wall construction.
- 4. Various additions eliminated natural daylight to educational space creating poor conditions for educating students.
- 5. Overall condition of finishes are generally in poor condition. However yearly improvements have been made to isolated areas, science labs, finishes in media center, tech education planned.
- 6. Majority of toilet cores are in poor condition due to age and use. In some instances, are not used/obsolete

Grade Level	6-8
Building Area/Site	128,489 sf / 32.4 acres (shared)
Age/Construction	1964, 1965 (Vo-Ag), 1972, 2002









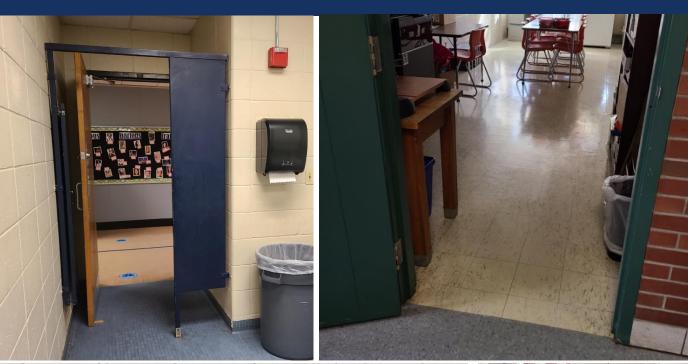
Code ~ Accessibility/Life Safety

- While 2002 upgrades addressed some code issues, some accessibility compliance issues remain related to floor & push/pull clearances and reach requirements
- 2. Egress stairwells appear to meet current codes for both guard and handrail requirements.

Structural

- 1. Structural system of original building steel frame superstructure with brick/block infill. Traditional slab on grade with concrete infill metal desk slab for second floor.
- 2. No observed structural conditions with building.

Grade Level	6-8
Building Area/Site	128,489 sf / 32.4 acres (shared)
Age/Construction	1964, 1965 (Vo-Ag), 1972, 2002







Building Systems

- 1. Many renovations and varying vintages of systems. Some newer, some original.
- 2. No central domestic Hot Water Plant. Lots of distributed water heaters. Leads to more maintenance and repairs.
- 3. Electrical systems has many vintages. While service is newer it back feeds original vintage systems.
- 4. Most major mechanical systems past or at the end of their useful life.
- 5. No natural ventilation/windows to many classrooms/educational spaces.
- 6. Overall MEP systems need a complete overhaul.

Grade Level	6-8
Building Area/Site	128,489 sf / 32.4 acres (shared)
Age/Construction	1964, 1965 (Vo-Ag), 1972, 2002



Tecton

SUFFIELD MIDDLE SCHOOL ~ PROGRAMMING



Programming Discussions

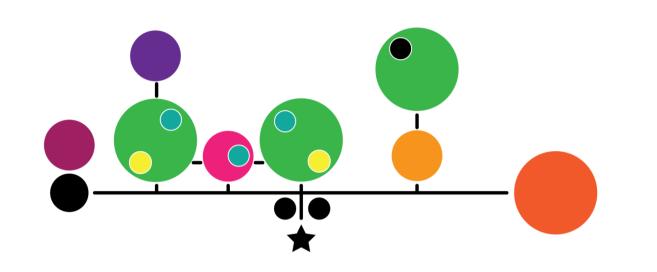
- 1. Classrooms are decent size throughout school although many of the specialized classrooms are not sized nor do the function correctly (ex. World language)
- 2. Flow of the overall building a concern, tough to implement team model, share spaces, promote collaboration ~ important for this demographic.
- 3. Specialized teaching rooms & core facilities biggest concern – band, cafeteria acoustics & queuing, media center, family & consumer science outdated, limited space for tech ed., many poorly located
- 4. Lack of efficiency in the layout affects quality of education, time in class, and programs offered.
- 5. Currently circulate through classroom to attend special education classes, would like to centralize and share, save on time & reinvest into student

Grade Level	6-8
Building Area/Site	128,489 sf / 32.4 acres (shared)
Age/Construction	1964, 1965 (Vo-Ag), 1972, 2002



SUFFIELD MIDDLE SCHOOL ~ PROGRAMMING







- Entrance Office/Admin
- Classrooms
- Gym
- Cafeteria
- Science
- Special Education
- Media/Resource
- Art/Maker
- Auditorium/Music

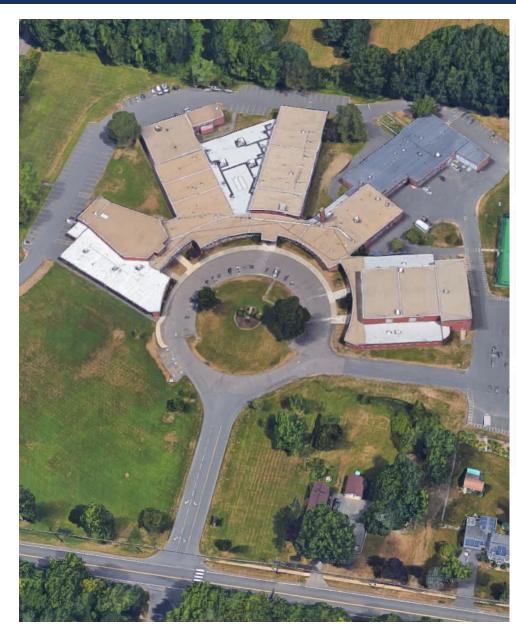
What's Existing

- Linear flow
- Divided Admin area
- Media Center not the heart of the school
- Specials are too far away from each other and general classrooms
- Special Education is too spread out and doesn't work

What's Desired

- Improved flow
- Consolidated Admin area
- Media Center surrounded by neighborhoods
- Neighborhoods surrounded by Specials
- Special Education accessible to all





Suffield Middle School					
Item Description 2027-28 Enrollment (High)					
Grade Level	6	7	8		
Student Pop. (10/1/18)	162	154	150		
Subtotal	466				
Current Space Standard					
SF/Student (Max.)	152	176	176		
SF/Grade Level (Max.)	24,624	27,104	26,400		

State Standard Space Specifications Grades

Projected Enrollment	Pre-K and K	1	2	3	4	5	6	7	8	9	10	11	(2
		A	llowa	able S	quare	Foo	age pe	r Pup	il				
0 - 350	124	124	124	124	124	156	156	180	180	180	194	194	194
351 - 750	120	120	120	120	120	152	152	176	176	176	190	190	190
751 - 1500	116	116	116	116	116	148	148	170	170	170	184	184	184
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Sec. 10-287c-15. Standards (Reference: Section 10-283a)

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purchases, vocational agriculture equipment, and administrative facilities. For any building constructed prior to 1950, the standard space specifications identified in this section shall be increased by twenty-five per cent.



State of CT ~ Max Allowable Area Analysis

Take highest student enrollment from 8-year projection (2027-28 High Projections from MMI/SLR Updated April 2021)

Multiply by max allowable as per state standard Space Specifications by grade level & total size of school

Review for applicable allowances (older building inefficiencies)

*BOE Approx. ~ 4,207 sf

Max Allowable ~ 78,128 GSF vs. Existing ~ 128,489 GSF* **Existing building is nearly** <u>40% larger</u> than the Maximum Allowable!



Media Center

CT State Standard ~ SF area is based upon 10% of student population x 35 sf per student 4,734 gsf 1,631 gsf **Existing Media Center CT State Standard** Cafeteria CT State Standard ~ SF area is based upon 3 lunch periods at 17.5 sf per student 3,318 gsf 2,718 gsf **CT State Standard Existing Cafeteria**



The importance of Efficiency in a Building

Yellow Outline

Area ~ 128,489 SF

Blue Area

Grade Level ~ 36,134 SF Upper Level ~ 4,437 SF + Chases, wall thickness, etc (3.5%)...

Blue Area (41,991 SF) Yellow Outline (128,489 SF) 32.6%

Typical Efficiency Factor ~ 25-30% Loss of Education Space is 3,340 – 9,765 sf

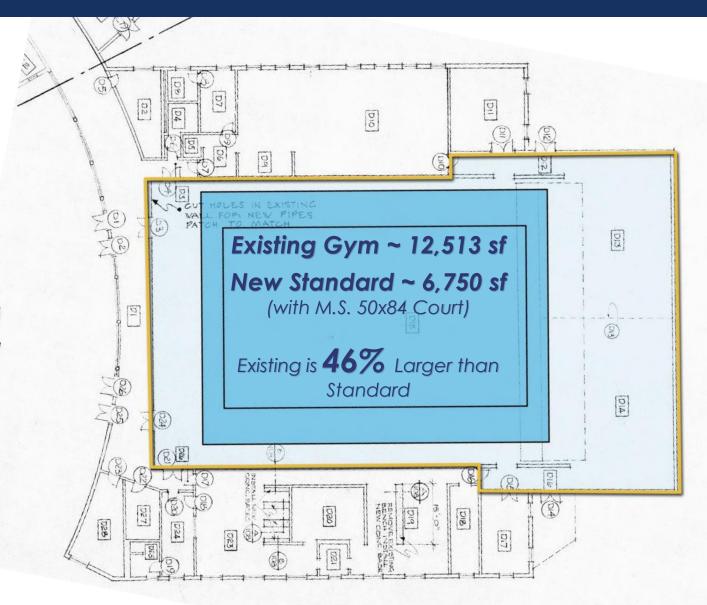


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Understanding the impact of your Building

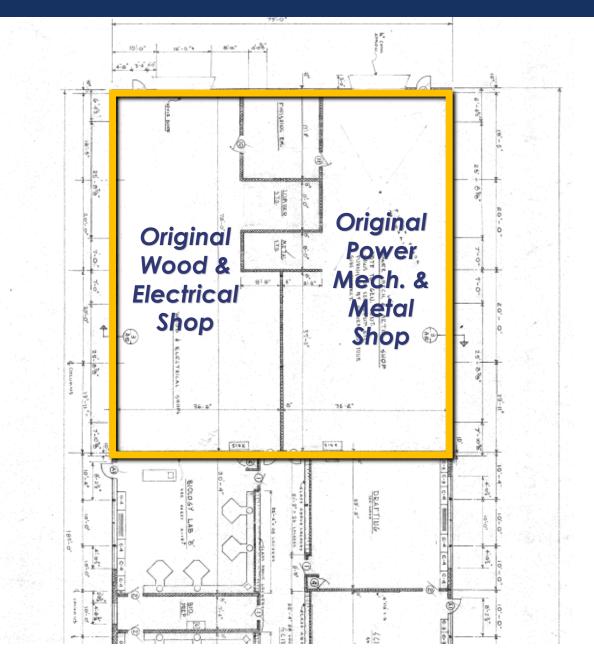
- 1. Clearly oversized for current population
- 2. Suffers from severe inefficiency and multiple change in use.
- 3. The benefits and challenges of maintaining and operating an oversized school should be considered:
 - a. Associated operational costs
 - b. Loss of the benefit of oversize core spaces (Example Gymnasium)
 - c. Challenges when reimaging space for a different use (Special Education located in original "shop" classes – or - Housing IT in the original VO-AG Building)



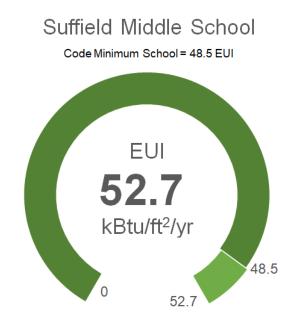


Understanding the impact of your Building

- 1. Clearly oversized for current population
- 2. Suffers from severe inefficiency and multiple change in use.
- 3. The benefits and challenges of maintaining and operating an oversized school should be considered:
 - a. Associated operational costs
 - b. Loss of the benefit of oversize core spaces (Example Gymnasium)
 - c. Challenges when reimaging space for a different use (Science & Special Education located in original "shop" classes – or -Housing IT in the original VO-AG Building)



System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage	
Fire Protection System	40 Years	20 Years	50%	
Plumbing Water Heater	25 Years	25 Years	100%	
Plumbing Piping & Fixtures	40 Years	40 Years	100%	
Mechanical Boiler Plant	40 Years	25 Years	63%	
Mechanical Piping & Equipment	40 Years	40 Years	100%	
Mechanical Air Conditioning	25 Years	10 Years	40%	
Mechanical Controls	20 Years	5 Years	25%	
Electrical Service & Distribution	40 Years	20 Years	50%	
Electrical Lighting	30 Years	30 Years	100%	
Electrical Generator	40 Years	30 Years	75%	
Fire Alarm	20 Years	25 Years	125%	



Tecton

SUFFIELD HIGH SCHOOL INITIAL FINDINGS

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Sheldon St



2002 Original Construction

Grade Level	9-12
Building Area/Site	204,016 sf / 60.48 acres
Age/Construction	2002 (19)



Site

- 1. Site circulation concerns separation of bus, parent, and student. Intersecting routes create confusion at arrival/dismissal.
- 2. Pavement in fair condition overall. Sidewalks are in fair condition with several areas deteriorating, cracking, spalling
- 3. Differential settlement at bollards ~ a representative indication of poor soils and/or moisture migration
- 4. Site walls show efflorescence/water infiltration

Architectural Exterior

- 1. Generally good to fair condition. Durable and well maintained. Recommend prev. maint. (caulking/sealants)
- 2. Under-utilized Courtyard Space. Gaps in perimeter roof flashing exposing building to loss of energy and wildlife
- 3. Original roof designed with 15-year warranty, 4 years out of warranty.

Grade Level	9-12
Building Area/Site	204,016 sf / 60.48 acres
Age/Construction	2002 (19)





Architectural Interior

- 1. Overall, well maintained, some areas of questionable quality of original construction, overall building has worn faster than anticipated (accelerated wear and tear on finishes)
- 2. Visual indications of various slab cracking throughout building with possible water/vapor infiltration. Persistent issue causing finishes/glue to bubble due to moisture.
- 3. Curious curling ceiling tiles leads team to be concerned about the HVAC balancing of the school.
- 4. Obsolete program functions have been transformed into new uses on a yearly/on-going basis
- 5. Original doors, hardware, finishes are beginning to show signs of age and deterioration.
- 6. Fairly significant deterioration of furniture in areas, in some cases it is mismatched.

Grade Level	9-12
Building Area/Site	204,016 sf / 60.48 acres
Age/Construction	2002 (19)





Building Systems

- 1. Major Air Handling units 20 years old but failing at a high rate.
- 2. Electrical distribution is challenging and is difficult to troubleshoot. Additionally nothing is labeled.
- 3. Plumbing Flush Valves for Water Closets and Urinals and Faucets were installed as sensor faucets. Faucets failing at a high rate. Need to be replaced throughout.
- 4. Controls throughout are an issue. Town is currently fixing this.
- 5. Overall ALL MEP systems are starting to get to the age where they will need some major maintenance. If maintenance is delayed then the repair costs will be greater.
- 6. Concern related to water treatment & affects on systems

Grade Level	9-12
Building Area/Site	204,016 sf / 60.48 acres
Age/Construction	2002 (19)



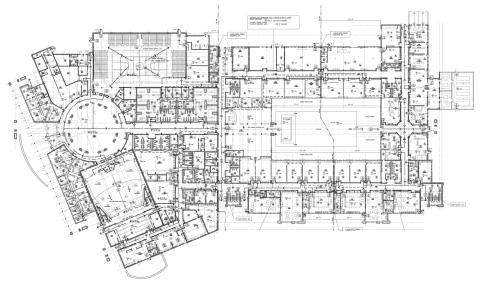
SUFFIELD HIGH SCHOOL ~ PROGRAMMING



- 1. Would like to integrate more collaborative spaces, working toward this @ media center
- 2. Ideally reinvent antiquated program space (dark room area, computer, material lab)
- 3. Investigate possibility of new classroom furniture to promote collaboration, flexibility, adaptable space ~ less "owning" of room
- 4. Integrate idea of a campus setting, more progressive approach to program layout
- 5. Rethink utilizing areas in multiple ways (ex. Of auditorium for "lecture hall" setting
- 6. Distribute specialized & social emotional / wellness to be more integrated into daily routine, "be there"
- 7. Create Innovation Hub (Manufacturing), Career Center, Education & Health Service – Career & College Ready

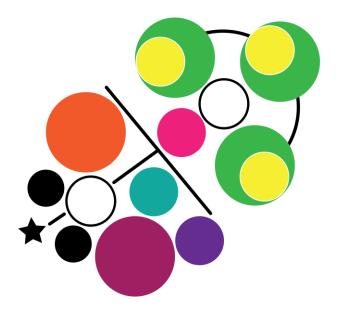
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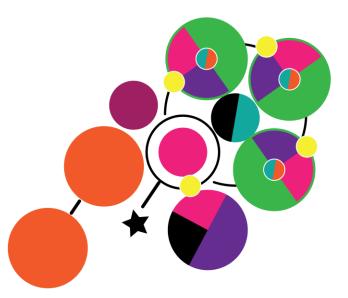




SUFFIELD HIGH SCHOOL ~ PROGRAMMING







- Entrance Office/Admin
- Classrooms
- Gym
- Cafeteria
- Science
- Special Education
- Media/Resource
- Art/Maker
- Auditorium/Music

What's Existing

- Labs not accessible while classes are taking place
- Media Center doesn't have an identity
- No alternative fitness/holistic health space
- Fitness room too small to train athletes, currently travel to S.M.S. for their Gym
- Integrate real-world collaboration, preparing students for careers of the future

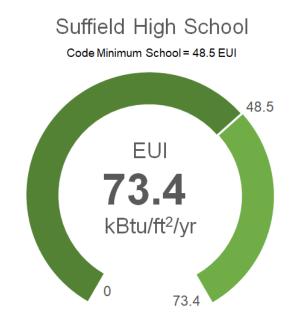
What's Desired

- Dedicated Labs outside the Classroom
- Reinvent Media Center
- Create Mindfulness Space
- Second Gym & Larger Fitness/Training
- Bring Counselors closer to the students
- Create Innovation Center
- Program to support "Career Ready" model

SUFFIELD HIGH SCHOOL ~ BENCHMARKING



System	Equipment Life Expectancy	Equipment Age	Useful Life Percentage
Fire Protection System	40 Years	20 Years	50%
Plumbing Water Heater	25 Years	20 Years	80%
Plumbing Piping & Fixtures	40 Years	20 Years	50%
Mechanical Boiler Plant	40 Years	20 Years	50%
Mechanical Piping & Equipment	40 Years	20 Years	50%
Mechanical Air Conditioning	25 Years	20 Years	80%
Mechanical Controls	20 Years	20 Years	100%
Electrical Service & Distribution	40 Years	20 Years	50%
Electrical Lighting	30 Years	2 Years	7%
Electrical Generator	40 Years	20 Years	50%
Fire Alarm	20 Years	20 Years	100%



Feedback, Comments and Questions

NEXT STEPS

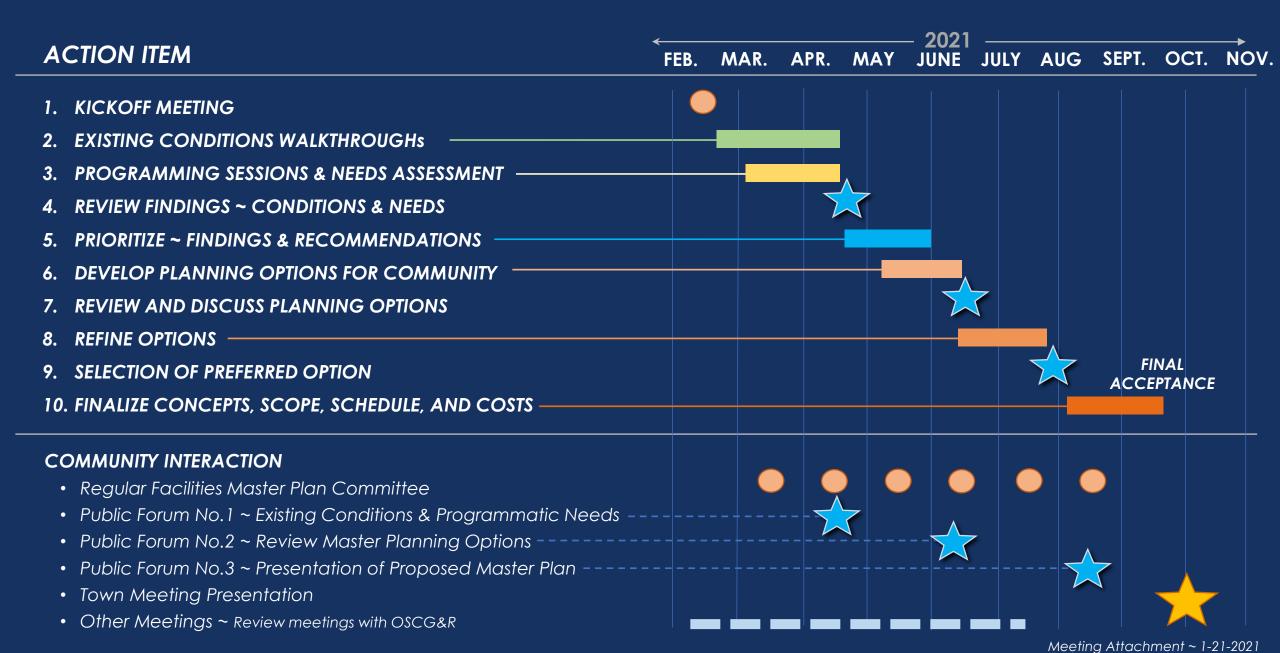
- 1. Communications Plan
- 2. Options Planning
- 3. Order of Magnitude Costs
- 4. DRAFT existing conditions report
- 5. Update to Schedule

COMMUNICATIONS PLAN

- 1. Website Creation, Email
- 2. Surveys
- 3. Building Tours
- 4. Public Forum on Existing Conditions
- 5. Publish Informational Fliers
- 6. Board Outreach Updates
- 7. Post Information and Public Meetings

MILESTONE SCHEDULE









SUFFIELD FACILITIES MASTER PLAN

PROGRESS UPDATE MEETING

SUFFIELD, CT 5.6.2021

CHALLENGES & OPPORTUNITIES

- Understand how others work
- Identify synergies and opportunities for collaboration
- Build consensus for shared amenities and support
- Identify where emotions may be
- Include cross-section of the community
- Strategically repurpose

FIRE DEPARTMENT CONSIDERATIONS





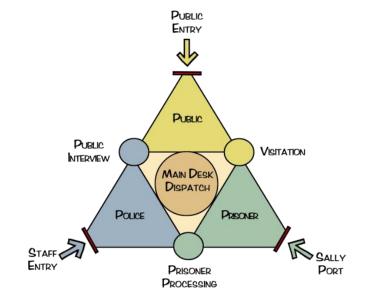


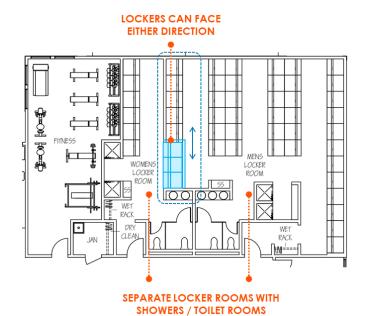
- Responder health and wellness
- Gender/bunk equity
- Volunteer staffing/ fulltime, transition over time



POLICE DEPARTMENT CONSIDERATIONS







Officer health and wellness

- Gender equity
- Flexibility & adaptability



SCHOOL REIMBURSEMENT & ENROLLMENT



	2019 GENERAL CONST.	2019 NEW CONST.	2020 GENERAL CONST.	2020 NEW CONST.	2021 GENERAL CONST.	2021 NEW CONST.
SUFFIELD	51.79	41.79%	53.57%	43.57%	55%	45%
	70					
OXFORD	37.5	27.5	37.14	27.14	38.57	28.57
TOLLAND	50.71	40.71	50.36	40.36	48.93	38.93
ELLINGTON	57.14	47.14	57.5	47.5	56.43	46.43
			Group C			
001 ANDOVER 005 BARKHAMSTED 008 BETHANY 012 BOLTON 023 CANTON 030 COLUMBIA	031 CORNWALL 048 ELLINGTON 050 ESSEX 067 HEBRON 078 MANSFIELD 079 MARLBORO	108 OXFO 112 POMF 121 SALEM 127 SHER	RD RET // MAN	139 SUFFIELD 142 TOLLAND 204 DISTRICT NO. 4 207 DISTRICT NO. 7 208 DISTRICT NO. 8 210 DISTRICT NO. 10	212 DISTRI 213 DISTRI 214 DISTRI 217 DISTRI 218 DISTRI 219 DISTRI	CT NO. 13 CT NO. 14 CT NO. 17 CT NO. 18

State School Reimbursement

Moderate increase in next few years

Enrollment Projections By Grade*																				
Birth Year	Births		School Year	РК	к	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	РК-1
2014	111		2019-20	40	138	139	130	133	135	145	140	158	173	172	216	201	182	0	2062	210
2015	107		2020-21	41	142	145	140	125	129	135	146	141	162	193	171	215	186	0	2030	207
2016	94		2021-22	42	125	149	147	135	122	129	136	147	144	180	191	170	199	0	1974	201
2017	88	(prov.)	2022-23	43	117	131	151	142	131	122	130	137	151	160	178	190	157	0	1897	194
2018	93	(prov.)	2023-24	44	123	123	132	146	138	131	123	131	140	168	159	177	176	0	1867	191
2019	99	(est.)	2024-25	45	131	129	124	127	142	138	132	124	134	156	167	158	164	0	1826	187
2020	96	(est.)	2025-26	46	127	137	130	120	123	142	139	133	127	149	155	166	146	0	1794	184
2021	94	(est.)	2026-27	47	125	133	138	125	117	123	143	140	136	141	148	154	153	0	1776	182
2022	94	(est.)	2027-28	48	125	131	134	133	122	117	124	144	143	151	140	147	142	0	1753	180
2023	95	(est.)	2028-29	49	126	131	132	129	129	122	118	125	147	159	150	139	136	0	1743	179
2024	96	(est.)	2029-30	50	127	132	132	127	125	129	123	119	128	164	158	149	128	0	1741	179
ote: Ungrade	2024 96 (est.) 2029-30 50 127 132 132 127 125 129 123 119 128 164 158 149 128 0 1741 te: Ungraded students (UNGR) often are high school students whose anticipated years of graduation are unknown, or students with special needs - UNGR not included in Grade Combinations for 7-12, 9-1																			

SPS NESDEC Enrollment Projections

Slight to moderate decrease over 10 years

EFFICIENCY OF BUILDING PLAN





McAlister Intermediate School Area Analysis

Orange Outline Total Gross Floor Area ~ 72,263 GSF

Blue Area Total Gross Floor Area ~ 21,278 GSF

Blue Area (24,100 SF) Total Building (72,263 SF) ~34% Efficient

Typical Efficiency Factor ~ 25-30% Loss of Education Space is 2,800 – 6,500 sf

MAXIMIZING REIMBURSEMENT





Renovate As New

"Renovation Status- maximum demolition of existing structure: The OSCG&R has revised its policy regarding maximum allowable demolition of an existing school building for renovation status. Effective 7/1/18, districts can demolish whatever portion or percentage of the existing building they want, but at least 55% of the total project at time of completion must be original construction."

Give Consideration to...

- Keep/Renovate 55% of Building
- Construct 45% New
- 10% higher reimbursement rate

ENERGY SAVINGS ANALYSIS



Renovate as New – A. Ward Spaulding School (Example Only)

Average Utility Costs Per Year
 Costs ~ \$2.50 - 3.25/SF
 GSF ~ 71,406 GSF

10 Year Projection of Energy Costs ~ \$2,143,270

Projection utilizes 4% inflation and 2% decrease efficiency compounded \$2.50/SF baseline

Potential Savings with Comprehensive Renovation

- Code Baseline (\$1.75/SF)
- Standard Energy Savings (\$1.50/SF)
- High Energy Savings (\$1.25/SF)
- Net Zero (\$0/SF)

~ \$1,071,635 ~ \$2,143,270

~ \$642,981

~ \$857,308





SUSTAINABILITY / A COMPREHENSIVE APPROACH FOR SUFFIELD



Project Eligibility Requirements*

- Commit to a ZNE, ZNE ready or Passive House (as a path to zero) project
- 2. Target a goal of 25 EUI or less **
- Building must be a minimum of 20,000 square feet (sf) of heated and cooled space
- Must anticipate year-round occupancy
- Engage us before 50% schematic design
- Include ZNE or ZNE ready goal and EUI target in project documents
- Commit to building commissioning

* Please refer to MOU document for full eligibility requirements

** If 25 EUI is not possible due to project type or hours of operation, contact your Sponsor to discuss an alternative EUI target

Summary of ZNE/Deep Energy Savings Incentives

Customer Incentives							
Construction Incentive	Paid if the project design successfully achieves a 25 EUI or alternative target approved by The Companies	\$3.50/sf					
Post Occupancy Incentive	Available following the 1-year post-occupancy period if customer successfully shows the project achieved the target EUI	\$1.00/sf					
ZNE or PH Certification Incentive	Paid to customers that officially certify their projects as ZNE or PH	\$10,000					
Technical Assistance for ZNE Services Up to \$10,000							
Verification Incentive 50% of fee up to \$10,000							
Design Team Incentives							
Calculated at \$0.20/sf and capped at \$15,000, but no less than \$8,000 per project							

Total Customer & Design Team Incentive cap

\$500,000/project

EVERSURCE



Part of the AVANGRID Family

Possible Incentive Cap \$500,000 per project!

MAXIMUM ALLOWABLE AREAS





Suffield Intermediate School

Max Allowable Area Analysis

Take highest student enrollment from 8-year projection.

Multiply by max allowable as per state standard Space Specifications by grade level & total size of school

Review for applicable allowances (older building inefficiencies)

MAXIMUM ALLOWABLE AREAS





MCALISTER INTERMEDIATE SCHOOL ~ AREA ANALYSIS

sf

St

<u>st</u>

sf

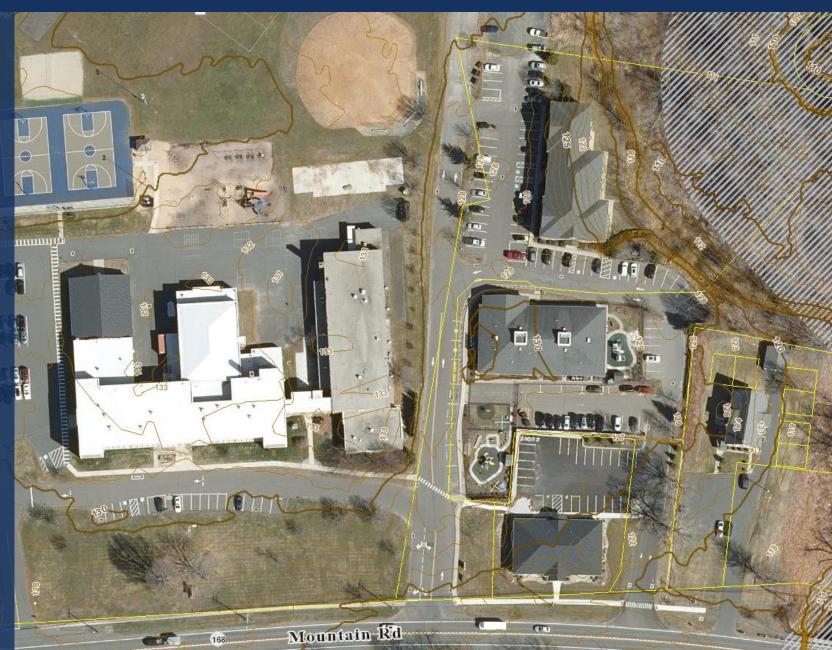


Area Summary

Lower level	2,548 g
Main Level	45,516 g
Upper Level	25,700 g
Total Area	73,764 g

Building History

- Original 1939
- 1956 Addition
- 1972 Modifications/Updates (High School to Middle School)
- 1987 Addition
- 1988 & 1990 Code/ Updates
- 1992 Elevator Addition/Lift
- 1994 Modular Building
- 2001 Code Alterations (Middle School to Intermediate School)



A. WARD SPAULDING SCHOOL ~ BENCHMARKING

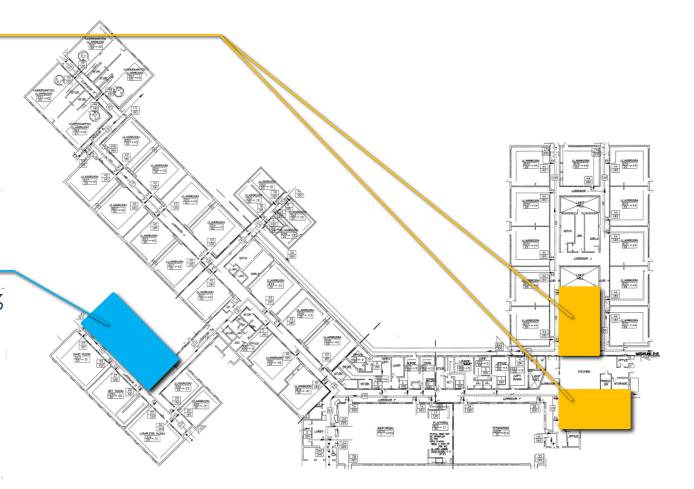


Cafeteria

- CT State Standard ~ SF area is based upon 3 lunch periods at 17.5 sf per student
- 2. 493/3 x 17.5 sf/student = <u>2,875 gsf</u>
- 3. Existing Cafeteria = 1,518 + 1,448 sf = <u>2,966 gsf</u>

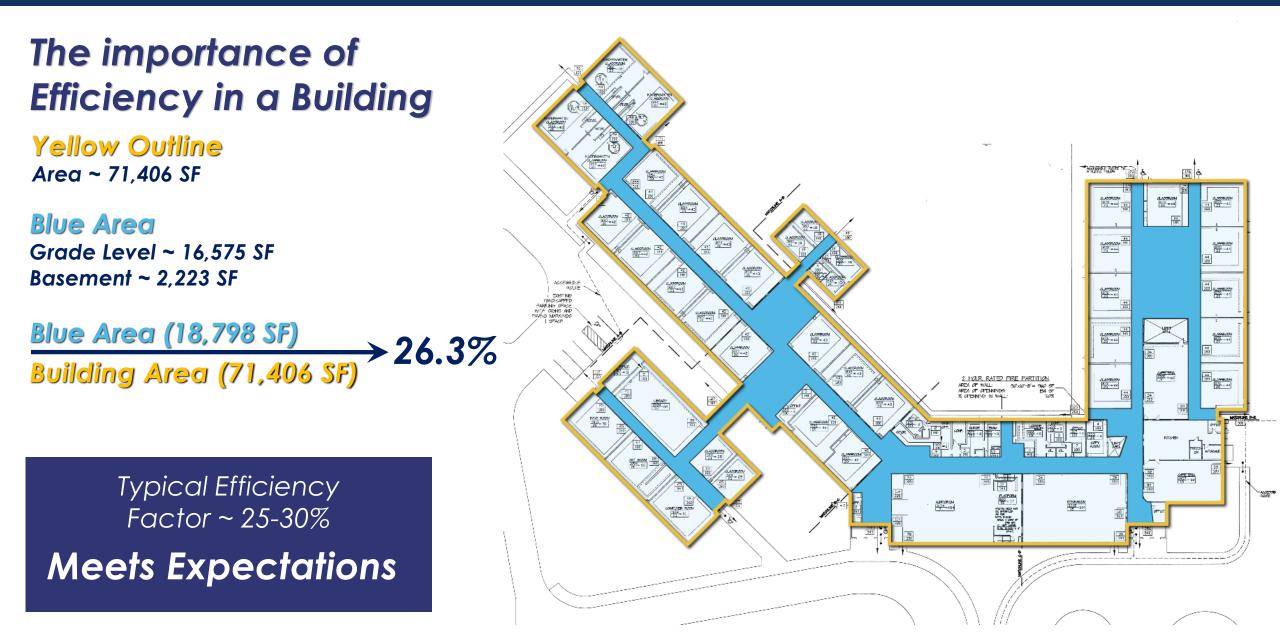
Media Center

- 1. CT State Standard ~ SF area is based upon 10% of student population x 35 sf per student
- 2. 493 x 10% x 35 sf/student = <u>1,750 gsf</u>
- 3. Existing Media Center = <u>1,834 gsf</u>



A. WARD SPAULDING SCHOOL ~ BENCHMARKING





A. WARD SPAULDING SCHOOL ~ BENCHMARKING



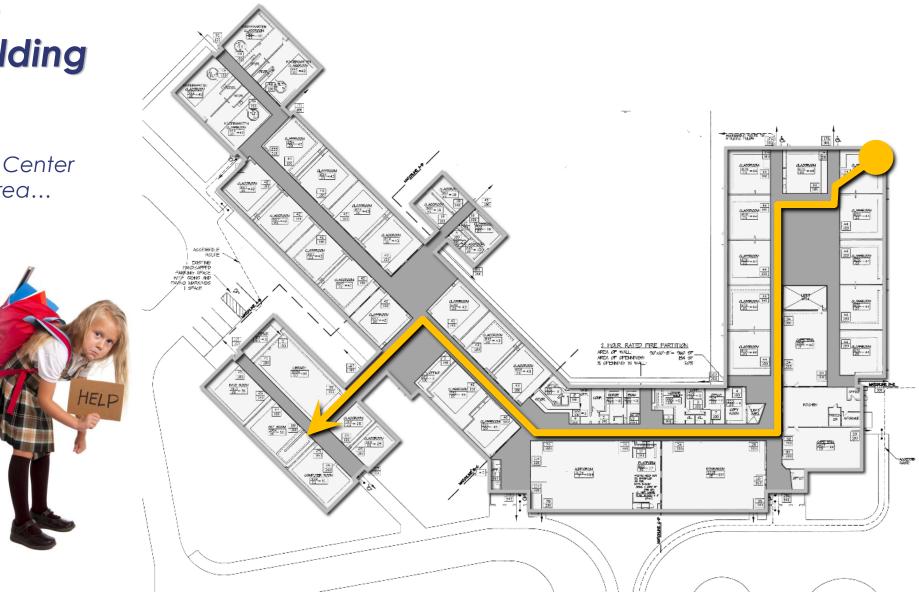
Understanding the impact of your Building

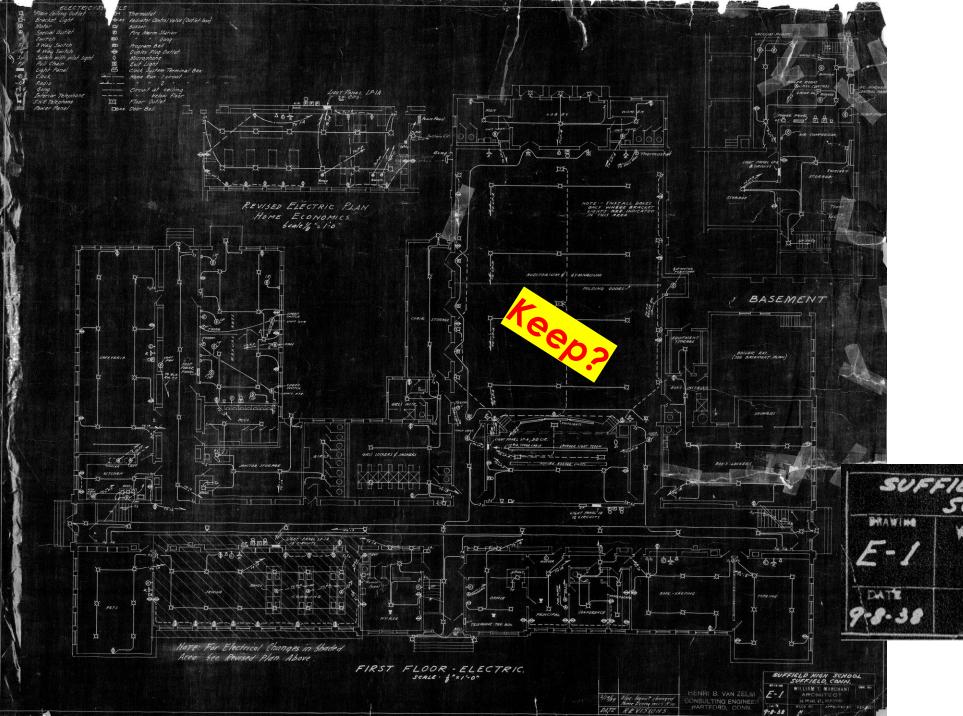
"The gift of time"

Distance of Classroom to Media Center and/or Specialized Education Area... Approximately 630 feet!

Average speed of a 5-yearold ~ 50 ft every 20 -25 seconds

About a 5 min. walk! Or... 10 minutes away from the classroom with <u>each</u> trip.









MCALISTER INTERMEDIATE ~ BENCHMARKING



Cafeteria Media Gym Overall SF vs. Max. Allowable Efficiency Plan Utility Consumption/EUI

Grade Level	3-5
Building Area/Site	72,263 sf / 32.4 acres (shared)
Age/Construction	1939 (82), 1956 (65), 1987 (34), 1994 (27)



Suffield Police & Fire

				Suffiel		
			Space	e Needs Su	mm	ary
			Fi	e Headqu	art	ers
New Pro	grammed A	rea Name		Program		
1.	Public					
	1.01	Public Entry Area		300	s.f.	
	1.02	Male Restroom		165	s.f.	
	1.03	Female Restroom		165	s.f.	
			Subtotal:	630	s.f.	
2.	Admin	istration				
	2.01	Training Room		1400	e f	
	2.02	Training Room Storage			s.f.	
			Subtotal:	1,544	s.f.	
3.	Admin	istration				
	3.01	Chief's Office		240	s f	
	3.02	Deputy Chief's Office		200		
	3.03	Fire Inspector's Office		200		
	3.04	Public Education Captain's Office		150	s.f.	
	3.05	Safety Captain's Office		150	s.f.	
			Subtotal:	940	s.f.	
4.	Firefia	hters/EMT Staff Facilities				
	4.01	Firefighter's/EMTs Day Room		320	e f	
	4.01	Kitchen and Dining Area		475		
	4.03	Exercise - Fitness Room		500		
	4.04	Officer Bunk Room(s) x 2		300		
	4.05	Firefighter Bunkers/Bed Room(s) x 6			s.f.	
	4.06	Unisex Bath/Shower(s) x2		160	s.f.	
	4.07	Laundry/Housekeeping Storage		100	s.f.	

1.03	Public Interview	160 s.f.
	Acoustics	
	 partitions to extend to underside of stru 	cture
	 sound batt insul. in stud partitions 	
	Security	
	proximity access control	
	audio/video monitoring - to record act	tivities including probate
	child exchange, internet purchasing, et	
	 ballistic protection in walls interfacing s 	
	panic device	
	Furniture	
	1 table w/ six chairs	
	Equipment 1 wall telephone	
1.04	MIRCS/Licensing Room	160 s.f.
	Acoustics	
	 partitions to extend to underside of stru 	icture
	 sound batt insul. in stud partitions 	
	Casework and built-ins	
	6 lineal foot licensing counter with cabine	ets below
	Security	
	proximity access control audio/video monitoring - to record act	in differen
	 audio/video monitoring - to record act ballistic protection in walls interfacing s 	
	panic device	
	Furniture	
	1 table w/ six chairs	
	Equipment	
	1 computer on licensing counter	
	1 fingerprint station	
	1 wall telephone	

		Site Needs Assessment				
					Police Fac	ilit
New P	rogrammed Area Name		Quan	tity	Programmed	
S.1	Building Area					
	Building Footprint		2	story	11,777	5
	Future Building Growth (25% of programme		ned area)		2944	
		Subtotal:			14,721	
S.2	Parking Area					
	Visitor Parking		11	spaces	1,815	
	Visitor Handicapped Parking		1	spaces	270	
	Staff Parking		30	spaces	4,950	
	Staff Handicapped Parking		1	spaces	270	
	Cruiser Parking		16	spaces	2,640	
	Oversize Fleet Parking		2	spaces	650	
	Travel Lane Allowance				8,400	
		Subtotal:			18,995	
S.3	Site Utilities					
	Electrical Transformers				100	
	Emergency Generator				500	
	Antenna Tower				500	
	AC Equipment				400	1
	Dumpsters				240	
	Storm Water Retention				3,400	1
		Subtotal:			5,140	:
S.4	Site Amenities					
	Impound Lot		6	spaces	1,200	
		Subtotal:			1,200	1
S.5	Setbacks and Green Space					
	Green space				16,000	
	Setbacks				16,600	