

TOWN OF MEDFIELD

Municipal Facilities

Evaluation and Capital Plan



October 6, 2017

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TOWN OF MEDFIELD MUNICIPAL FACILITIES EVALUATION AND CAPITAL PLAN

EXECUTIVE SUMMARY

INTRODUCTION

The Town of Medfield's executive management had concerns regarding the maintenance, preservation, safety and security of the Town's present investments in municipal facilities. Given the genuine concerns of these local officials and the magnitude of an initial evaluation and planning effort, local leaders sought grant funds and professional assistance as they endeavored to better understand their fiduciary roles and responsibilities pertaining to these considerable public facility concerns.

This assessment of public buildings is a first phase. This report is designed to initiate public interest and debate around all of the Town's current public facilities and their futures. Our report is based on physical observations, narratives from municipal users/occupants with very limited investigation of the properties.

This is not a complete architectural or engineering study. Based on the age of several buildings, some upgrades or repairs identified in this assessment may trigger compliance with current building codes that may not have been fully vetted via this initial assessment effort.

OVERVIEW

The Town's facilities are aging and in many cases the buildings are over 50 years old and have lasted beyond their original expected useful lives. Many of these buildings have original mechanical systems still in current use. If upgrades did occur, they were done as a repair or partial replacement to solve only the immediate needs

In many cases the structures are still functional; however, elements within the facilities such as roofs, building envelope, HVAC, plumbing, electrical, and handicap accessibility have exceeded their lifecycles and require planned capital repair expenditures.

We observed that at best the Town's current facilities management and capital planning exists more as a reactionary program. This results in an effort that never catches up or looks ahead. We also found that frequently the building occupants seem to be always competing for the funding necessary for their building's current system failure or emergency.

We do complement the Town for their replacement of the antiquated DPW and Public Safety Buildings. In the 1990's the Town took a comprehensive building upgrade program with several schools and town builds. Upgrades and expansions were done on these facilities to address a population growth in the schools and update and expand town buildings such as Town hall, Library, and Counsel on Aging buildings. These projects were a major undertaking to address significant infrastructure needs. As we come up on 20 -25 years of operational service in these facilities, it is apparent that building systems are in need of upgrades.

We find that other mechanical system or building envelope matters seem to continue to be deferred. A capital repair plan helps focus facility owners to anticipate maintenance and failure rates. Capital plans also help owners with multiple and diverse facilities to better prepare and manage their future operational budgets.

Also users and occupants generally agreed that the Town's capital outlays for facilities tend to be reactionary based. We find this management practice is present in many of the Commonwealth's communities regardless of size. We hold that this management style is based in the roots of the so-called Prop 2 ½ legislation of 1982. Deferral of proper facility maintenance has been practiced across our state now for 35 years. Unfortunately that management practice generally only addressed the facilities' failures issues and then only those of the highest priority. We are now 35 years into the Prop 2 ½ legislation's life cycle. Now as we move closer to four full decades since the law change, the challenges of facility ownership and the proper care of those facilities owned are now robustly coming to the forefront across our state.

We further note that the buildings that house staff or have access to some non-tax based financial resource have managed the basic needs of the facility. In general, the facilities tend to provide a level of comfort to the occupants or address critical needs; however, we rarely see municipal owners take a pro-active approach to regular or planned major systems replacement.

Municipal Owners, who are unfamiliar with building construction, did not have the knowledge or guidance to take a pro-active approach to regular or planned major systems replacement. In some instances the municipal staff inhabiting the facilities have adapted to working in less than desirable conditions. We see employees work around these conditions by installing make shift draft stops, use of extension cords, space heaters or multiple window air conditioning units and other "piece meal" approaches to system failure repairs. Sometimes the "band aid" approaches work until such time as funds permit correcting the problem. In other instances the building inhabitants accept these so-called "fixes" as a permanent repair.

This report was prepared to provide the Town with an initial evaluation public facilities. The report identifies the immediate repair needs, the lack of required equipment performance at each facility and provides a multi-year replacement plan that results in an annual maintenance program for each facility. It should be noted that, at this time, this report does not include the new Public Safety and Public Works facilities, the Wastewater Facility, and the Derby House. Subsequent updated versions of this report will include these facilities.

The Town is at a crossroads with respect to their facilities. Immediate repair needs exist in most facilities. This report helps Medfield's executive leaders and residents recognize the urgency of investing in these facility repairs. With no action the town will inevitably face much larger facility concerns and costs in the future.

SCOPE OF SERVICES

This report is the output that resulted from an effort funded via the Commonwealth's Community Compact Grant program. An engineering firm was retained to evaluate the roof systems of several buildings, as well as a mechanical engineer to review and comment on HVAC components. The scope of the services provided included the following three phases.

Phase I – DATA COLLECTION:

We inspected ten facilities identified by the Town, initially not including the new Public Safety and Public Works facilities, the Wastewater Facility, and the Derby House (these facilities will be added to the overall working version of this report as time permits). This included review of source documents provided by the Town, walk-throughs of each facility, interviews with building managers and/or maintenance staff and contact with current service providers to review condition of existing systems.

Phase II – EVALUATION:

We evaluated the data collected during Phase I and developed a maintenance plan, which includes recommended repairs and scheduled routine maintenance tasks. The organizational resources currently available to support the required routine facilities maintenance were documented. Finally, we provided recommendations for improvements.

Phase III – REPORT:

The document includes: 1) executive summary; 2) evaluation of each facility; 3) capital plan for major replacements or improvements; and 4) findings and recommendations.

DETAILS

The age, size, and 2017 assessed valuations of the Town facilities included in this report are summarized on the following page

<u>Year(s)</u> <u>Built</u>	<u>Facility</u>	<u>Land</u> <u>(Acres)</u>	<u>Building</u> <u>(Sq Feet)</u>	<u>Assessed</u> <u>Valuation</u>
1900	Town Hall	0.58	17,356	\$3,395,600
2007	Senior Center	7.13	7,810	2,777,600
1930	Pfaff Recreation Center	1.30	12,033	781,100
1917	Library	0.94	22,192	4,070,300
1985	Transfer Station	3.76	5,456	595,100
1950	Memorial Elementary	0.00	54,387	7,672,000
1942	Dale Street Elementary	16.98	67,249	9,750,400
1969	Wheelock Elementary	44.25	65,190	10,524,600
1960	Blake Middle School	61.49	121,564	29,284,600
1967	Medfield High School	0.00	186,487	42,625,000
TOTALS:		136.43	559,724	\$111,476,300

The Town has nearly 700,000 square feet of facilities it is responsible for maintaining, including the new Public Safety and Public Works facilities. The age of several buildings exceeds 50 years, while two (2) were built 100 or more years ago. The overall condition of the Town's municipal facilities ranges from Good to Fair. In a few cases a facility is considered to be in Poor condition or may have certain component systems that are Poor.

The insured valuations of these facilities is also a useful "data point". This metric is used to illustrate the value of the Town's major capital investments in public buildings. Management has the responsibility for the care and custody of over \$106,000,000 of buildings and another \$10,850,000 of possessions in those buildings. It should be noted that today's facility replacement costs are likely higher than the insured values listed below.

<u>Public Facility</u>	<u>Building</u> <u>Value</u>	<u>Personal</u> <u>Property</u> <u>Value</u>
Town Hall	\$ 2,835,975	\$ 582,915
Senior Center	2,218,986	166,424
Pfaff Recreation Center	1,072,658	49,613
Library	2,817,446	582,915
Transfer Station	258,401	
Memorial Elementary School	8,105,068	665,696
Dale Street Elementary School		708,539
Wheelock Elementary School	10,407,710	708,539
Blake Middle School	18,383,300	1,664,239
Medfield High School	28,846,817	3,883,225
Public Safety Facility	15,300,000	612,000
DPW Garage	7,428,456	1,224,000
TOTALS:	\$105,829,590	\$ 10,848,105

An annual maintenance effort equivalent to 1.5% of the insured value of these facilities would suggest a repair/replacement budget \$1,587,500 or approximately \$2.39 per square foot. The Commonwealth of Massachusetts manages their facilities via the Division of Capital Asset Management (DCAM). This state agency's benchmark recommended budget is \$4.00 per square foot, equivalent to 2.5% of the insured value of these facilities.

The individual facility sections of this report are organized in a uniform manner. First we evaluate each component (site, building, building system, and code/operational concern); followed by photographs illustrating existing conditions and repair needs. That section is followed by a 20-year repairs/improvements table, which summarizes the repair needs and estimated costs found in the evaluation.

Given the amount of deferred maintenance, we have identified significant repair needs summarized as follows. You can review the individual facility sections of this report for the details.

<u>Facility</u>	<u>Section 2</u> <u>Site</u>	<u>Section 3</u> <u>Building</u>	<u>Section 4</u> <u>Systems</u>	<u>Section 5</u> <u>Concerns</u>	<u>Estimate</u>
Town Hall	\$ 80,000	\$ 1,206,000	\$ 524,000	\$	\$ 1,810,000
Senior Center	72,000	593,000	68,000		733,000
Pfaff Recreation Center	140,000	1,259,000	240,000	6,000	1,645,000
Library	41,000	814,000	237,000		1,092,000
Transfer Station	28,000	408,000	36,000		472,000
Memorial Elementary	290,000	2,836,000	1,273,500	-	4,399,500
Dale Street Elementary	130,000	5,305,000	6,341,000		11,776,000
Wheelock Elementary	570,000	2,958,000	1,450,000	110,000	11,776,000
Blake Middle School	220,000	5,491,000	2,080,000		7,791,000
Medfield High School	335,000	5,396,000	2,219,000	-	7,950,000
TOTALS:	\$1,906,000	\$ 6,266,000	\$14,468,500	\$ 116,000	\$ 42,756,500

These amounts include a 25% markup of estimated costs, to cover contractor overhead and profit, valued at FY2018 estimated costs. These initial estimates are based upon unit costs. Further study of specific repair needs may yield higher or lower estimated costs.

Looking ahead, over the next twenty-year period, we recommend a number of repair or replacement projects to the Town for consideration. We acknowledge that priorities and/or available funding may vary from year to year. However, the next exhibit provides a sense of the efforts required (in five-year increments) to address the Town's facility needs.

	FY2019-38				
<u>Facility</u>	<u>FY19-23</u>	<u>FY24-28</u>	<u>FY29-33</u>	<u>FY34-38</u>	<u>TOTALS</u>
Town Hall	\$ 467,128	\$ 925,212	\$ 497,124	\$1,306,675	\$ 3,196,139
Senior Center	177,647	250,635	224,893	739,780	1,392,955
Pfaff Recreation Center	1,857,689	61,147	73,528	330,514	2,322,878
Library	481,983	498,68	448,065	402,362	1,831,038
Transfer Station	201,271	148,317	80,086	441,857	871,531
Memorial Elementary	3,808,029	273,624	2,119,619	997,398	7,198,670
Dale Street Elementary	8,312,941	8,533,418	315,631		17,161,990
Wheelock Elementary	4,339,308	1,166,631	788,390	1,753,391	8,047,720
Blake Middle School	7,354,874	2,563,820	606,036	1,426,582	11,951,312
Medfield High School	2,061,373	4,671,556	975,388	6,697,532	14,405,849
TOTALS	\$29,062,243	\$19,092,988	\$6,128,760	\$14,096,091	\$68,380,082

The above amounts are based on FY2018 values adjusted by 3% per year.

FINDINGS/RECOMMENDATIONS

The individual facility sub-section reports offer a number of recommendations which we have summarized with estimated costs in the Capital Plan tables. We encourage the readers of this report to review all recommendations within this report. Presented below are the findings we believe to be of critical concern that management should consider pursuing further.

FINDING #1: Master Plan – Most of the Town’s facilities and related systems are at or beyond their anticipated life cycles. Major repairs and improvements must be addressed in a thoughtful, comprehensive manner.

We recommend the Town pursue the development of a Facilities Master Plan to address maintenance, sequencing, and protection of its investment.

FINDING #2: Dale School Replacement/Improvements – Several engineering/architectural studies have highlighted the building component failures that impact the building, regardless of use. It has been suggested that the estimated cost to renovate this facility as a school (using current MSBA standards) is excessive; however, certain municipal uses may be feasible.

We recommend that, should the Town opt to retain the Dale School for municipal purposes, a site specific masterplan be commissioned to prepare for its future use and the need for immediate repairs of this building. Further, the Town needs to plan for a replacement school facility to address future educational needs.

FINDING #3: Roof Replacement Program – The 2017 Roof Condition Survey highlights several schools and municipal buildings in need of roof replacement; due to leaks and/or failure. Given the magnitude of this concern, a comprehensive engineering plan and replacement program is required.

We recommend the Town engage appropriate professional services to plan, design, and contract for roof replacements at various Town facilities.

FINDING #4: Budgeting and Capital Planning – The Town has significant deferred maintenance needs and should begin proactively addressing these needs. A Town wide, consolidated facilities management budget would allow for flexibility to deal with (or re-prioritize) needs as they occur.

The Town has a better ability to clearly determine and understand the volume of capital projects anticipated over the next several years in order to at a minimum, gain control over the collective deferred maintenance projects that the current Town facilities require. The costs of these efforts and the logistical scheduling of the required projects are also vital to any cost effective comprehensive facilities management plan.

The Town properties do not have a comprehensive building capital replacement/repair plan established. Historically the various building occupants, tend to reevaluate the building needs each year and determine the most significant issue to address. They then request a budget accordingly.

A pro-active approach to system replacements in buildings does not currently exist. Several buildings were renovated in the 1990's and after 25+/- years of service component failure and upgrades are needed. Each building and its component systems are not analyzed in their entirety to provide the Town with a comprehensive capital plan and long-term cost projection. As a result, the Town is not in a position to properly understand and fund its true capital needs on an annual basis.

While not a focus of this study, the town may need to prioritize and re-evaluate uses of spaces within these town buildings. Re-organizations of uses and space needs within each building may result in better capital planning.

This report heads the Town down a path to develop a solid facilities maintenance capital planning model.

We recommend the Town consolidate its facilities maintenance budget into a single Town-wide budget. Further we encourage the Town to establish an annual Capital Repairs/Reserve account (or Article) to fund on-going facility repairs, system replacements, renovations, and related improvements.

Municipal Facilities

Evaluation and Capital Plan

MEDFIELD TOWN HALL



LOCATION: 459 Main Street

Year Built 1872/1998

Condition Fair

Assessors: Map 43 Parcel 024

Building area: 17,139 sq ft

Land Area : approximately .75 acres

Town Hall

1.0 PURPOSE and LIMITATIONS

The purpose of this Property and Conditions Report (the Report) is to assist the Town of Medfield to assess the general physical condition and maintenance status of the property and to recommend repair and maintenance items considered significant for the property to continue its current operations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, access through building “owners” and information presented by the Town. Findings, conclusions, and recommendations in this Report are based on the methods described above, industry standards, and general observations of the equipment and its visible condition.

The report is focused on existing conditions, lifecycle of existing materials, and non-code compliant conditions. Recommendations will include items needed to bring the space/component to a safe, code compliant, and generally accepted facilities condition. The Report does not anticipate change of use, reconfiguration of space, or change in current program.

Estimated Costs are based on professional judgment and the probable or actual extent of the observed defect inclusive of the cost to design, procure, construct and manage corrections.

1.1 Condition

The Report uses terms describing conditions of the various site, building and system components. The terms used are defined below. It should be noted that a term applied to an overall system does not preclude that a part, component, or section of the system may be in a different condition.

Excellent	The component or system is in new or like new condition, and little or no deferred maintenance is recommended, or the scheduled maintenance can be accomplished with routine maintenance.
Good	The component or system is in sound condition and performing its function. It may show signs of normal aging or wear and tear, and some remedial and routine maintenance or rehabilitation work may be necessary.
Fair	The component or system is performing adequately at this time but is obsolete or is approaching the end of its useful life. The component or system may exhibit Deferred Maintenance, evidence of a previous repair, or workmanship not in compliance with common accepted practices. Significant repair or replacement may be recommended to prevent further deterioration, prevent premature failure, or to prolong its useful life.
Poor	The component or system has either failed or cannot be relied upon for continued use performing its original function, exhibits excessive Deferred Maintenance or is clearly in a state of disrepair. Repair or replacement is recommended.

1.2 Abbreviations

The Report may use abbreviations to describe various site, building, or system components of legal descriptions.

ACT	Acoustical Ceiling Tile	GFI	Ground Fault interrupt (circuit)
AHU	Air handling unit	GWB	Gypsum Wall Board
BTU	British Thermal unit (heat measurement)	HVAC	Heating, Ventilating, Air Conditioning
CMU	Concrete Masonry Unit	HWH	Hot Water Heater
EDPM	Rubber membrane roofing	MDP	Main electrical distribution panel
EUL	Expected Useful Life (life cycle)	PTAC	Package through wall A/C unit
FCU	Fan Coil Unit	RTU	Roof top Unit
FHA	Forced Hot Air	MSBC	Massachusetts State Building Code
IBC	International Building Code	VAV	Variable Air Volume box
ACM	Asbestos containing material	VCT	Vinyl Wall covering (floor tile)
ADA	Americans with Disabilities Act	MAAB	Mass. Architectural Access Barriers

2.0 SITE CONDITIONS

2.1 Topography

Description:

The building's main (first floor) level is situated a few feet up gradient from the Main Street sidewalk and accessed by brick walkways and steps with handrails.

The grade slopes from the front to the rear of the site.

The rear has a walkout basement flanked by a stone retaining wall on the east with guardrail and a concrete retaining wall on the west with chain link fencing at top.

The lower level entrance is accessed by a brick walkway from the rear parking lot grade and is the accessible entrance to the rear of the building.

An exterior concrete stair with handrails is also provided from rear sidewalk up to main from walkway on the west side of building.

Town Hall

Condition and Observations:

Condition is good.

Recommended Repairs:

Provide blue handicap signage at front of building's main entrance stating " accessible entrance is at rear of building".

2.2 Pavement, Parking and Drainage

Description:

The building is located on Main Street with accessible curb cuts at both Main Street, Janes Ave. and the municipal parking area at rear. There is a crosswalk at Janes Ave. beginning at the curb cut. The curb cut on Main Street has no "accessible" parking designation nor crosswalk continuation.

There are steps up to existing main Street entrance so the accessible entrance is provided at the rear, lower level entrance. There is no signage directing you to rear.

All the walkways around the building are brick pavers with granite curbing at edge of paving and a raised solder course of brick edging elsewhere.

The front brick walkway slopes up to entrance on the left side and similar on right except a 3-riser granite stair with handrails is provided.

There is (1) handicap parking space designated on Janes Ave. and (2) within municipal parking lot.

The paved parking is delineated with striping and the (3) handicap parking spaces painted blue with international handicap symbol. The one space on Janes Ave also has a post mounted "Accessible parking only" sign.

There is also an exterior area at concrete retaining wall which has the electrical service transformer and standby generator located here. A chain-link fence protects the (3) high sides of the area.

There is a concrete stair with handrails on both sides leading from lower level to Main Street level on the west side.

There are (2) dumpsters placed in a single parking space within municipal parking area.

Drainage seems adequate. There are gutters and downspouts provided above the rear entrance only and piped to an underground collection system. There are also (2) area drains in the rear landscaping beds.

One outlet pipe was found within the area well at sidewalk on east side of building; could not verify outlet.

Condition and Observations:

The pavement at the municipal parking area is in fair to poor condition with some cracks observed. The pavement along the crosswalk at Janes Ave. curb cut is in poor condition with a lip at edge of concrete curb cut. In the rear lot there are low spots that do not drain water to the catch basins. Paving in these areas are failing.

The granite steps at front are in disrepair, bricks missing and possible tripping hazard where bricks have settled at top riser. The base under the granite step appears to be undermined and will need to be addressed soon to prevent movement.

Brick walkways are in reasonable condition, some brick edging is broken. Brick has settled in numerous locations and is in need of sand being added to joints. The settlement in the brick allows water to pool and undermine the brick walk. It should be noted that flat brick pavers, if properly installed pitched and well maintained, have a life expectancy of 25-30 years.

The concrete stairs on west side have a large crack at top riser and the handrail posts here and at easterly retaining wall have a depression that collects water and freezes.

The (2) “accessible” parking spaces at rear do not have pole-mounted signs.

The chain link enclosure at generator pad needs some repair.

The generator is not bolted down.

There is no dumpster enclosure.

The (2) area drains at rear have accumulated mulch washed in partially filling sump and possibly clogging the outlet.

Recommended Repairs:

The asphalt paving has a 15-20 year life, so if “new” during 1998 renovation, it may be reaching its limit. Crack seal may extend the life somewhat. Repaving should be added to the Town’s pavement management plan. The low areas adjacent to the island that have failed should be removed and repaved with a correct pitch. \$20,000

Restripe pavement markings every 5 years or when they become illegible. \$1,000

The condition of paving at Janes Ave curb cut and crosswalk could be considered a hazard to wheel-chair bound persons and should be repaired, re-striped and the lip at the curb cut eliminated. During this repair, installing a tactile warning pad should be considered.

The (2) “accessible” parking spaces in parking lot require pole mounted signs for each. The painted parking space is not recognized as proper designation per MAAB.

The brick walkways need to be re-set where the settlement has resulted in possible tripping hazards. Especially at the top riser of front granite steps, which should have a concrete sub-base to prevent further settlement. Consideration should be given to replacing the brick pavers within 20 years. \$10,000

Town Hall

In the short term, broken brick edging and other defective brick pavers should be replaced. Base should be checked for proper material and thickness, then re-compact the base material. Infill joints in brick pavers with “pointing” sand. Filling joints with “pointing” sand should be a routine task.

Granite steps need to be rebuilt by resetting granite, providing new mortar joints and replacing missing bricks. \$5,000

Fix large crack in concrete at top of westerly stairs. This cracking appears to be a cold joint/stress crack. An expansion joint type repair will be required.

Fill depressions around all guardrail posts, flush with surrounding surface, using non-shrink grout to prevent water accumulation and subsequent frost damage which will eventually split concrete. \$2,000

There should be a continuation from the Main Street curb cut that currently directs you into Main Street, or an “accessible” parking space designated there.

Keep a circle of the crushed stone around area drains clean and free of mulch, possibly adding metal edging to separate the two.

Verify outlet pipe in eastside area well is free flowing. \$2,000

The chain link fence is damaged and should be repaired, with consideration given to adding gates to complete the enclosure at generator.

Generator should be bolted to its concrete pad in the holes provided. This is an installation requirement to resist seismic forces. \$2,000

Consideration should be given to providing dumpster enclosure. The Town requires this of others.

2.3 Landscaping

Description:

There are isolated landscaping beds in the front and rear of the building with mulch and lawn areas elsewhere.

There are area wells with metal grates at the front and sides of the building for lower level windows and louvers. No outlet drains were found except at east side area well, but elevation of outlet pipe appeared higher than the window sill, so may not function as intended.

There are exterior, flush-mounted uplights within landscaping beds and at flagpole.

Town Hall

Condition and Observations:

Landscaping is in good condition and well maintained.

Area wells are in good condition but have accumulated leaves and debris.

Landscaping & flagpole lights are full of debris, could not determine if functioning.

Recommended Repairs:

Recommend keeping mulch away from area drains so they don't wash into drain sump.

Provide routine maintenance of area wells to rid them of accumulated debris and leaves.

Verify area wells have crushed stone base and are allowing water infiltration.

Clean and/or repair all landscaping lights.

3.0 BUILDING CONDITIONS

3.1 Foundation

Description:

Building has a stone and mortar foundation with large granite cap stones which form a watertable along 3 sides of the building.

The lower level is enclosed on three sides by the stone foundation with some windows, louvers & area wells provided. There is a full "walk-out" access to rear.

Condition and Observations:

Condition is good, with some cracks and mortar deterioration observed in granite.

Recommended Repairs:

Repoint cracks and mortar-filled joints of granite foundation cap stone.

You may wish to consider epoxy-injected structural crack filler at these stones. \$2000

3.2 Super Structure:

Description:

The original 1872 building is a full wythe, solid mass brick wall with both granite and brick water table, brick and limestone accents, sills and headers.

There is a shingled hip roof over main structure with tower elements at sides and rear with steeply pitched shingled roofs. There is also a brick chimney on west side.

Some tab-style snow guards were observed along front roof and above Jane Ave sidewalk. Some lightning arrestors were observed at high-points of roof.

The 1998 addition is a brick veneer tower at rear housing the elevator shaft and stairs of similar brick veneer and granite accents.

The roof has a large overhang with decorative wood corbels. Only a small area has gutters.

The roof is wood truss structure that was built in the 1998 renovation.

3.3 Facades

3.3 A *Description: (Brick & Limestone)*

The exterior is a three wythe solid brick & mortar construction. Brick corbeling and other brick accents are integral to the construction. There are also granite and limestone sills, lintels and accents.

The original 1872 building is all original brick with no recent repointing or other repairs observed. There is a granite water table around the entire original building and brick intermediate water table brick work above.

At the eave lines, brick has been corbelled out creating a brick cornice.

It appears some new restoration of brickwork was performed at some window openings at front based on color and condition of arch brick and limestone keys. (see photos)

At the top of the brick wall is a painted wood frieze board and corbels supporting the roof overhang.

3.3 B *Description: (Fenestrations)*

There are insulated, vinyl-clad windows with simulated divided lights, PVC trim and accent panels above and between the glazing section. Windows are operable with exterior screens.

There are a combination of wood entrance doors with glass sidelights and metal doors & frames.

Metal exterior louvers for air intakes exist.

Town Hall

Condition and Observations:

3.3 A Façade (Brick & Limestone)

The original brick and mortar is in good condition considering its age. The mortar does show signs of weathering in some locations and is missing or deteriorated in others. The brick is very porous with holes that can allow water to penetrate and cause spalling as is evident in many locations.

There are also some loose and cracked bricks and the mortar has shrunk around some bricks, leaving a gap where water could infiltrate.

On close inspection, there is organic growth on the face of much of the brick and efflorescence seen at other locations.

The water table brick has some open joints that allow water infiltration.

The various brick control joints have sealant that appears to have served its intended life. Some sealants have cracked, separation and others have mildew.

There are gaps around existing exterior brick penetrations which could allow moisture to enter building.

The original limestone shows widespread decay from water, time, wear and urban pollution. There does not appear any work has been recently performed to restore the original limestone.

There is new brick work at the rear elevator tower and at the arches above and below the front first floor windows. These areas appear to also have new limestone key stones and sills.

The granite is in good shape except for minor crack repair and joint repointing.

3.3 B (Fenestrations)

Doors appear to be in good condition, showing normal wear. The basement level door has exceeded its life and has rusted through. Immediate replacement is required.

The clear finish on the wood doors will need to be maintained to prevent total refinishing later.

Windows appear in good condition, but would benefit by having new caulking installed.

In general, caulking has a 10 year life, and many areas appear to be failing.

Many window screens are missing.

The replacement windows installed in the 1998 renovation are an extruded plastic with a fiberglass panel. The paint or finish of the fiberglass panel has failed due to UV rays.

Window sills within lower level area wells should be closer investigated for water infiltration as this is a very susceptible location for water damage.

Recommended Repairs:

3.3 A Façade (Brick & Limestone)

Brick and limestone has a life expectancy of 100 years +/-.

Although not performed during the 1998 Addition project, consideration should be given to repoint the original portion of the building. Any repointing should be done with a similar mortar mix and aggregate as the original.

Broken or loose bricks should be removed and replaced. This includes the rowlock brick sills which appear in very poor condition at several window locations. The intermediate brick water table is a difficult detail to withstand the weathering. Brick sills are at least sloped to shed water, these surfaces are flat and do not readily shed water. Possibly a flashing cap or replace with a sloping brick could be a solution to prevent moisture related problems. \$20,000

An expert opinion should be solicited as to the condition of some of the more porous brick. Those bricks, exposed to more harsh conditions, have served their useful life and likely need replacing. Joints in water table bricks should be raked out and repointed, or in some cases, add sealant as a soft joint. Engineering \$10,000

All existing control joints should be raked out and re-sealed. If no backer rod was originally provided, new should be added now (existing caulking should be tested for ACM). \$20,000

The entire area of brick would benefit by a cleaning and then an application of (2) coats of brick sealer. A restoration detergent is recommended. Do not perform the same cleaning or coating of the limestone. That can trap moisture in the stone and cause further deterioration.

The existing limestone needs serious repair work. Proper repair can be very costly, so replacement cost options should be compared and evaluated. The decay (spalling, cracking, exfoliation) is seen on much of the existing limestone maybe masking deeper issues. Superficial surface repairs may only mask conditions causing the noted deterioration. Limestone is porous and absorbs water readily. If replacement is determined as the appropriate remedy, new steel anchoring should also be factored in as well as possible repair of damaged substrate. \$40,000

If repair is selected, care should be made to evaluate the options available. Consolidation has shown to be an effective solution on historically significant repairs. That method involves removing the loose limestone material down to a solid surface. The original stone grains are salvaged and mixed with a mortar product and reapplied matching existing appearance as close as possible. \$20,000

The existing chimney cap should be closely inspected as a likely area of deterioration.

The wood frieze board and cornice work should be repainted every 7-10 years or so. Fiberglass windows will require painting as well. \$20,000

Provide sealant around all penetrations through the exterior brick.

Town Hall

Recommended Repairs:

3.3 B (Fenestrations)

Painted portions of the windows and accents should be repainted.

Existing window caulking should be raked out and replaced with new.

Missing screens should be replaced.

Metal doors and exposed steel lintels should be repainted.

Wood doors and sidelights should be lightly sanded and recoated with 2 coats marine grade polyurethane annually. \$2000

Sealants around all exterior openings should be redone every 10 years.

The existing handrails and guardrails here will need to be repainted.

3.4 ROOF

Description:

The hip roof areas are asphalt-composite shingles mimicking slate. There are tab-style snow guards installed over egress openings below.

There are metal caps at the hips and it appears some decorative accents at the higher roof.

Gutters and downspouts are provided at the front and over rear entrances.

A lightning arrestor system is also installed on high points of roof

Excerpts from the Russo Barr Engineering report:

6. MEDFIELD TOWN HALL

The Medfield Town Hall is a multi-story, wood framed building with brick masonry bearing walls. An addition was added in 1997. The total area of roofing is approximately 9,100 square feet.

A. Shingle Roofs

There is one type of roofing at this site: heavy weight, tabbed, asphalt shingles. The style of shingles indicates that the shingles are "Slateline" as manufactured by CertainTeed. The shingles are installed at a very steep slope estimated at 18" per foot. There are no active leaks reported. The asphalt shingle roofing is reported to be approximately 15 years old. Generally, the heavy weight asphalt shingles are warranted against defects in materials for 40 years for commercial applications. There are stronger warranties that are available that may be applicable to this project.

The condition of the shingle roof is fair. Approximately 200 shingle tabs are missing. The missing shingles may be due to poor installation, poor wind seal adhesive or the lack of hand sealing the tabs (often a requirement when working on very steep slopes). These deficiencies may exist throughout the project. Depending upon the extent of warranty provided with the installation, the cost of repair may be covered. We recommend that the Owner review the project files to determine if a warranty exists and the extent of coverage.

B. Recommendations

Short Term: Short-term repairs should include the following:

- Replace all missing shingle tabs.

The estimated cost to perform short-term repairs (if warranty coverage is not available) is **\$20,000 to \$25,000**. Note: Hand sealing of shingle tabs may be required but at this stage it is unknown if this is needed; estimate cost does not include any hand sealing of shingle tabs.

Recommended Repairs:

Repair all damaged shingles \$25,000

Life cycle of roof has 15 years Engineering \$40,000

Roof replacement \$400,000

PHOTOGRAPHIC DOCUMENTATION of MEDFIELD TOWN HALL

2.1 TOPOGRAPHY



FRONT ELEVATION SHOWING STEPS TO MAIN ENTRANCE



SLOPING WALKWAY FROM MAIN STREET CURB CUT TO MAIN ENTRANCE

Town Hall



RIGHT SIDE (JANES AVE) ELEVATION SHOWING SLOPING GRADE TO REAR



REAR ELEVATION SHOWING LOWER LEVEL ACCESSIBLE ENTRANCE

Town Hall



CONCRETE STAIRS & HANDRAILS FROM LOWER (REAR) LEVEL TO MAIN STREET ENTRANCE LEVEL
(Note crack at top tread)

2.2 PAVING, PARKING, DRAINAGE



SHOWING ACCESSIBLE PARKING SPACE ALONG JANES AVE. (EAST)



SHOWING POOR CONDITION OF CURB CUT AND PAVING AT JANES AVE CROSSWALK



SHOWING MAIN STREET CURB CUT WITH NO DESIGNATION FOR ACCESSIBLE PARKING



TYPICAL OPEN JOINTS OF BRICK WALKWAYS NEEDING SAND INFILL



POOR CONDITION OF GRANITE STEPS AT FRONT ENTRANCE WALKWAY SHOWING GAPS IN GRANITE AND LOOSE BRICKS



SHOWING LIP AT GRANITE TOP TREAD AND BRICK SETTLEMENT



GAPS AROUND GUARDRAIL POSTS COLLECTING WATER & ICE

Town Hall



SHOWING UN-ENCLOSED DUMPSTERS NEAR CONCRETE GENERATOR PAD AT REAR



GENERATOR UNSECURED TO CONCRETE PAD

2.3 LANDSCAPING



AREA DRAIN AT REAR LANDSCAPING AREA SHOWING MULCH WASHING INTO SUMP



TYPICAL LANDSCAPING LIGHTS FILLED WITH DEBRIS

Town Hall



AREA WELL ALONG JANES AVE FILLED WITH LEAVES

3.1 FOUNDATIONS:



TYPICAL CRACKS IN GRANITE FOUNDATION CAP STONES

3.2 SUPER STRUCTURE



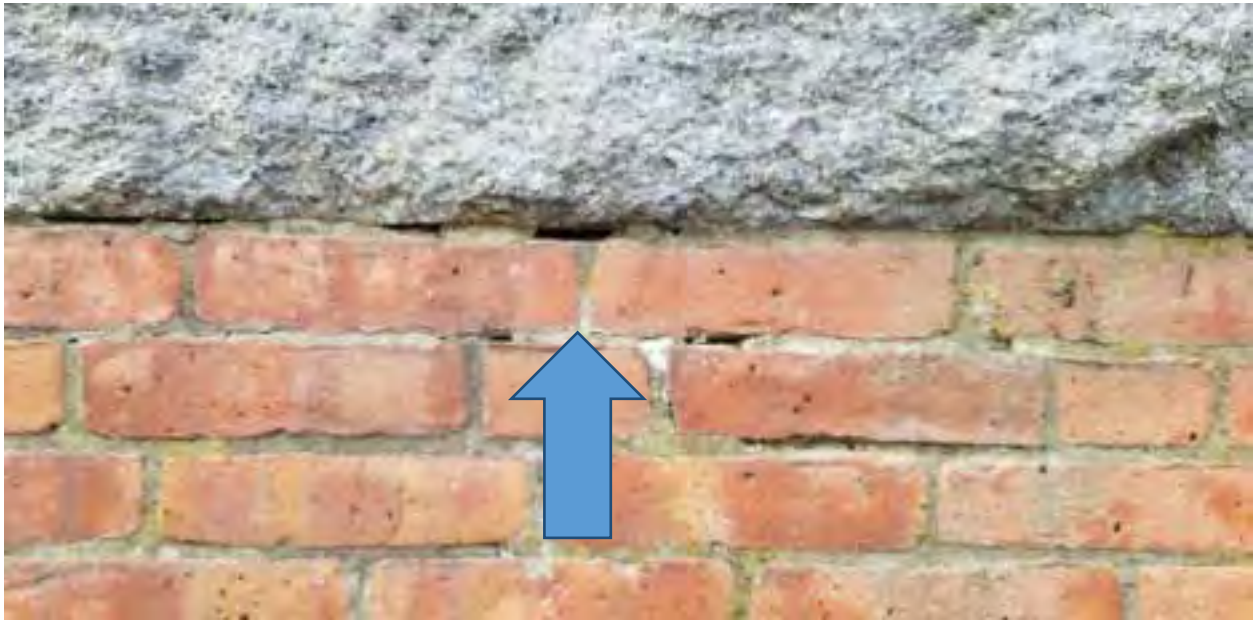
FRONT (SOUTHERLY) MAIN STREET- FACING ELEVATION SHOWING HIP ROOF AND TOWER ELEMENTS



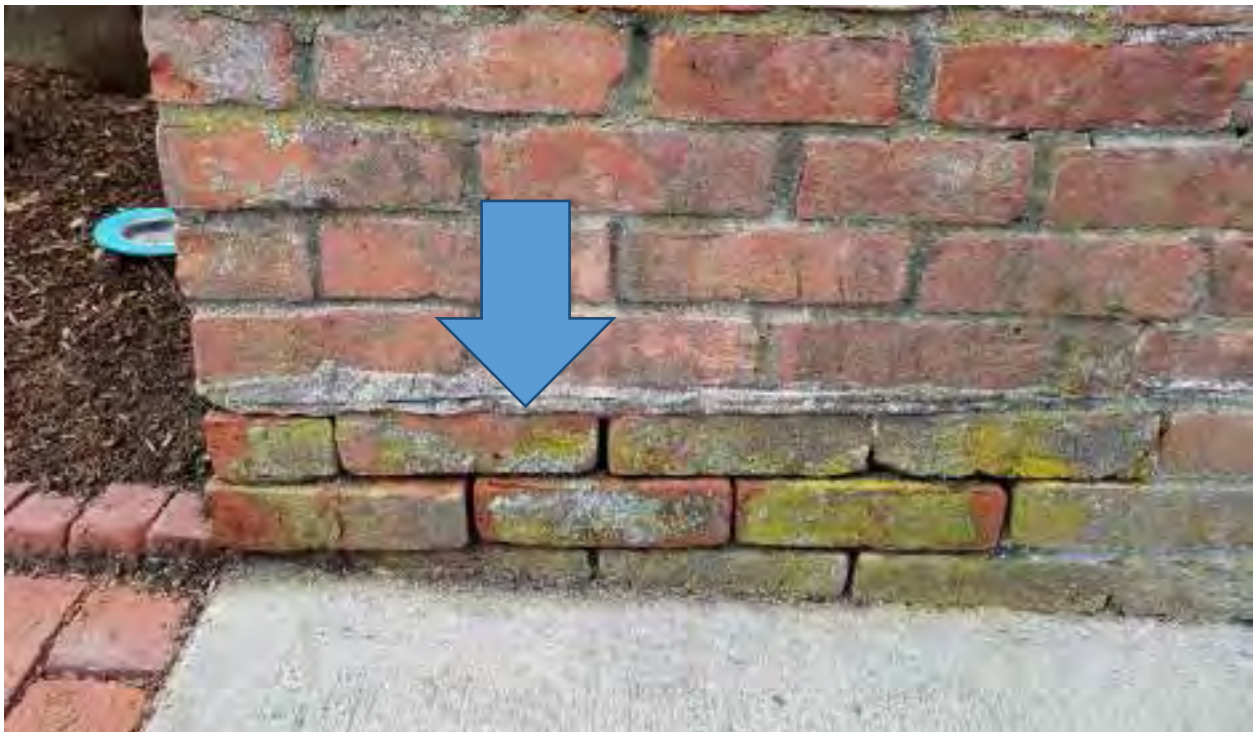
REAR (NORTH) ELEVATION SHOWING NEW ELEVATOR TOWER

Town Hall

3.3A FAÇADE (BRICK)



TYPICAL OPEN JOINTS IN EXISTING BRICK NEEDING REPOINTING



LOOSE BRICK AND TYPICAL ORGANIC GROWTH ON EXISTING BRICK



OPEN JOINTS IN BRICK AROUND OPENINGS CREATED DURING 1998 RENOVATIONS



TYPICAL EXAMPLE OF SPALLED BRICK NEEDING REPLACEMENT and GROWTH ON BRICKS & MORTAR

Town Hall



TYPICAL EXAMPLE OF DETERIORATED LIMESTONE SILL and OPEN JOINTS AT INTERMEDIATE WATER TABLE BRICK



TYPICAL EXAMAPLE OF DETERIORATED ROXLOC BRICK SILLS

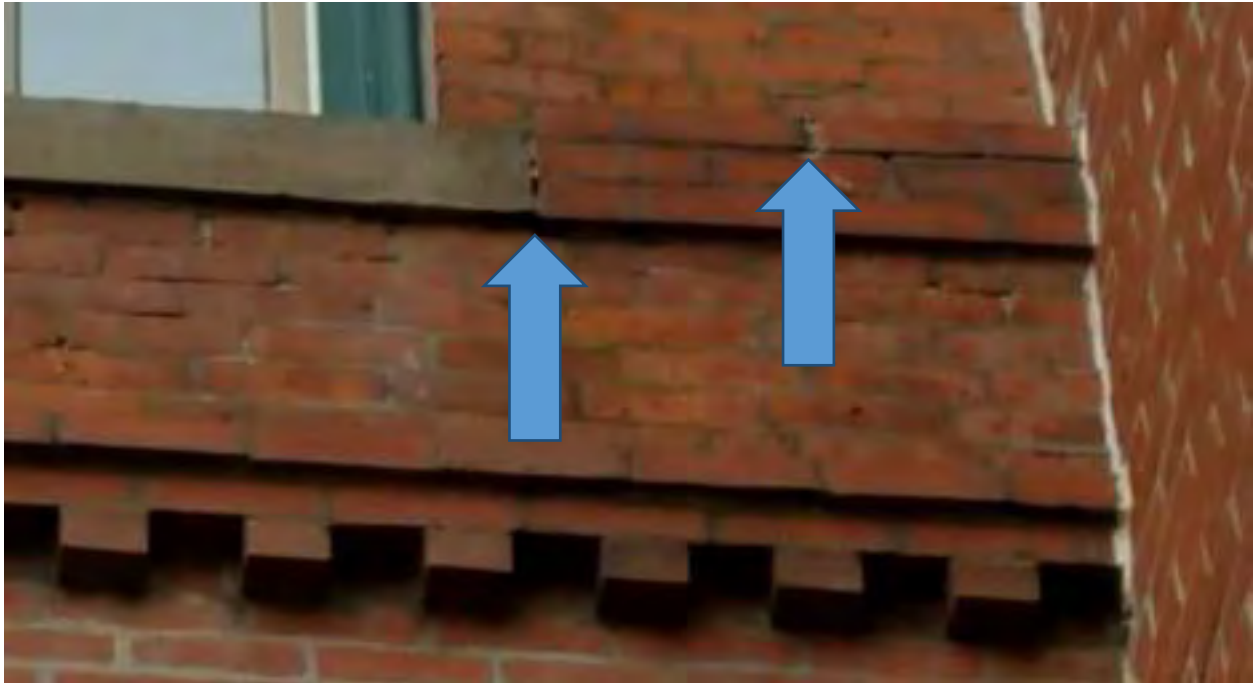
Town Hall



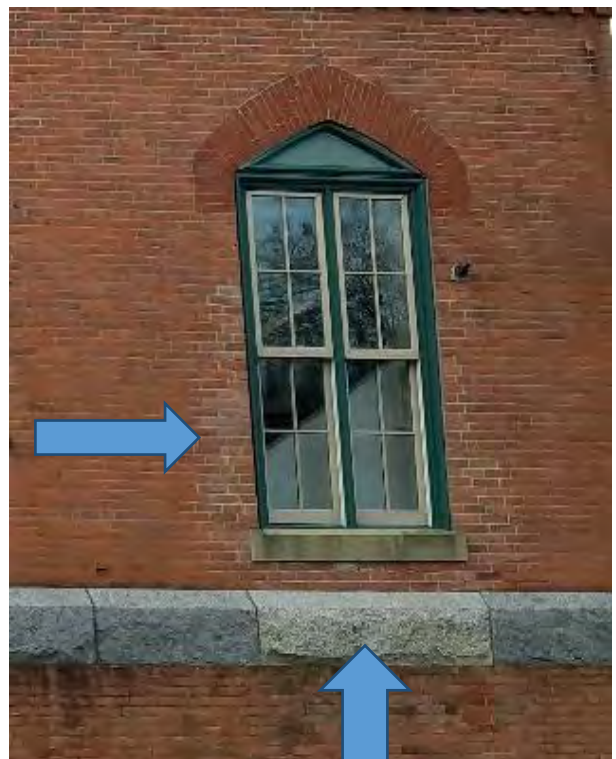
EXAMPLE OF EXTREMELY POROUS CONDITION OF EXISTING BRICK – SUSCEPTIBLE TO MOISTURE INFILTRATION AND FREEZE/THAW DAMAGE – ALSO ORGANIC GROWTH ON MORTAR



EXAMPLE OF OPEN JOINTS IN GRANITE SILLS and NOTE CRACKS IN MORTAR AT BRICK



OPEN JOINTS IN BRICK/LIMESTONE

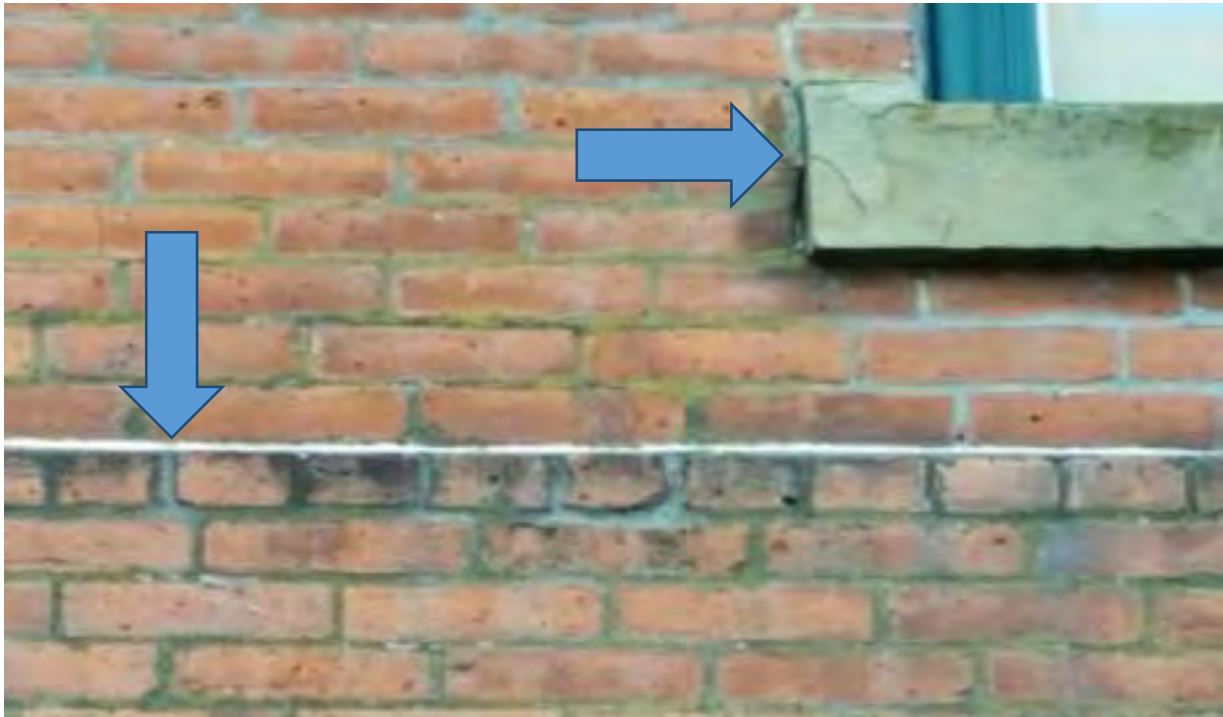


EXAMPLES OF POSSIBLE NEW BRICK, LIMESTONE & GRANITE WORK BASED ON COLOR and CONDITION

Town Hall



SHOWING REPOINTING NEEDED AT GRANITE SILLS



SHOWING POOR CONDITION OF LIMESTONE SILLS and CAULK JOINT ALONG TOP OF INTERMEDIATE BRICK WATERTABLE



TYPICAL DETERIORATED LIMESTONE KEYS



COMPLETELY DETERIORATED JOINTS IN LIMESTONE SILLS and SOURCE OF WATER INFILTRATION



GAPS AROUND EXTERIOR HOSE BIBS NEEDING SEALANTS



GAPS AROUND SPRINKLER DRAIN NEEDING SEALANTS

3.3 B FENETRATIONS



TYPICAL METAL DOORS and WINDOW UNIT (Note missing screens here & elsewhere)



TYPICAL WINDOW UNIT SHOWING PERIMETER CAULKING



TYPICAL STEEL LINTEL NEEDING SCRAPE & PAINT

3.4 ROOF



FRONT SHINGLED ROOF SHOWING MISSING SHINGLES

Town Hall



MISSING SHINGLES ON TOWER ELEMENTS



FALLEN ASPHALT SHINGLED SCATTERED AROUND BUILDING PERIMETER

Town Hall



TYPICAL PAINTED WOOD CORBELS & CORNICE

3.5 Basements / Attics

Description:

The subject property has a full finish basement that houses active office functions, private offices, IT room, conference room and small mechanical space.

The attic is un- insulated space that sits under the hip roof section of the roof. The area has fire suppression (dry system) and houses an air handling unit (AHU) and exhaust fans.

The attic is built over the existing flat roof structure.

Condition: Good

Basement: The basement level appears in good condition. An isolated closet in the Westside houses the domestic water service room and the sprinkler system and dry system pumps. The boiler room, elevator machine room, and main electric room are housed in the northwest basement area and are accessed by an exterior door.

The basement level office areas are in good condition.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Long term repair would be to install additional lighting and access to attic mounted exhaust fans for service and cleaning.

3.6 ADA Compliance

The Americans with disabilities Act (ADA) and the State of Massachusetts Accessibility Code governs public accommodations and commercial properties. This report will only look at accommodations and access to public facilities that are equal or similar to those available to the general public. This report will identify areas of non-compliance, or will be in compliance if upgrades and renovations are made to the facility that trigger mandatory resolutions. However this report is not a full ADA or Accessibility Code assessment. Being "Public" facilities, upgrades to allow for employee or the general public need to be addressed to meet the provisions of Title III of the ADA Act.

Condition:

With the new addition, it appears most if not all the ADA and MAAB codes for accessibility have been met.

3.7 Interior Finishes and Components

Descriptions:

Typical Interior finishes:

TYPICAL INTERIOR FINISHES				
Area	Flooring	Walls	Ceiling	trim
Third floor	Carpet	Painted sheetrock	Painted plaster on lath and suspended acoustical tile.	Painted wood
Second floor	Carpet	painted sheetrock	Painted plaster on lath and Suspended acoustical tile	Painted wood
First floor	Carpet	Painted plaster on lath	Painted sheetrock and Suspended acoustical tile	Painted wood
Supply/refrigerator area	VCT	Plaster on lath	Suspended acoustical ceiling	Painted wood
Bathroom	tile	Sheetrock painted	Painted plaster on lath and Suspended acoustical tile	Painted wood
Basement	Carpet	Sheetrock painted	Painted plaster on lath and Suspended acoustical tile	Painted wood

Conditions: Good

The rooms appear to be in good condition. There are a few areas where the paint is peeling from the plaster and sheetrock walls and ceilings. Painting the walls and trim is recommended on a regular basis as part of routine maintenance. Replacement Reserves are recommended for interior refurbishment, carpet replacement, plaster repairs painting, etc.

Paint generally appears in fair shape. In heavy traffic areas should be a five to seven year cycle.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Scrape all loose paint, prime and repaint. \$30,000

Due to life cycle and wear carpeted areas should be budgeted for systematic replacement.
\$10,000

4.0 BUILDING SYSTEMS

4.1. Plumbing

Description:

The domestic service enters the building from the west side into the main water service/fire service room. The water service has a main backflow preventer and separate fire service valving. The observed supply piping is copper, and the waste lines are cast iron. The plumbing fixtures are vitreous china with chrome trim. The main boiler and water heater with water storage tank with circulating pumps supply domestic hot water. Welded and threaded black iron pipe is used for gas piping within the subject property.

Condition: Good

There were no reported or observed problems with the plumbing size, operation or capabilities. The utilities appear to be configured and operated in a manner consistent with its intended use. As witnessed in many of the town buildings, the water servicing the town has galvanic action on all valves.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Create an aggressive testing and exercising of all the water service valves to assure their operation. Replacement of non-operational valves should be done as on-going maintenance.

4.2 HVAC

a. Heating Plant /Cooling Plant

Description:

The building is serviced by multiple gas fired Burnham Forced Hot water units to support the building and one main circulating pump. This two pipe supply water system also provides chilled water. The heating and cooling water system distributes conditioned water to ceiling mounted fan coil units throughout the building. The system is manually switched over for the heating and cooling seasons.

The cooling plant is a ground mounted Trane tandem compressor unit chiller.

Condition: Good

The heating plant (installed in 1996) are gas fired Burnham unit. The Trane chiller plant is also a 1996 installation. The main hot water pump has suffered from excessive rusting due to the “sweating” condition in the basement during the cooling season. Operational, but replacement should be anticipated. The systems are good and operational but near term budgeting for replacement pump motors, blower motors, and actuator valves should be planned for. The age of the equipment and FCU units will begin to see failure in components such as compressors, blower motors and ignition controllers. These components replacement should be accounted for in long term planning.

The Trane Chiller unit compressors are nearing their life expectancy. A thorough evaluation of the compressors, contactors, and related equipment should be performed to help evaluate life span of components.

b. Distribution system (FCU, exhaust)

Description:

Condition: Good

The building distribution of the hvac and hot water was also installed during the 1996 addition/renovation project. The building is a combination of heated air through FCU units and a radiant baseboard wall wash as a supplemental heat source

In the basement level, the radiant baseboard which supplement the air distribution system travel along the exterior wall to provide a heat wash on the exterior wall.

HVAC controls are through an Energy management program (Automated Logic)

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Duct work cleaning. \$5,000

Recommissioning is a re-occurring preventative measure every 8 years. \$10,000

Complete review and component replacement on the Trane chiller plant. \$10,000

Upgrades to the main water distribution pumps and pipe insulation in the boiler room due to life cycle (Table 1)

Replace and recommission all exhaust fans currently nonoperational. \$3,000

4.3 Electric

Description:

600 amp electric service with new sub panels and what appears to be new electrical distribution wiring done as part of the 1996 addition/renovation project. Emergency generator i a diesel fueled 100Kw plant that supports all emergency electrical functions

Condition: Good

Town Hall

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Near term repair is to have an electrical specialist survey company inspect all circuit breakers or operation and effectiveness. The pro-active survey will determine if there are any circuit breaker concerns. \$3,000

4.4 Building Fire Suppression and Fire alarm

Description: Good to Poor

The property is protected by a multi-zone Fire Alarm Control panel, hard wired smoke and heat detectors, pull stations, illuminated exit lights, emergency battery lighting units, horn/light enunciators, fire extinguishers, and full coverage 4" wet sprinkler system with check valves and tamper/flow.

The attic is a dry pipe system with the air pump located in the basement level at the main valve. Horizontal dry pump runs in the attic were done in metal pipe, with the vertical runs in galvanized pipe.

The horizontal dry pipe in the attic has begun to suffer from internal rusting/decay. This decay has led to small pinhole leaks which allow the air to escape and causing the dry air pump to run for extended time. Recent selected pipe replacement has occurred due to this rusting failure.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Replace the remaining 400 linear feet of horizontal attic dry pipe with new galvanized pipe. \$40,000

Replace dry system air pipe with new pump due to age and the extensive use that occurred due to the dry system failure causing excessive air leakage. \$10,000

Medfield Town Hall

CAPITAL PLANNING BUDGET

System	sq ft 17,139																				
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2032	2034	2035	2036	2037	2038
Site work																					
2.2 Various site work		5,000									5,000								5,000		
2.3 Landscape affecting buildings							5,000										5,000				
2.2 Paving			15,000				30,000					5,000						5,000			
2.2 brick walkways																					
Building envelope																					
3.1 foundation		3,000													3,000						
3.1 window well drainage		1,000										1,000									4,000
3.3 Façade																					
3.3 Brick façade engineering					10,000																
3.3 Brick façade repair		5,000				100,000					5,000										
3.3 Sealant replacement						40,000					5,000					5,000					5,000
Windows																					
3.3 windows								30,000		30,000		30,000									7,000
Door																					
3.3 Wood door 2units								10,000										5,000			
3.3 Metal doors		3,000							5,000												5,000
3.3 Doors (interior)										3,000				3,000			3,000			3,000	
3.3 Exterior Paint				60,000								60,000								60,000	
3.4 ROOF																					
engineering roof																30,000					
Asphalt Shingle roof repair	42,000																400,000				
Asphalt shingle replacement																					
3.6 ADA Compliance																					
3.7 Interior																					
Carpet (25+ years)			20,000						60,000					50,000							
VCT flooring (25+ years)													8,000								
Paint								8,000	70,000					40,000							8,000
Doors															8,000						
4.1 Plumbing																					
Fixtures										2,000											
regROUT tile											2,000	1,000					2,000		2,000		1,000
4.2 HVAC																					
Boiler 1996								10,000	30,000			5,000						20,000			
ATC computer controls							10,000		5,000								10,000		4,000		
Fluid pumps								4,000													
Chiller plant				10,000		10,000			200,000												
Valves (ahu/vav)			500	500	500							500	500	500							
Backflow preventers	1,000									1,000											1,000
Water Heater 1996					8,000															8,000	
Duct Cleaning						15,000															
Fan coil units 15 units					3,000	3,000	3,000	3,000	3,000	3,000	3,000					15,000	60,000				
Vent /exhaust fan			5,000																	2,000	
Air Handling unit (2 units attic)					5,000		5,000														
4.3 Electrical																					
Branch circluts																					
lighting								10,000													
service repair																					
Fire Alarm										5,000											
4.4 Fire Suppression																					
Dry system pump					5,000																5,000
replace attic dry pipe							10,000														
Total Yearly Expenditure	42,000	18,000	40,500	70,500	31,500	168,000	63,000	80,000	374,000	43,000	20,000	102,500	8,500	98,500	12,000	50,000	480,000	34,000	5,000	75,000	36,000
Escalated cost 2018 3.0%	\$53,204	\$23,486	\$54,429	\$97,588	\$44,911	\$246,714	\$95,293	\$124,637	\$600,160	\$71,072	\$34,049	\$179,734	\$15,352	\$183,239	\$22,993	\$95,805	\$975,741	\$71,188	\$10,783	\$166,597	\$82,365

THE CENTER AT MEDFIELD



LOCATION: One Ice House Road

Assessors: Map 56 Parcel 043

Year Built 2008

Building area: 7,690 sq ft

Condition Excellent

Land area: 7.1 acres

1.0 PURPOSE and LIMITATIONS

The purpose of this Property and Conditions Report (the Report) is to assist the Town of Medfield to assess the general physical condition and maintenance status of the property and to recommend repair and maintenance items considered significant for the property to continue its current operations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, access through building “owners” and information presented by the Town. Findings, conclusions, and recommendations in this Report are based on the methods described above, industry standards, and general observations of the equipment and its visible condition.

The report is focused on existing conditions, lifecycle of existing materials, and non-code compliant conditions. Recommendations will include items needed to bring the space/component to a safe, code compliant, and generally accepted facilities condition. The Report does not anticipate change of use, reconfiguration of space, or change in current program.

Estimated Costs are based on professional judgment and the probable or actual extent of the observed defect inclusive of the cost to design, procure, construct and manage corrections.

1.1 Condition

The Report uses terms describing conditions of the various site, building and system components. The terms used are defined below. It should be noted that a term applied to an overall system does not preclude that a part, component, or section of the system may be in a different condition.

Excellent	The component or system is in new or like new condition, and little or no deferred maintenance is recommended, or the scheduled maintenance can be accomplished with routine maintenance.
Good	The component or system is in sound condition and performing its function. It may show signs of normal aging or wear and tear, and some remedial and routine maintenance or rehabilitation work may be necessary.
Fair	The component or system is performing adequately at this time but is obsolete or is approaching the end of its useful life. The component or system may exhibit Deferred Maintenance, evidence of a previous repair, or workmanship not in compliance with common accepted practices. Significant repair or replacement may be recommended to prevent further deterioration, prevent premature failure, or to prolong its useful life.
Poor	The component or system has either failed or cannot be relied upon for continued use performing its original function, exhibits excessive Deferred Maintenance or is clearly in a state of disrepair. Repair or replacement is recommended.

1.2 Abbreviations

The Report may use abbreviations to describe various site, building, or system components of legal descriptions.

ACT	Acoustical Ceiling Tile	GFI	Ground Fault interrupt (circuit)
AHU	Air handling unit	GWB	Gypsum Wall Board
BTU	British Thermal unit (heat measurement)	HVAC	Heating, Ventilating, Air Conditioning
CMU	Concrete Masonry Unit	HWH	Hot Water Heater
EDPM	Rubber membrane roofing	MDP	Main electrical distribution panel
EUL	Expected Useful Life (life cycle)	PTAC	Package through wall A/C unit
FCU	Fan Coil Unit	RTU	Roof top Unit
FHA	Forced Hot Air	MSBC	Massachusetts State Building Code
IBC	International Building Code	VAV	Variable Air Volume box
ACM	Asbestos containing material	VCT	Vinyl Wall covering (floor tile)
ADA	Americans with Disabilities Act	MAAB	Mass. Architectural Access Barriers

2.0 SITE CONDITIONS

2.1 Topography

Description:

The site is generally a level site with a large parking area in the front with minimally landscaped traffic islands. To the south is a bio-retention basin to address the surface water run off that is a grassed. The south side of the parking lot separating the bio retention area is separated by a planted Hemlock tree screening. The remainder of the perimeter of the site is a wooded area.

Condition and Observation:

The wooded area to the rear has mature oaks trees. Some overhanging branches show signs of stress and are “leaning” toward the building. The fir trees are currently healthy and have grown since the installation to perform a solid screening.

Recommended Repairs:

An assessment of all existing landscaping is needed to be performed in conjunction as to the desired concept. If the intent is to limit the height of the fir trees to prevent full maturity of 40 feet tall, a program of pruning must be established to determine the goal. The surrounding tree line growth should be evaluated to control growth as not to impact the building or the exterior site functions.

2.2 Pavement, Parking, and drainage structures

Description:

The parking lot is a level asphalt lot with an asphalt berm.

Condition and Observation:

Generally the lot is in good condition, however serious cracking has occurred in the travel lane portion. The cracking has opened up to 1 inch in width and is approximately 50+/- feet long in several of the lanes. If not addressed, this cracking will allow significant water infiltration and promote asphalt failure. Other areas has smaller stress cracking that needs crack sealing. Crack sealing is a less expensive repair that stabilizes the immediate area and extends the life of the asphalt. Immediate repairs will need to be done to prevent further damage and larger costs.

The rear asphalt drive that acts as the service entrance to the kitchen and a means of egress to the community hall rooms has a slight pitch directed towards the building. This asphalt layout does not allow for a good snow removal opportunities, promotes water flow towards the structure, and allows water to build up against the foundation which has created frost heaving that impacts the Center's operation (walkways/entrance pads discussed/ addressed in Section 3.1). The concern with this water flow towards the building is the wood framing on then building is at grade. The water is directly impacting the wood siding and the wood structure.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Immediate repairs should be performed on the large cracking. Failure to address will create larger potholes and asphalt failure. Addressing the immediate areas limits cost and extends the life of the overall paving. \$5,000

Redesign of the rear asphalt delivery area to prevent water flow from drive running into foundation and doorway. \$4,000 see 3.1 substructures

Maintenance at the bio-retention area should receive an annual cut back and cleaning of the plant material to assure it proper operation.

2.3 Landscaping

Description:

The landscaping around the building is low growth shrubs, a rock drainage strip.

Condition and Observations:

Prune and maintain as required. Drip strip may need periodic removal and re-installation to assure surface water is not blocked. Fir hedge abutting the drainage retention may require pruning and shaping depending on the intent of this screening.

Recommended Repairs:

None

2.4 Municipal Services and Utilities

a. Water and sewer

Medfield has its own water and sewerage

b. Gas

Gas by: Columbia Gas

c. Electric

Eversource

3.0 BUILDING CONDITIONS

3.1 Sub Structure/Foundation/Entry walks

Description:

Poured concrete foundation and slab on grade. The foundation walls are assumed to have spread footing.

Concrete entry walk ways exist in the front entry from the parking to the entry door and at the rear patio area appear. At the rear of the Fellini Hall, the rear egress exits onto the asphalt sidewalk.

Condition and Observation:

Generally the foundation appears to be in good shape. No visible sign of cracking or movement in the foundation walls was observed.

The Center at Medfield

There is a concern that at all concrete walk ways, concrete patio and the Fellini Hall asphalt rear egress are all built without a proper pitch. The concrete and asphalt have a minimal pitch, and in some areas have a slight pitch towards the building. Along the rear entrance and at the concrete patio in the rear the concrete and asphalt were installed above the wood trim. This is not considered good construction practice. (This issue will be further addressed under Section 3.3 Facades) Water in entering at these open joints and allowing water to concentrate under these concrete/asphalt surfaces. This excessive water has created frost heaving conditions of the concrete walkways, patios, and asphalt. During the past winters, frost heaving has lifted then concrete/asphalt and directly affected the egress doors. The doors have been bound up, and prevent egress, which is a safety issue and a violation of the Building code.

The rear patio was built with no pitch and its finish elevation is level to one inch above the wood trim. This condition does not allow for surface water to flow away from the building. In areas that the wood trim is below the concrete creates a constant moisture problem which will eventually lead to rot condition.

Recommendation:

Redesign of the rear asphalt egress area is required to prevent water from damaging the wood façade and creating water heaving at the door. Repairs must provide a better drainage under the handicap accessible pad to prevent movement and address excessive moisture. \$4,000

At the front entry, redesign the immediate concrete walk to prevent frost heaving and anchoring concrete pad to prevent movement. \$7,000

At the rear patio, has the similar problem as the front entry at the immediate door location that must be addressed. The remainder of the pad may be too costly to address. \$7,000

An exterior envelope engineer should be consulted to develop a solution to prevent this potential rot condition. \$3,000



Poor drainage has led to frost heaving and door failure to open. All locations



3.2 Super Structure

Description:

The Building is a light wood framed structure with structural wood, beams, and wood roof trusses.

Condition and observation:

The condition is in good shape.

3.3 Facades

a) Description Building Facades:

The wood fiber board clapboard siding, with a combination of wood and synthetic “Azek” trim create a residential colonial style building. The façade has a decorative wood water table at the slab level. Decorative wood rail at the flat roof area exists.

Condition:

The condition is in good shape.

Areas which are susceptible to water damage and premature failure exist on the north side kitchen service entrance and at the rear concrete patio. As discussed in previous sections, exterior site conditions exist which direct water towards the siding or the finish concrete patio traps water against the skirt board and does not allow air from to dry the façade.

The fiberboard clap board siding has small areas where the siding cuts were not properly sealed which allowed for excessive movement. This expansion/contraction movement creates a situation where the butt edges have “buckled” and expose the material to water infiltration and further material damage. Some siding at grade level has had drip line splash back which saturates the siding creating material and paint failure.

The siding movement has also loosened up nail connections. Nails are randomly popping out of the siding. Some siding installation defects are observed. At the butt ends of the clapboard run, nailing was not installed. As a result, the siding has “drooped” and can be observed. This is more of an aesthetic issue.

Along the soffit, there areas several areas of the rot and water damage. On the south side gable end, there is water damage to the trim and possible siding that needs further investigation on the flashing.

Synthetic trim (AZEK) is installed along the soffit has joints that have opened up do to movement of the material. The concern is the joints are allowing moisture infiltration. Resealing these joints will be required.

Paint failure is occurring on the white wood trim and decorative rails. The clapboard body of the building has spot areas of concern but is generally reaching its life expectancy, Painting of this wood structure should be on a seven year life cycle.

b) Description Windows and Doors: Good

The windows are double glazed energy efficient aluminum framed window typically found in commercial construction. Condition appears to be in Good condition.

Main entry is a double glazed commercial store front system typically found on commercial construction. Condition appears to be in good condition.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Evaluate all trim and siding that has signs of rot and moisture penetration and replace damaged wood. Spot repair all wood siding where nail connections have failed. Address flashing on clapboard siding has excessive gaps to assure water is not penetrating wood siding. \$8,000

Repaint all white trim to stabilize paint failure \$12,000

Evaluate and determine solutions to address rear patio siding and potential moisture issues.
Table 1

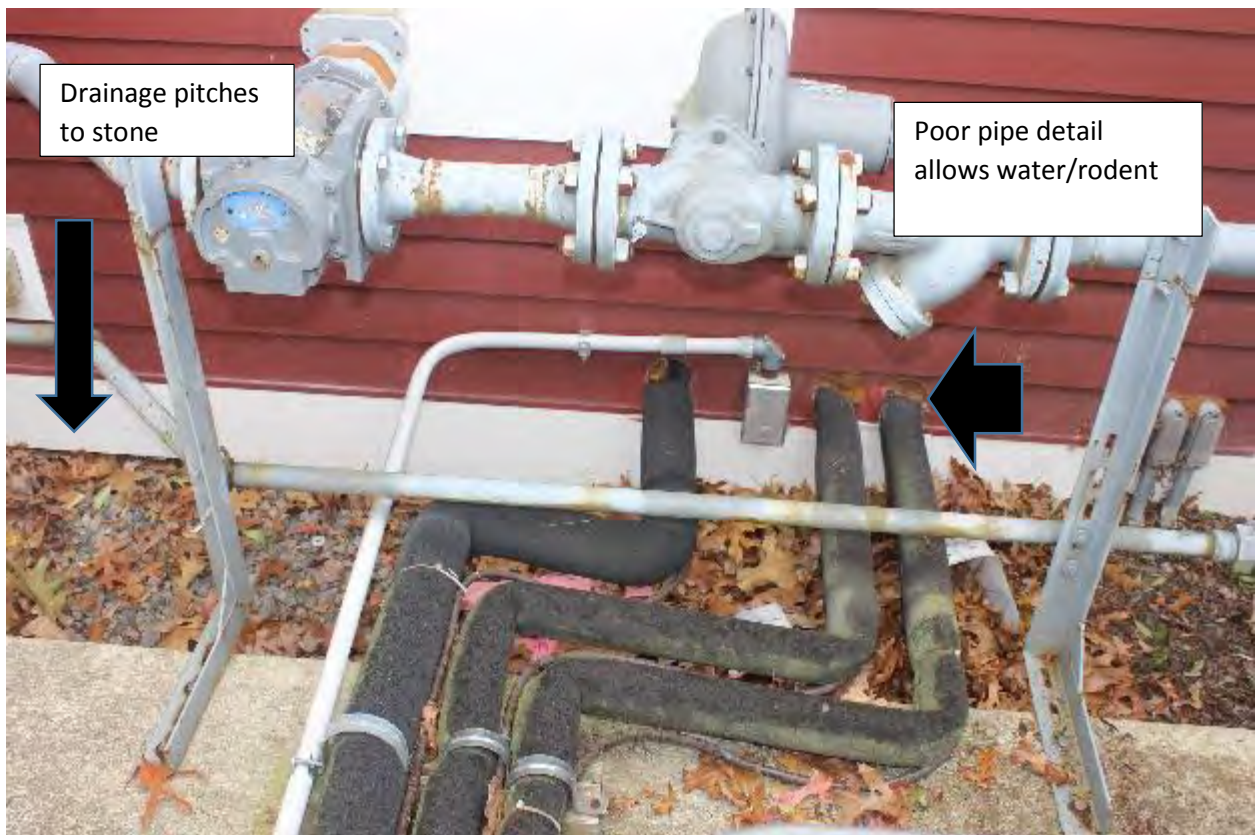
Implement flashing and surface water prevention measures as determined be the investigation.

Exterior paint should be on a seven year painting cycle. \$80,000





The Center at Medfield





3.4 Roofing

Description:

The majority of the roof is a thirty year architectural shingle. The meeting room section of the building has snow guards installed on the south side of the roof to prevent snow sliding off the roof and onto the flat roof connector/HVAC equipment. The flat roof connector section is an EDMP roofing material with roof drain and scupper drainage.

Condition: GOOD

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

NONE

2037 Engineering for roof replacement \$30,000

2038 Replace roof \$360,000



Roof with snow guards



The Center at Medfield

3.5 Attics

Description:

The space over the meeting room section of the building is a vaulted ceiling and is not accessible to view. Over the office/ classroom section of the building has an attic space that houses a majority of the HVAC mechanical equipment. This space has kraft faced insulation on the walls and ceiling areas covered by a foil faced vapor barrier. This installation allows for heat and vapor transmission from the mechanical space into the uninsulated area, which is contributing to the ice damming in this portion of the structure. Building Codes may require this solid surface to prevent heat transmission to the kraft face insulation.

The building suffered extensive water damage due to ice damming. The concern is that although insulated, ventilation concerns and what I believe is excessive heat getting into the attic space promoting ice damming.

Recommendations:

Investigate all attic and soffit to assure proper ventilation is occurring. \$1,000

Install sheetrock/ solid wall surface in the mechanical attic space with required access doors to the uninsulated space. \$15,000

3.6 ADA Compliance

The Americans with disabilities Act (ADA) and the State of Massachusetts Accessibility Code governs public accommodations and commercial properties. This report will only look at accommodations and access to public facilities that are equal or similar to those available to the general public. This report will identify areas of non-compliance, or will be in compliance if upgrades and renovations are made to the facility that trigger mandatory resolutions. However this report is not a full ADA or Accessibility Code assessment. Being "Public" facilities, upgrades to allow for employee or the general public need to be addressed to meet the provisions of Title III of the ADA Act.

Condition: Public area meets handicap access.

3.7 Interior Finishes and Components

Conditions: Good

Typical Interior finishes:

Location	Floor	Wall	Ceiling
Main office/classrooms	carpet	Sheet rock and paint	Acoustical dropped ceiling
Meeting area	hardwood flooring	Painter sheetrock	Acoustical ceiling

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Repaint the interior walls and trim 7 to 10 years. \$12,000

Hardwood floor (scheduled for sanding 2017), screen and reseal flooring yearly. \$1,000

4.0 BUILDING SYSTEMS

4.1. *Plumbing*

Description: Good

The observed supply piping is copper, and the waste lines are cast iron. The plumbing fixtures are vitreous china with chrome trim. The water heater is original to the building. Piping looks in good working condition.

Welded and threaded black iron pipe is used for gas piping within the subject property.

Condition:

All plumbing is in good condition. The mineral content in Medfield water has aggressively impacted plumbing fixtures, balancing valves, and domestic hot water pumps. Several flushometers and the balancing valve have been replaced or rebuilt due to mineral deposits.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Actively inspect operational components and replace interior components that are likely to seize up do to mineral deposits.

Schedule water pump replacement for 8 to 10 year replacement. \$2,000

Service plumbing fixtures on a yearly basis. Table 1

The Center at Medfield

4.2 HVAC ADD INFO

a. Heating Plant

Description:

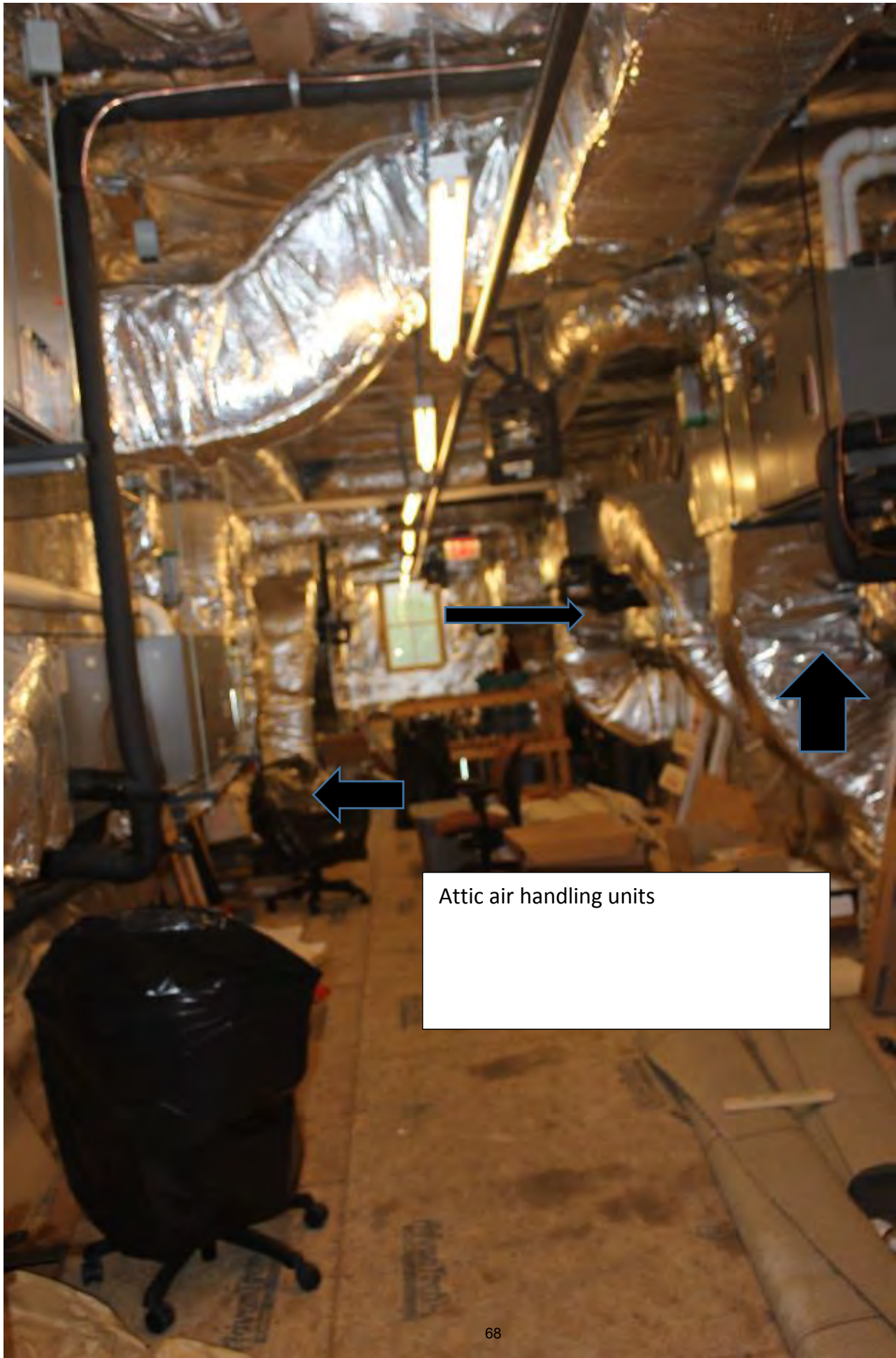
The Office and classroom areas are heated and cooled by air handling unit with the roof mounted condenser unit located in the attic space. The Two large conference spaces are heated and cooled by a large roof mounted Air handling unit. All other spaces are serviced with small hot air systems with DX coils and unit condensers for cooling.

Condition:

The units are all in good condition. The equipment has received yearly maintenance and is operationally in good shape. Budget planning to replacement of blower motors, heat chambers, and condenser motors should be factored in the next several years as a lifecycle replacement.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term repairs planning for lifecycle replacement of HVAC components needs to be factored.





Ground mounted condensing units

The Center at Medfield

4.3 Electric

Description:

A new 800 Amp electrical service supply service. .

Condition: Good

The equipment is relatively new and in good shape.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term repair is to have a electrical specialist survey company inspect all circuit breakers or operation and effectiveness. The pro-active survey will determine if there are any circuit breaker concerns.

\$2,000

4.4 Building Fire Suppression, Fire alarm and Life safety

Description:

The property is protected by a multi zone Fire Alarm Control panel, hard wired smoke and heat detectors, pull stations, illuminated exit lights, emergency battery lighting units, horn/strobe enunciators, fire extinguishers. A full coverage 4 inch Wet fire suppression sprinkler system with check valves, and tamper and flow switches exist. Exterior Fire Department Siamese connections are located on the exterior building.

Condition: Good

As reported these system undergo a yearly test and inspection.

5.0 CODE/OPERATIONAL CONCERNS

Council on Aging

CAPITAL PLANNING BUDGET

sq ft 7,690																						
System	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2032	2034	2035	2036	2037	2038	
Site work	4,000	3,000			5,000																	
2.2 Various site work																						
2.3 Landscape affecting buildings																						
2.2 Walkway drainage/ redesign				8,000																		
2.2 Paving				8,000						20,000												
2.2 site design				8,000						20,000												
Building envelope																						
3.1 General carpentry/siding repair					5,000					5,000					5,000				5,000			
3.1 engineering							3,000															
3.3 Siding/ skirt board repair								10,000				20,000									100,000	
3.3 Sealant replacement				2,000					2,000		5,000			2,000					2,000			
Windows																						
3.3 wood windows											5,000				5,000			5,000		5,000		
Door																						
3.3 Exterior door								5,000												20,000		
3.3 Doors (interior)										3,000							3,000					
3.3 Exterior Paint					50,000							50,000							50,000			
3.4 ROOF																						
engineering																				10,000		
EDPM roof											5,000					5,000				5,000		
Asphalt																				100,000		
3.6 ADA Compliance																						
3.7 Interior																						
Carpet									20,000					8,000					8,000			
tile flooring						5,000							5,000				5,000					
Paint interior								25,000							25,000							
4.1 Plumbing																						
Fixtures replace age				5,000										5,000						5,000		
Hot water heater					4,000															4,000		
4.2 HVAC																						
Boiler 2015																						
ATC computer controls																						
Fluid pumps							3,000									3,000						
Valves (ahu/vav)																						
Backflow preventers																						
Duct Cleaning 10 yr cycle			8,000										8,000									
RTU units																						
Vent /exhaust fan								2,000						2,000						2,000		
4.3 Electrical																						
Branch circuits											2,000											
lighting				10,000																		
Fire Alarm										5,000												
4.4 Fire Suppression																						
Total Yearly Expenditure	4,000	3,000	32,000	22,000	59,000	11,000	10,000	32,000	27,000	48,000	37,000	50,000	13,000	22,000	5,000	33,000	8,000	5,000	65,000	21,000	230,000	
2018																						
Escalated cost	3.0%	\$5,067	\$3,914	\$43,005	\$30,453	\$84,120	\$16,154	\$15,126	\$49,855	\$43,327	\$79,337	\$62,990	\$87,675	\$23,479	\$40,926	\$9,581	\$63,231	\$16,262	\$10,469	\$140,178	\$46,647	\$526,223

PFAFF CENTER/RECREATION



LOCATION: Dale Street

Assessors: Map 49 Parcel 086

Year Built 1927

Building area: 8,556 sq ft

Condition Poor

Land Area : approximately .5 acres

1.0 PURPOSE and LIMITATIONS

The purpose of this Property and Conditions Report (the Report) is to assist the Town of Medfield to assess the general physical condition and maintenance status of the property and to recommend repair and maintenance items considered significant for the property to continue its current operations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, access through building “owners” and information presented by the Town. Findings, conclusions, and recommendations in this Report are based on the methods described above, industry standards, and general observations of the equipment and its visible condition.

The report is focused on existing conditions, lifecycle of existing materials, and non-code compliant conditions. Recommendations will include items needed to bring the space/component to a safe, code compliant, and generally accepted facilities condition. The Report does not anticipate change of use, reconfiguration of space, or change in current program.

Estimated Costs are based on professional judgment and the probable or actual extent of the observed defect inclusive of the cost to design, procure, construct and manage corrections.

1.1 Condition

The Report uses terms describing conditions of the various site, building and system components. The terms used are defined below. It should be noted that a term applied to an overall system does not preclude that a part, component, or section of the system may be in a different condition.

Excellent	The component or system is in new or like new condition, and little or no deferred maintenance is recommended, or the scheduled maintenance can be accomplished with routine maintenance.
Good	The component or system is in sound condition and performing its function. It may show signs of normal aging or wear and tear, and some remedial and routine maintenance or rehabilitation work may be necessary.
Fair	The component or system is performing adequately at this time but is obsolete or is approaching the end of its useful life. The component or system may exhibit Deferred Maintenance, evidence of a previous repair, or workmanship not in compliance with common accepted practices. Significant repair or replacement may be recommended to prevent further deterioration, prevent premature failure, or to prolong its useful life.
Poor	The component or system has either failed or cannot be relied upon for continued use performing its original function, exhibits excessive Deferred Maintenance or is clearly in a state of disrepair. Repair or replacement is recommended.

1.2 Abbreviations

The Report may use abbreviations to describe various site, building, or system components of legal descriptions.

ACT	Acoustical Ceiling Tile	GFI	Ground Fault interrupt (circuit)
AHU	Air handling unit	GWB	Gypsum Wall Board
BTU	British Thermal unit (heat measurement)	HVAC	Heating, Ventilating, Air Conditioning
CMU	Concrete Masonry Unit	HWH	Hot Water Heater
EDPM	Rubber membrane roofing	MDP	Main electrical distribution panel
EUL	Expected Useful Life (life cycle)	PTAC	Package through wall A/C unit
FCU	Fan Coil Unit	RTU	Roof top Unit
FHA	Forced Hot Air	MSBC	Massachusetts State Building Code
IBC	International Building Code	VAV	Variable Air Volume box
ACM	Asbestos containing material	VCT	Vinyl Wall covering (floor tile)
ADA	Americans with Disabilities Act	MAAB	Mass. Architectural Access Barriers

2.0 SITE CONDITIONS

2.1 Topography

Description:

Site is generally flat with a slight grade pitch to the street. Lot is treed along the outer rear property line.

Condition and Observation:

Recommended Repairs:

None

Pfaff Center

2.2 Pavement, Parking, and drainage structures

Description:

Site is paved to accommodate the use on the north lot. Shared parking with the newly created Dale Street School lot, parking and access appears adequate.

Condition and Observation:

Asphalt area in general looks in poor shape. Areas of wear, and asphalt degradation can be observed over the entire lot. The worn and low spots trap water which further degrades the driveway.

The site drainage is focused toward the street. There was not enough catch basins or drainage structures that can readily accept all surface drainage.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Replace the driveway and parking areas in their entirety. \$100,000

Engineer and tie in all roof drains into a catch basin drainage system as a method to control roof discharge and further damaged to the asphalt and remove water that makes the basement level moist. \$20,000

2.3 Landscaping

Description:

The front and south side of the lot is a lawn area. The front also has a large ornamental stair and walkway system. Little landscaping exist in the reminder of the site.

Condition and Observations:

As described in section 2.2 Topography the asphalt area of the building does not pitch away from the building. Water on the asphalt can migrate towards the building and enters the ground at the asphalt/foundation intersection.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

In lawn areas, run all downspouts to a drywells and away from the building. \$20,000

Where asphalt pitches towards the building, regrade slope and asphalt away from the building.
See 2.2 paving

Pfaff Center

2.4 Municipal Services and Utilities

- a. Water and sewer
Medfield has its own water and sewerage
- b. Gas
Columbia Gas
- c. Electric
Eversource

3.0 BUILDING CONDITIONS

3.1 Sub Structure/Foundation

Description:

The substructure poured in place foundation. Approximately ½ of the basement is a full basement, and the remainder is a crawl space that had limited entry. The basement area has approximately 50% full basement and the remainder is a crawl space. Access to the basement is from an interior stair and an open basement well with an exterior door.

Condition and Observation: FAIR

The basement area foundation is susceptible to moisture. Evidence of airborne moisture exists in the crawl space areas. The main basement has a large sump pit at the area adjacent to the exterior basement access.

In areas that have been finished, the structure could not be observed. The front section of the building, the structure could be observed. The combination of fieldstone, granite and brick were used as the structural components. Areas were dated but appeared in structural sound shape.

Crawlspace was never designed properly to vent and keep the subgrade area dry.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

In the unfinished basement area, remove all small wood framed rooms, and materials that wick water and promote mold conditions. \$10,000

Replace basement level doors to prevent weather from entering the building. \$5,000

Re-evaluate all stored records and material storage no longer required to be kept. Reorganize files on a rack storage system to promote air flow. See section 3.5 Basement

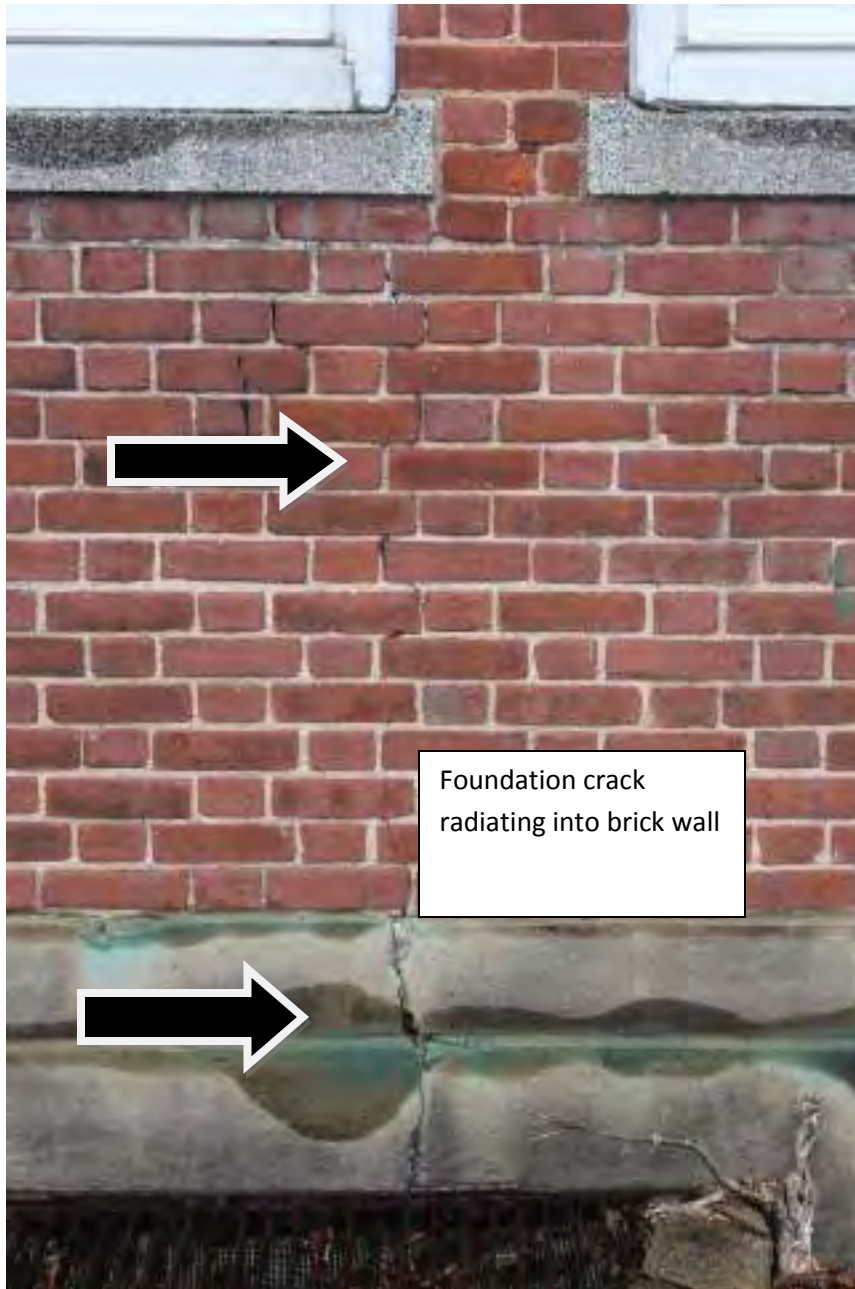
Pfaff Center



West side Ramp



Pfaff Center



3.2 Super Structure

Description:

The Pfaff center is constructed of heavy brick masonry (appeared three wythes thick) exterior façade, with a combination of heavy timber wood structure framing and extremely light wood floor and rafters. This heavy “archaic” construction, common for buildings constructed in this time frame, however the floor joists are extremely undersized. The masonry extends beyond the roof line to create a parapet wall approximately 24-30 inches tall around the entire roof.

On the west side is a sloping retaining wall and ramp that runs from grade to approximately 8’-0 below grade. This ramp creates an access to the basement level storage. The elevation drop is protected with a cast in place chain link fence 4’-0” tall

Condition and Observation: POOR

Based on the overall appearance and observed general condition of the building, the exterior walls appear to be in poor condition. On the east side of the building, large horizontal cracking is occurring along the window lintel line and where the wall transitions from structural bearing to the parapet wall. At all other lintel locations, the lintels have “rusted” to a point where the steel has “swelled” and these forces have broken the mortar joints and caused stress cracking. In many instances, the joint at the thru wall flashing, which indicates the location where the parapet wall begins has lateral cracking at this joint. This cracking appears to transmit well into the masonry assembly.

The floor joists in the exposed area of the building appear to be full dimension 3x12 at 16 inches on center. This construction is extremely undersized for the current use requirements for classrooms and assembly. The floors have sagging and deflection throughout the building. When walking on the main hall floor, the joists have perceptible movement that should not exist in a commercial structure. Most of the interior structural elements could not be observed because finish materials.

It was reported that during heavy snows, the flat roof structure had deflected. Roof rafters could not be observed. The longest unsupported span of the rafter is approximately 20 ft (based on location of bearing walls). With the age of the building, one can assume that the rafters are likely to be full dimension 3x12 on a flat roof. This construction is extremely light to meet snow loading capacities. As reported, during a heavy snow, the roof appeared to have bowed due to the weight. Movement of the structural roof system could have also contributed to the structural cracking at the parapet location. The roof framing over time more than likely developed a “sag”.

On the ramp retaining wall, there is a significant vertical structural crack on the soil retaining side that runs from the top of wall to the floor of ramp which is 7’-0” long. The concrete floor of the ramp has cracking in the middle of the concrete ramp that could most likely be attributed to the expansion/contraction of the material. However, this cracking allows water penetrations into the concrete which could accelerate the concrete failure at this location.

Pfaff Center

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

See section 3.3 Facades Structural /exterior envelope engineering review. If the Town intends to continue use of this building, a full and comprehensive structural analysis should be performed. Any renovation to this structure will require upgrades to seismic, snow loading and floor loading to meet current code requirements. \$50,000

Replacement or repair of the parapet wall and thru wall flashing. Once engineering is complete repair, replacement or removal of the parapet wall will need to be performed to keep the structure and prevent further water degradation. \$400,000

Epoxy or mechanically fix the cracking in the retaining wall \$20,000

Replace steel lintels over the windows. This work would need to be integrated into the above masonry repairs.

Upgrades to structure to address flooring movement (flexing/bounce), due to undersize. \$100,000

Repoint/replace damaged mortar and brick See section 3.3 Facades

3.3 Facades

a) Description Facades: Brick

Condition: Fair to poor

The brick is generally in fair to poor shape below the parapet wall, with areas showing signs of moisture infiltration, mortar wear, movement at all the structural steel lintels. Above the steel lintels where the wall goes from load bearing to a parapet wall is in extremely poor condition. The brick and façade and the mortar joints appear in fair to poor condition on the façades.

All observed brick and mortar surfaces show a weathering consistent with the age of the structure.

Moisture has infiltrated the brick at the roof parapet wall intersection. There appears to be thru wall flashing, but its condition and age may have failed. Water entering at this point, made its way to the steel lintels over the windows causing rusting and the lintels to expand. With the excess expansion of the lintels, the design which created a long thin masonry structure with no vertical anchoring, the wall appears to have “snapped” along this horizontal joint. Large structural cracking has opened gaps as large as one inch in the masonry wall, thus allowing more water penetration and accelerating rusting and failure. This excess water within the brick cavity is subject to freeze thaw cycles at the face. The freezing moisture has expanded and at the face of the brick spalled the face of the brick. At the brick

Pfaff Center

interface, the mortar joints are failing due to the different absorption rate and expansion rate of the materials. There are significant signs of movement at this critical joint.

At various other locations mortar joints have fallen out and spot repair and repointing is required to assure longevity in the total brick wall facade.

The caulked joints are showing signs of drying out and are starting to crack.

b) Description Windows and Doors:

Condition: Good

Windows:

The building has had a windows replacement and cosmetic repairs. There are newer aluminum framed windows, throughout the building

The aluminum windows are operable double hung window.

Basement level door, windows and boarded in windows are all in some degree of disrepair. All window wells have filled up with leaves and debris which has created a standing water/moisture condition that affects the windows and keeps the basement structure moist.

Doors:

The original wood doors are in operational shape, but do require door hardware and weather stripping upgrades for better energy efficiency and operation. The wood exterior face trim around the door has rotted in several locations to what is believed a flashing failure at the brick. Water is channeled at the thru wall flashing, and allowed to get behind this wood accelerating rotting.

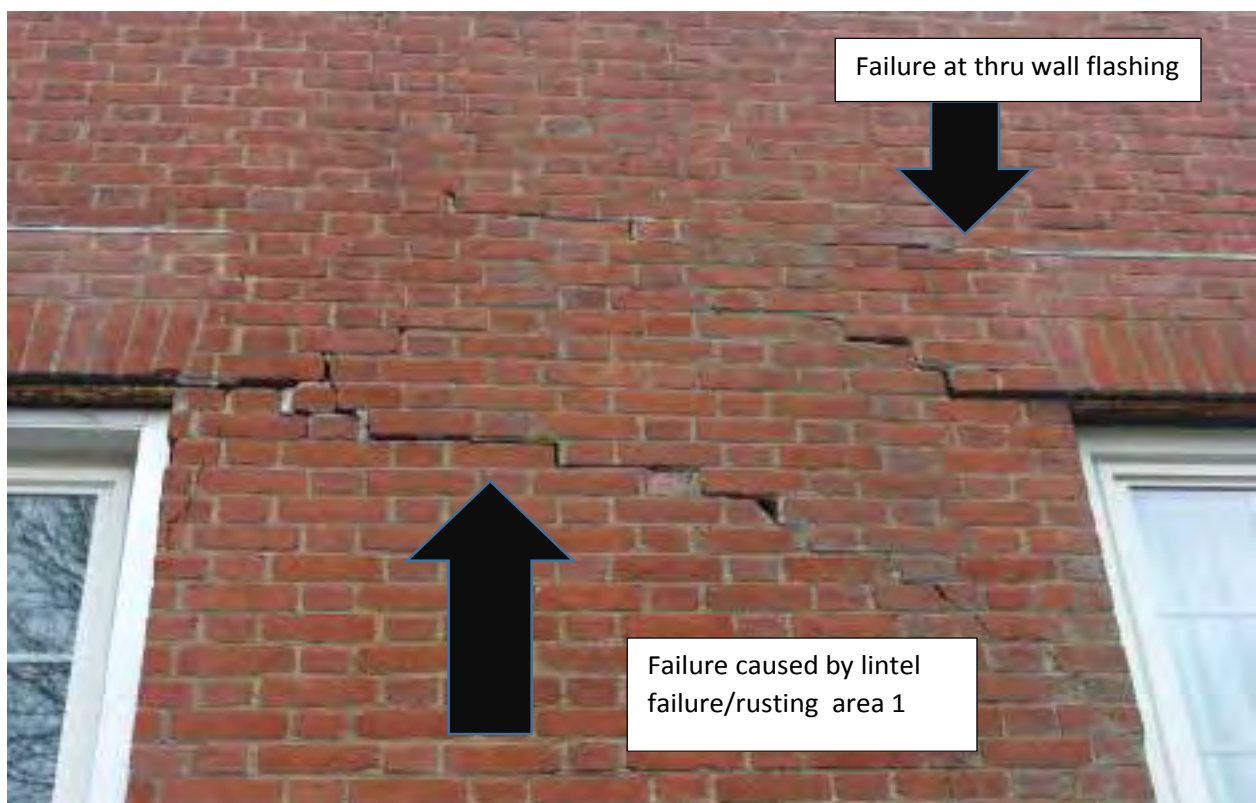
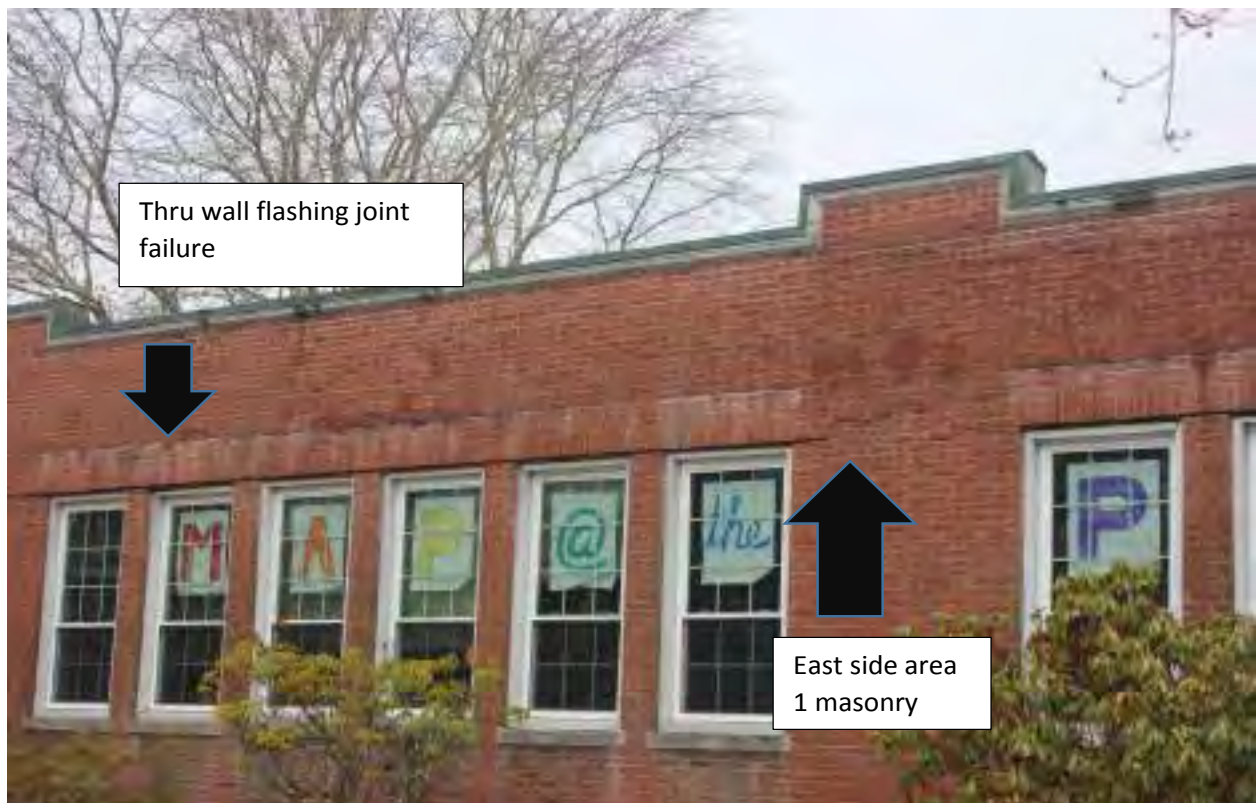
Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Basement level boarded in windows (assuming that they are not going to be converted back to windows) and wood windows. Remove all rotted and damaged wood and replace with metal insulated panel unit. Remove all excess debris in the window wells. \$15,000

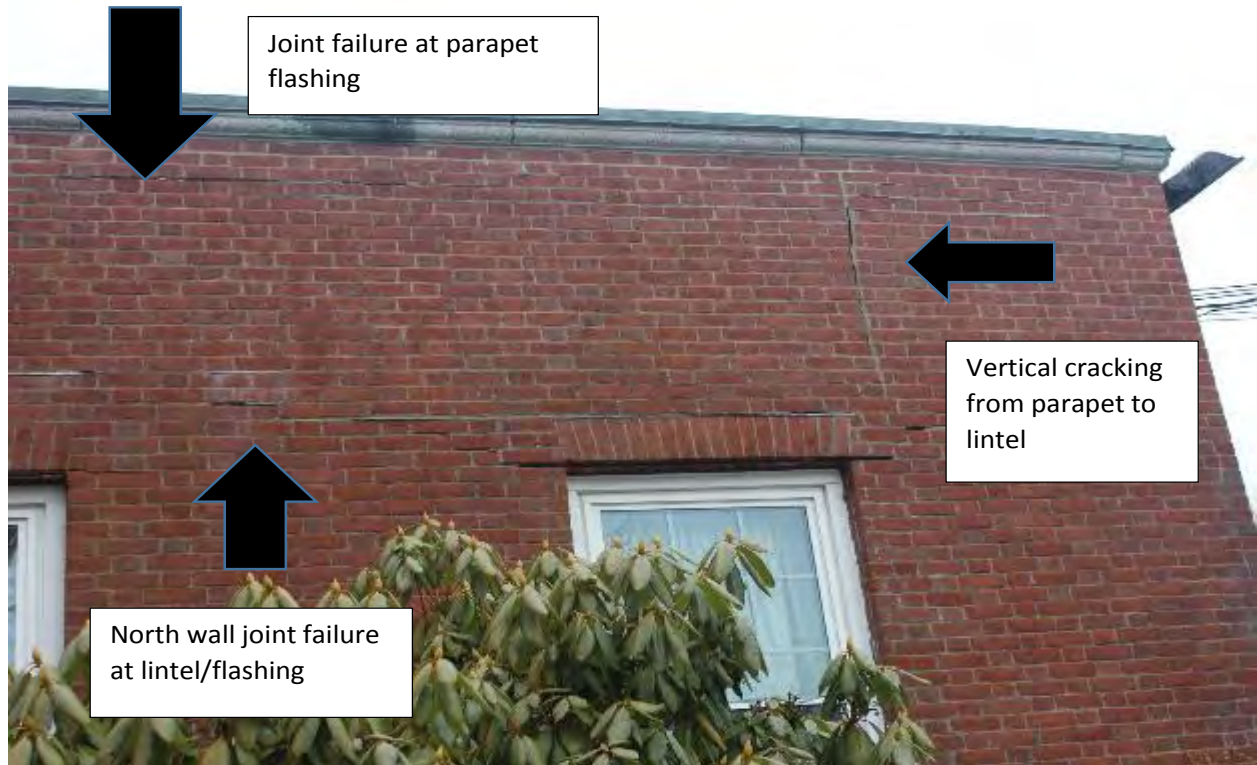
Structural/exterior envelope engineering review. The structure has such significant problems in the masonry wall at the parapet and lintel locations, and engineer review is needed immediately. See 3.2 Super structure

Masonry, flashing, repointing and structural repair as determined by the engineering review. See 3.2 Super structure

Pfaff Center



Pfaff Center



Pfaff Center

3.4 Roofing

Description:

The roof is a white PVC roofing material that was installed approximately 8-10 year ago.

Condition: Fair

The roof in general is operational and may need spot repair. However, is determined that the parapet thru wall flashing is compromised, or the parapet needs substantial repair, this could directly affect the roof material and require replacement or substantial upgrades.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Immediate have a roofer certified in PVC roofing inspect roof surface and repair/address any areas of concern or leaking. \$2,000

See section 3.2 Super structure. If the structural repair of the parapet is determined to be needed, the roof membrane will be affected to address the thru wall flashing.

3.5 Basements / Attics

Description:

The basement area houses mechanical rooms, storage and old town storage in the front portion of the building.

Old basement window openings that have been sealed off.

All ceiling are 9-12 foot ceilings in basement and crawl space areas are only 4 feet tall.

Condition:

The condition of the front unfinished basement is in poor shape. The excessive storage of unwanted materials, wood framed walls that have no current purpose, and poor air flow are contributing to spot mold conditions, rotting wood if left un-abated could lead to termites and further decay.

Crawl space area was unobserved. Is reported to have unfinished flooring. There is no exterior or interior venting to allow air flow and promote dry conditions.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term to remove unwanted materials to prevent moisture damage, mold conditions, and further degradation to the structure, remove all wood walls, debris, and unwanted materials. This removal will enhance air flow and reduce moisture issues. Storage on a rack system, to promote air flow. \$10,000

Open access form the interior basement into the crawl spaces to promote air flow and dry conditions. See above

3.6 ADA Compliance

The Americans with disabilities Act (ADA) and the State of Massachusetts Accessibility Code governs public accommodations and commercial properties. This report will only look at accommodations and access to public facilities that are equal or similar to those available to the general public. This report will identify areas of non-compliance, or will be in compliance if upgrades and renovations are made to the facility that trigger mandatory resolutions. However this report is not a full ADA or Accessibility Code assessment. Being “Public” facilities, upgrades to allow for employee or the general public need to be addressed to meet the provisions of Title III of the ADA Act.

Condition:

The building meets some basic Handicap accessibility, however falls short on meeting full compliance. Various rooms have small step ups or door width issues, door access, and door hardware amongst other issues that are non-code compliant. Toilet facilities are not fully compliant. A full and comprehensive handicap access survey should be performed so the Town can develop a plan to seek variances, or develop a plan to correct all non-conformities. The building, being the most used and accessed for the operation of Town Government, is subject applicable requirements of ADA.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Perform a handicap access audit to determine and prioritize issues that are to be addressed. This may assist the town in prioritizing future renovations, and if a lawsuit is issued under ADA, the Town can present its report and program to correct violations. \$5,000

Upgrades for ADA compliance Potential \$30,000 upgrades

3.7 Interior Finishes and Components

Descriptions:

Typical Interior finishes:

Location	Floor	Walls	Ceiling
Bathrooms	Tile	Tile/sheetrock	Plaster
offices	wood	Paneling/plaster	plaster
First floor	wood	plaster	plaster
Trim	Wood painted		

Conditions: Poor

The building interior finishes are dated and in need of a comprehensive upgrade. All woodwork and trim around window has dried cracked and in need of paint and restoration. Where the building has children in the building, a full hazardous materials investigation should be performed. The bathrooms are archaic and are in poor condition. The Bathroom facilities, materials, and design are original to the building, and are in need of a complete gut rehab.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Replacement reserves should be considered for upgrades to address all worn and dated materials as part of an interior restoration and upgrade. \$300,000

Pfaff Center



Pfaff Center



Typical dated classroom

4.0 BUILDING SYSTEMS

4.1. Plumbing

Description:

The observed supply piping is copper, and the waste lines are cast iron. The plumbing fixtures are vitreous china with chrome trim. Piping looks in working condition. Much of the piping was hidden from view and assessment was limited.

Welded and threaded black iron pipe is used for gas piping within the subject property.

Condition:

The water service is copper which ties into a galvanized pipe transition. Visible corrosion is observed at the shut off valves for both the main shut.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term replacement of the water line feed to the building. \$10,000

Replace or plan to replace all bathroom plumbing and equipment. \$100,000

4.2 HVAC

a. Heating Plant

Description:

The building heat is supplied a steam fired heating plant and wall mounted radiator. The main boilers are on the basement level (2016 HB Smith steam boilers). Steam pipes are original to the building. The piping on the supply side was sized for the original steam boiler system and is extremely oversized for the structure. A lot of energy usage is wasted to heat these 8" dia feeds. Much of the supply and return piping in the crawl spaces could not be observed. Steam pipes within the boiler room appeared to be covered with asbestos impregnated pipe insulation and could its condition could not be observed. The systems are maintained by an outsourced vendor on a maintenance plan.

There is the remains of a main forced hot air plenum in the basement, that provided some air exchange. This system is abandoned and takes up a lot of space in the basement. It also appears to be insulated in what appear to be an asbestos containing material. The material looks in tack.

Condition: Good to fair

The new boiler is in excellent condition. The existing piping is reaching its effective life of 50 years, and should be budgeted for replacement on a deferred maintenance plan.

Pfaff Center

b. Distribution system (radiators, exhaust)

Description:

The first floor level is heated with convection steam radiators. Each space has a steam radiator unit which is locally controlled with restriction flow valves that act as thermostat units that control a local steam valve.

Condition: Fair

All equipment is at or nearing its effective life cycle. The town should begin to plan for replacement of component parts (piping, steam traps, etc.) as the equipment ages out and the parts fail.

The spaces are cooled with window air conditioning units. The concern with the continued use of window units is the damage to the window and window frames, or the improper discharge of moisture from the unit which has damaged exterior brick, or the exterior look of the building with a simple bracketed condenser install as needed to address the space.

Generally the spaces were not designed for contemporary air and heat distribution. The systems existing solve a small or finite spaces but are not effective with a “global” solution for the building needs.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Have the building and systems evaluated to develop a cost effective way of cooling operation spaces in lieu of a continued program of temporary installation of small package heating and cooling units. \$30,000 package cooling system

Plan a replacement of window units for several package split units.

Plan replacement of unit components (piping/insulation/steam traps) for all hvac equipment. Most units are nearing the lifecycle replacement. \$5,000

Remove all abandoned hvac equipment. \$5,000

4.3 Electric

Description:

The main service entry to the building is underground and is located in the Main mechanical space in the basement level. The service is a 400 amp service. The main service and basement mechanical room panels are of newer vintage. The sub panels throughout the building are circuit breaker panels. All wiring to the office area is limited. Many rooms do not have enough outlets in the space. Power strips are used to provide needed outlet capacity.

Pfaff Center

Condition: Fair to Poor

The observed wiring in the basement was in fair condition. The various junction boxes, basement lightings and loose junction boxes should be secured. Sub-panels are filled to capacity and it appeared some breakers have been “piggybacked” and may have additional wiring tied to a single breaker.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term, add additional outlets to all locations to provide additional capacity and to remove power strips/extension cords. This will also address the concern of ungrounded outlets. \$3,000

Rehang, reinstall, and repair any observed electric violations. \$5,000

4.4 Building Fire Suppression and Fire Alarm

Description:

No Fire suppression exists

Fire detection exists and offers significant, but not complete, code required coverage.

Condition Fair

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Replacement reserves upgrade the fire alarm system when electric upgrades/replacement is to occur. \$10,000

5.0 CODE/OPERATIONAL CONCERNS

Description:

Asbestos

Exterior caulking, interior caulking, and some HVAC piping joints appear to have asbestos insulation on them. A full hazardous materials survey should be performed to understand what materials within the building are prohibited to be addressed. This will also help with understanding costs to upgrade the facility. \$3,000

Pfaff Center

Concern:

The structure is in need of a complete and comprehensive renovation do to the many end of life-cycle systems/building deficiencies, the structure does not meet many building code requirements for a current business/education use, material failures, and lack of compliance with many ADA requirements. (This report does not address programmatic needs)

The Town must make a comprehensive decision as to what is the future of the building. The Building systems are in so much need of upgrades, that if renovations are to be made, building codes will dictate complete building analysis and upgrades. Cost for such comprehensive upgrades could range from 3-3.5 million dollars for the basic needs of the building. This estimate does not address programmatic needs of the Recreation Department.

Recreation PFAFF

CAPITAL PLANNING BUDGET

sq ft 8,556																					
System	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2032	2034	2035	2036	2037	2038
Site work																					
2.2 Various site work design		20,000																			
2.3 Landscape affecting buildings		20,000																			
2.2 Paving		100,000																			
Building envelope																					
Engineering		150,000																			
3.1 foundation		20,000																			
3.1 window well drainage		4,000										4,000									4,000
3.2 Super structure		100,000																			
3.3 Brick façade repair		400,000																			
Windows																					
3.3 windows														7,000							7,000
3.3 Window basement			15,000																		
Door																					
3.3 Wood door			12,000															5,000			
3.3 Doors (interior)			5,000							3,000							3,000			3,000	
3.3 Exterior Paint		5,000																			
3.4 ROOF																					
engineering																					
PVC roof		20,000								5,000						5,000				8,000	80,000
3.5 Basement		20,000																			
3.6 ADA Compliance		30,000																			
3.7 Interior																					
Bathroom Upgrades		200,000																			
Kitchen upgrade		100,000						8,000													
Paint		20,000													8,000						8,000
4.1 Plumbing																					
Fixtures		100,000								2,000				1,000							1,000
4.2 HVAC																					
Boiler 2015																		20,000			
Engineering												5,000									
Fluid pumps								4,000										4,000			
Steam trap repair			5,000					5,000						5,000				5,000			
Backflow preventers		1,000							1,000												
Remove abandoned equipment		5,000												5,000							
Remove window AC install split				50,000																	
4.3 Electrical																					
electric service testing		1,000																			
lighting				10,000																	
service repair																					
Fire Alarm										10,000											
5.0 operational																					
Asbestos testing		6,000																			
Total Yearly Expenditure	-	1,322,000	37,000	60,000	-	-	-	17,000	1,000	20,000	-	10,000	10,000	7,000	8,000	5,000	3,000	34,000	-	11,000	100,000
2018																					
Escalated cost	3.0%	\$0	\$1,724,910	\$49,725	\$83,054	\$0	\$0	\$26,485	\$1,605	\$33,057	\$0	\$17,535	\$18,061	\$13,022	\$15,329	\$9,581	\$6,098	\$71,188	\$0	\$24,434	\$228,793

MEDFIELD PUBLIC LIBRARY



LOCATION: 468 Main Street

Assessors: Map 43 Parcel 132

Year Built 1917/1996

Building area: 20,166 sq ft

Condition good

Land Area : Approximately .5 acres

Library

1.0 PURPOSE and LIMITATIONS

The purpose of this Property and Conditions Report (the Report) is to assist the Town of Medfield to assess the general physical condition and maintenance status of the property and to recommend repair and maintenance items considered significant for the property to continue its current operations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, access through building “owners” and information presented by the Town. Findings, conclusions, and recommendations in this Report are based on the methods described above, industry standards, and general observations of the equipment and its visible condition.

The report is focused on existing conditions, lifecycle of existing materials, and non-code compliant conditions. Recommendations will include items needed to bring the space/component to a safe, code compliant, and generally accepted facilities condition. The Report does not anticipate change of use, reconfiguration of space, or change in current program.

Estimated Costs are based on professional judgment and the probable or actual extent of the observed defect inclusive of the cost to design, procure, construct and manage corrections.

1.1 Condition

The Report uses terms describing conditions of the various site, building and system components. The terms used are defined below. It should be noted that a term applied to an overall system does not preclude that a part, component, or section of the system may be in a different condition.

Excellent	The component or system is in new or like new condition, and little or no deferred maintenance is recommended, or the scheduled maintenance can be accomplished with routine maintenance.
Good	The component or system is in sound condition and performing its function. It may show signs of normal aging or wear and tear, and some remedial and routine maintenance or rehabilitation work may be necessary.
Fair	The component or system is performing adequately at this time but is obsolete or is approaching the end of its useful life. The component or system may exhibit Deferred Maintenance, evidence of a previous repair, or workmanship not in compliance with common accepted practices. Significant repair or replacement may be recommended to prevent further deterioration, prevent premature failure, or to prolong its useful life.
Poor	The component or system has either failed or cannot be relied upon for continued use performing its original function, exhibits excessive Deferred Maintenance or is clearly in a state of disrepair. Repair or replacement is recommended.

1.2 Abbreviations

The Report may use abbreviations to describe various site, building, or system components of legal descriptions.

ACT	Acoustical Ceiling Tile	GFI	Ground Fault interrupt (circuit)
AHU	Air handling unit	GWB	Gypsum Wall Board
BTU	British Thermal unit (heat measurement)	HVAC	Heating, Ventilating, Air Conditioning
CMU	Concrete Masonry Unit	HWH	Hot Water Heater
EDPM	Rubber membrane roofing	MDP	Main electrical distribution panel
EUL	Expected Useful Life (life cycle)	PTAC	Package through wall A/C unit
FCU	Fan Coil Unit	RTU	Roof top Unit
FHA	Forced Hot Air	MSBC	Massachusetts State Building Code
IBC	International Building Code	VAV	Variable Air Volume box
ACM	Asbestos containing material	VCT	Vinyl Wall covering (floor tile)
ADA	Americans with Disabilities Act	MAAB	Mass. Architectural Access Barrier

2.0 SITE CONDITIONS

2.1 Topography

Description:

Site is relatively flat, landscaped on three sides, public access provided on the easterly side, employee parking & service entrance at rear (south). Front faces Main Street to the north.

Condition and Observations:

Condition is good

2.2 Pavement, Parking and Drainage

Description:

Drive and pavement appear in good condition. Two accessible parking spaces are provided with an accessible route to the public entrance. No drainage structures found, but no ponding of water observed.

Condition and Observations:

The two pole-mounted signs identifying the accessible parking spaces are not at the proper height. MAAB regulations, Section 41.2 say 60" above grade.

The accessible route has a few hazards. There is a hump/lip where the paving meets the brick walkway.

There is also a lip at the granite accent strip. The brick edging along areas of brick walkway have deteriorated.

Two dumpsters are located on the rear sidewalk diminishing width of walkway.

A book depository is located near employee entrance and somewhat blocks Fire Department knox box.

Recommended Repairs:

Provide new compliant sign posts and remount handicap parking signs.

Eliminate lip in paving to provide flush condition.

Reset granite accent strip to provide flush condition.

Remove damaged brick edging and replace with new.

Verify whether entrance ramp exceeds 1:20 slope, if so, provide additional handrail on side of ramp segment per MAAB regulations, Section 24.5.1. (Note: the existing handrail system does not meet shape requirements of the MAAB. It is recommended that the new handrail not merely match the existing, but comply with MAAB regulations, Section 24.5.1 – 24.5.10)

Relocate dumpsters to maintain full sidewalk width.

Relocate book depository for proper clearance at knox box.

All work \$20,000

2.3 Landscaping

Description:

Landscape plantings and mulch beds placed on three sides of Library.

Gutter downspouts are connected to underground collection system.

There are exterior accent lights within areas of landscaping. There are also exterior hose bibs and exterior electrical outlets on each side of building.

Library

Condition and Observations:

Some shrubs are overgrown. Mulch has been placed to a level where it has blocked masonry weep holes in some areas.

Landscaping up-lights do not function as was reported to me by Library worker. Cover of one electrical outlet to right of rear employee door broken.

Recommended Repairs:

Certain shrubs should be trimmed back especially at "Fire Department Hose Connection" area at areas of hose bibs and at exterior outlets. \$1,000

Rather than add new layers of mulch each season, a maximum "fill level" should be established so weeps are left open.

Repair/replace non-functioning landscape light fixtures. \$3,000

Repair/replace damaged exterior electrical outlet. \$1,000

3.0 BUILDING CONDITIONS

3.1 Foundation

Description:

Building has a brick foundation with stucco parging and full basement at original section, and a poured concrete foundation with full basement at 1998 addition.

Basement is accessed via exterior open stair well with handrail & guardrail system.

Basement windows have area wells with metal grates over openings. Some have had screening added over grates.

Condition and Observations:

Condition is good.

Stucco parging is in disrepair in area around stairwell

Leaves have mounted up in several areas, covering basement window wells and blocking mechanical louvers.

Likewise in basement stair well, leaves have blocked function of area drain there.

Guardrail protecting stairwell does not meet minimum 36" height above grade as per Code.

Recommended Repairs:

Remove areas of loose stucco and apply new. \$1,000

Create control joint in area of current crack and fill joint with sealant and where stucco meets any other dis-similar materials. \$5,000

Provide annual clean-up of leaves around building, from gutters and from stairwell.

Keep area drains open, remove cover and clean and/or snake outlet pipe to allow drainage.

On all subsurface drains that receive rain water need to be “snaked” or cleaned to assure operation. \$2,000

Keep top grates of area wells clear and free of accumulation of leaves and debris. Keep mechanical louver at rear open and unobstructed.

Scrape and paint existing metal grates, handrails and guardrail. \$1,000

Consider adding top rail to existing guardrail to achieve minimum 36” height. \$1,000

Clean out accumulated leaves and debris from inside of arear wells. Excavate down and provide a layer of 1 ½” crushed stone. Maintain minimum of 4” clear from top of stone to bottom of window. \$1,000

3.2 Super Structure:

Description:

The original building is a full wythe, solid brick wall with water table, brick cornice, with stepped out gutter line support ledge

There is a brick chimney and vent shaft on original section and a similar detail on addition.

The 1998 addition is a brick veneer cavity wall with matching water table. There are exterior cast iron brackets at front and rear elevations used to attach the interior super structure to the brick wall construction.

The roof is mainly a gable roof with flat roofs at canopies.

The structural framing is largely not visible. The 1998 addition is a steel framed structure. The original building is a wood framed structure with heavy masonry support walls. The attic of the original structure is exposed full dimension lumber and appears in good condition.

3.3 Facades

3.3 A Description: (Brick)

The primary exterior cladding is brick and mortar. The original 1917 building is original solid, brick and mortar construction, with some evidence of repointing was observed – presumably during 1998 addition. The 1998 addition is of similar brick and mortar, although a brick veneer cavity wall. Weep holes were observed at several locations near grade – but no evidence of through-wall flashing. There is a brick water table around the entire new and original building and brick arches at windows and other exterior features.

At the eave lines, brick has been corbelled out creating a brick cornice and shallow roof overhang.

There are accents of stucco and precast sills and lintels

There are cast iron brackets as well as several rusted fasteners on original section.

There are brick parapets at the ends of the gables, capped with metal coping.

3.3 B Description: (Fenestrations)

There are insulated, vinyl-clad windows with PVC trim and accent panels throughout new addition.

There are a combination of existing wood entrance doors, flush metal doors & frames, and solid wood entrance doors.

The public access doors have automatic door openers. Both the existing entrance (1872) (noted as “not in service”) and new public entrance both have canopies above with wood supporting columns.

The non-functional existing entrance is accessed via brick steps with cast iron handrails & guardrails. There are wood louvers at top of vent shaft in original building.

Condition and Observations:

3.3 A Façade (Brick)

The original brick and mortar is in very good condition considering its age. The mortar does show signs of weathering, has become porous and some of the mortar’s surface sand aggregates are loose.

There are also some cracked bricks and the mortar has shrunk around some bricks, leaving a gap where water could infiltrate.

On close inspection of mortar, there is visible efflorescence on much of the joint work, indicating moisture has already penetrated brickwork. There are also other areas of visible efflorescence on the west side near eaves/brick cornice area.

Below the change in direction of the metal coping, which caps the brick parapets, there is noticeable efflorescence that needs further investigation as to source/cause. This consistent water infiltration could lead to premature failure in the brick mortar joints.

The water table brick has some open joints that could allow water infiltration.

In some areas, repointing and other repairs were done in a haphazard manner. The mortar is not of the same consistency, and appears “harder” in its strength. By having mortar of a harder strength, creates problems with the existing brick and mortar system. The new materials do not absorb water at the same rate as the existing brick and mortar. As the old material absorb water, the new harder mortar prevent movement and act as a wedge and cause the brick to crack or “pop” the brick face. This exposes the softer inner core of the brick and accelerates the brick failure.

Weep holes at new addition are few and far between. Many are blocked, or were installed in a coursing where they have become buried by mulch or sidewalks.

Stucco wall finish in exterior basement stairwell has cracked and delaminated.

The original brick entrance steps (1917) are in disrepair with missing and spalling bricks throughout. This is caused from excessive salt use during the winter months.

The existing handrails and guardrails are set into the brick, or in some areas buried into the ground and have or are showing signs of excessive rusting and/or failure. In any case, they do not comply with minimum height requirements, while acknowledging they are Historic and located at a non-functioning entrance. The cast iron brackets are rusty and there are unnecessary metal fasteners now rusting and causing discoloration.

The various brick control joints have sealant that in most cases, appears to have served its intended life. Some sealants have cracked others have mildew. The sealant has lost its elasticity and is pulling away from the fixed material. Water infiltration can be expected if not addressed.

The wood louvers in the shaft of original building appear to be lacking bird screening on the inside and need of paint. At other locations where faux louver panels have been installed, these are also showing signs of paint fatigue and made need sealant installed.

There are gaps around existing electrical service penetrations in the brick wall on west side which could allow pests entering building.

3.3 B (*Fenestrations*)

Doors appear to be in good condition, showing normal wear. The original 1872 entrance doors, while in good condition, do need to be refurbished to stabilize the “warping” and to install much needed weather stripping.

Some hardware has deteriorated.

Side door at SE corner of building, has 3-riser steps leading to the walkway, but without handrails.

Windows appear in good condition, but would benefit by having new caulking installed. It appears that some exterior window sills may not be sloped away from window with signs of accumulated water (and now mildew) now present.

Wood windows in the 1917 wing are generally in good condition. Energy upgrades are needed. The wood window on the east side of the 1917 wing has been damaged by water infiltration (caused by roof leak, see roof section). The window and trim are sound, but water has created lifting and the joints have pulled apart.

Wood trim and columns need painting and re-caulking where it meets dissimilar materials (existing paint should be tested for possible lead content).

Window sills within basement area walls should be closely investigated for water infiltration as this is a very susceptible location for water damage.

Recommended Repairs:

3.3 A Façade (Brick)

Although not performed during the 1998 Addition project, consideration should be given to repoint the original portion of the building. Any repointing should be done with a similar mortar mix and aggregate as the original.

Any broken bricks should be removed and replaced.

Joints in water table bricks should be raked out and repointed, or in some cases, add sealant as a soft joint.

Areas of poorly repointed areas should be redone to an acceptable level and match the existing mortar consistency and material make up.

All existing control joints should be raked out and re-sealed. If no backer rod was originally provided, new should be added now (existing caulking should be tested for ACM). \$20,000

At areas of visible efflorescence, source of water infiltration needs to be closely evaluated by exterior envelope specialist. Possible sources could be open joints in brickwork, failed seams in parapet coping or roof leaks (this may require destructive testing work to determine source). \$10,000

Weeps need to be cored out and made functional at the 1998 addition. An investigation of the construction documents should be done to see if through-wall base flashing was installed at the brick work (this may require destructive testing work to determine if installed).

If base flashing was installed, more weep holes should be provided. Maintenance workers should be cautioned against installing mulch that could block these holes.

Where horizontal flashing was cut in at shed roof on rear wall, sealant needs to be added to now open joint there. \$3,000

The entire area of brick would benefit by a cleaning and then an application of (2) coats of brick sealer. A restoration detergent is recommended. This application should be engineered (see above). \$40,000

The existing stucco finish in exterior stair well should be removed and replaced. Remove existing handrail to facilitate new work and reinstall. Control joints should be installed where vertical cracks have occurred. Provide sealants where stucco meets adjoining surfaces/materials. See repointing

The entire original brick steps/entrance platform of the 1917 wing, needs to be totally rebuilt. The brick work and perimeter cast-in-place concrete has failed. \$20,000

The existing handrails and guardrails here will need to be scraped and painted and reinstalled. This doorway serves as an "egress only" exit. A re-configuration of the platform and stair may provide a longer term solution which may extend the life of the platform and prevent it from heavy abuse from sidewalk plows and salting, while maintain its character. Design \$2,000

Scrape and paint all existing metal brackets on original building.

Remove random rusted fasteners and fill holes with sealant.

Scrape and paint existing wood louvers at rear shaft, add bird screen where missing, or blank-off if not functional. \$3,000

Provide sealant around electrical service penetrations on west side.

Recommended Repairs:

3.3 B (Fenestrations)

Replace rusted hinges at rear HM door. \$1,000

Add handrails to steps leading from side door on east, to possibly eliminate steps toward yard and install guardrail. Clean vegetation off steps. \$1,000

Existing window caulking should be raked out and replaced with new. Any mildew should be cleaned from all window surfaces. \$80,000

Check slope of existing window sills on east side to verify they pitch away from window unit. Make adjustments as necessary. \$3,000

Upon completion of area well repairs, check window sills there for damage or infiltration and make similar repairs.

Scrape and repaint any wood items (columns, trim, etc.) \$8,000 every 5 years

3.4 ROOF

Description:

The gable roof areas are slate flashed into brick parapets at each end.

The parapets are capped with metal coping.

Metal 3-row metal snow guards are placed at strategic areas.

Copper gutters and downspouts are provided at eaves and connected to underground collection system.

The flat roof areas of entries roofs have a membrane roof and are flashed to brick walls.

There is a metal standing seam roof over the rear shed area also flashing into brick wall.

Condition:

Slate roof appears in good condition. Recent repairs on the slate roof (4/18/17) addressed all noted concerns in the Russo Barr report

The parapet coping appears in good condition but may have open seams as mentioned in Section 3.3 Brick Façade.

Snow guards are in good condition with no visible damage.

Some downspouts are damaged, others not connected to collection pipes while others are missing the “rectangle-to-round” adapter.

The flat roof has suffered several HVAC equipment upgrades. Workman on the roof have left debris, punctures and several “repairs” when the hvac equipment was installed. The original installation was never done properly to pitch water towards roof drains or scuppers. Standing water is seen in several locations. The design of the congested roof top hvac units, poor pitch slopes of the roof, with punctures and seam failures has allowed water penetration. The water penetration has affected the rigid insulation under the EDPM. The insulation is spongy and it can be readily observed that the EDPM has delaminated from the rigid deck board. This delamination allows for excessive movement in the EDPM rubber and pre-mature failure.

Excerpts from Russo Barr report MEDFIELD PUBLIC LIBRARY

The Medfield Public Library is a two story, steel and wood framed building with brick masonry walls that includes one addition built in 1998. The total area of roofing is approximately 10,500 square feet. There are two types of roofing at this site: natural slate and adhered EPDM. There have been sporadic leaks throughout the facility. Numerous and extensive repairs have been performed on EPDM roofing. There are no current leaks reported at this site.

A. Slate Roofs

The natural slate roof system covers approximately 9,200 square feet and appears to be 19 years old. The slate roofing is applied to wood roof decks that slope at 12" per foot. The condition of the slate roofing is fair to good. There are approximately 40 slates that are missing or broken. Four areas of copper ridge cap have become loose. There is approximately 30 linear feet of gutter that appears to have been damaged by snow slide. We understand Titan Roofing will be performing the needed repairs soon.

B. EPDM Roofs

The adhered EPDM roof system covers approximately 1,300 square feet and is reported to be 17 years old. The EPDM roof covering is adhered to rigid board roof insulation at the center of the complex and at dormers built into the slate roof slopes. The center roof is heavily congested with HVAC equipment. There is a build-up of debris. The condition of the roofs at dormers is fair. The condition of the EPDM roof in the center of the complex is poor. Extensive repairs have been performed and we expect future abuse by tradesmen when servicing the HVAC equipment. We found many small punctures and tears in the EPDM roof membrane where the EPDM roof is applied to sloped roof decks below the slate roofing.

C. Recommendations

Long Term: Long-term repairs should include the following:

- Promptly remove and replace the EPDM roofing and underlying insulation. Tapered insulation will be required.
- Snake all roof drain lines.

The estimated cost to perform long-term repairs is **\$35,000 to \$45,000**.

Recommended Repairs:

Check gutter hangers and replace where damaged. Suggest additional hangers at gutters in shaded areas of building to help prevent further damage from ice accumulation. Table 1

Provide regular annual maintenance of cleaning out gutters and verifying downspouts are clear.

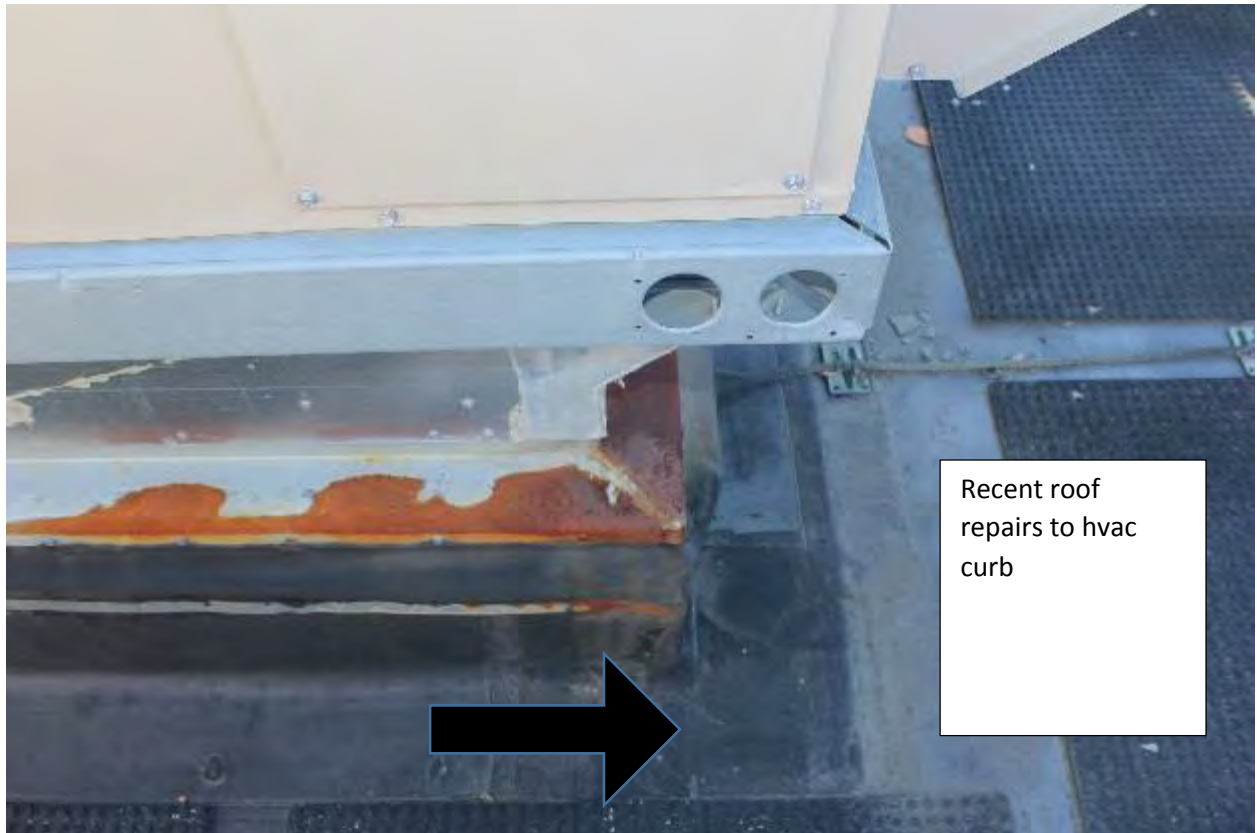
Provide adapters where missing at downspouts. Replace damaged section of downspout at rear with cast-iron receptor and fasten to brick. This will prevent further damage in this location. \$2,000

Provide termination bars at areas noted above and in photos. \$3,000

Detail engineering plan for replacement of the EPDM (flat roof) \$4,000

Replace all EPDM roof areas \$45,000

Library



PHOTOGRAPHIC DOCUMENTATION of MEDFIELD PUBLIC LIBRARY

2.2 PAVING, PARKING, DRAINAGE



SHOWING HANDICAP PARKING SPACES & NON-COMPLIANT SIGNS



DUMPSTERS BLOCKING PATH OF TRAVEL AND BOOK DEPOSITORY BLOCKING KNOX BOX (ARROW)

Library



GRANITE ACCENT STRIP LIFTED CAUSING HAZARD ALONG ACCESSIBLE ROUTE

2.3 LANDSCAPING



SHOWING DEMINISHED ACCESS TO FIRE DEPARTMENT CONNECTION (WEST)
(NOTE FALLEN ROOF SLATE IN FOREGROUND)



LANDSCAPING LIGHT NOT FUNCTIONING



LANDSCAPING LIGHT NOT FUNCTIONING



SHOWING TYPICAL CLOGGED WEEP HOLES DUE TO MULCH

3.1 FOUNDATION



SHOWING TYPICAL AREA WELL NEEDING DEBRIS REMOVED



CLOGGED DRAIN IN EXTERIOR STAIRWELL



SHOWING AREA WELL DEBRIS BLOCKING MECHANICAL LOUVERS (REAR)



AREA WELL WITH TEMPORARY FIX and NOTE OPEN DOWNSPOUT JOINT (ARROW)

3.2 SUPER STRUCTURE



VIEW OF WESTERLY FACING ELEVATION SHOWING ORIGINAL BUILDING IN FOREGROUND,
1998 ADDITION IN BACKGROUND



EASTERLY FACING ELEVATION SHOWING MAIN ACCESSIBLE ENTRANCE OF NEW ADDITION
NOTE ACCESSIBLE RAILS ARE ON ONLY ONE SIDE OF RAMP

Library



PARTIAL REAR ELEVATION SHOWING ORIGINAL 1872 BUILDING WITH ADDITION TO RIGHT



PARTIAL REAR ELEVATION (FACING SOUTH) SHOWING 1998 ADDITION

Library

3.3A FAÇADE (BRICK)

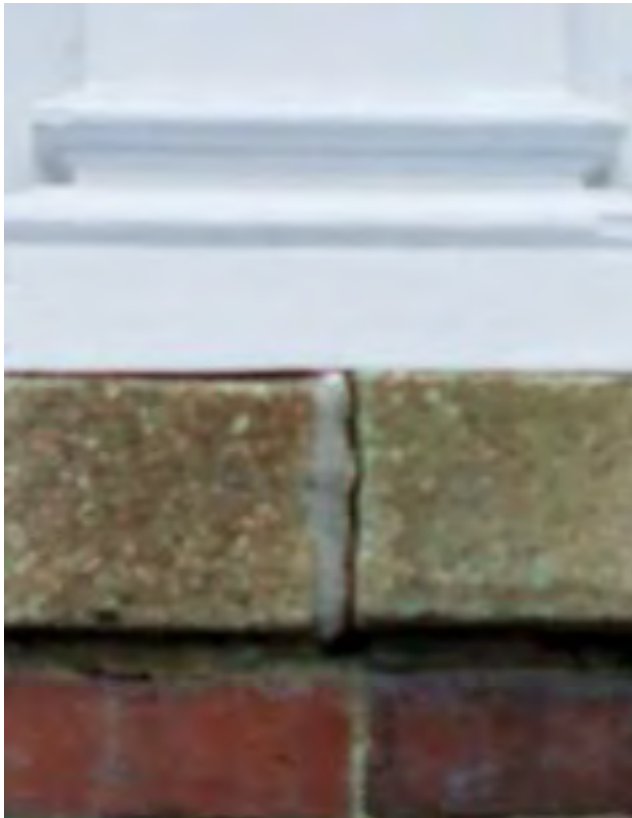


DETERIORATED BRICK STEPS AT ORIGINAL ENTRANCE STEPS (NORTH ELEVATION)



DETERIORATED EDGES OF ORIGINAL ENTRY PLATFORM (NORTH ELEVATION)

Library



OPEN SILL JOINT TO BE REPOINTED and
SEALANT ADDED TO WINDOW SILL ABOVE



MASONRY CONTROL JOINT TO BE REDONE



OPEN BRICK JOINTS TO BE REPOINTED (REAR ELEVATION)



CLOSE-UP OF ORIGINAL MORTAR JOINTS SHOWING COURSE TEXTURE and WIDE SPREAD EFFLOREENCE



POORLY EXECUTED REPOINTING (WEST ELEVATION)



CLOSE-UP OF "WEATHERED-STYLE" BRICK JOINT IN NEW ADDITION



TYPICAL OPEN JOINTS IN WATER TABLE BRICK JOINTS NEEDING REPOINTING



WEEP HOLES BLOCKED (REAR) ALONG SIDEWALK

TYPICAL WEEP HOLES BLOCKED BY MULCH BEDS



STUCCO PARGING IN EXTERIOR STAIRWELL NEEDING REPAIR and CONTROL JOINT

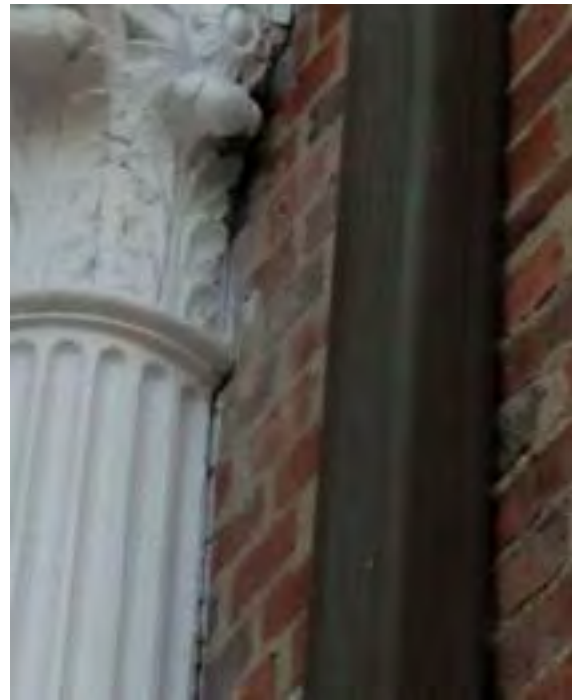


PROVIDE SEALANTS AROUND ELECTRICAL SERVICE PENETRATIONS (WEST)

3.3 B FENETRATIONS



RUSTED DOOR HINGES (SOUTH ELEVATION)



ORIGINAL FRONT COLUMN NEEDING SEALANT



WOOD WINDOW TRIM NEEDING SEALANT

Library



3-RISER STEPS WITH NO HANDRAILS and OVERGROWN WITH VEGETATION (EAST ELEVATION)



LOUVERS AND CAST IRON BRACKETS NEEDING PAINTING (REAR ELEVATION)

Library



MILDEW & DETERIORATED SEALANTS SHOWN AT EASTERLY WINDOW UNIT WITH POSSIBLE REVERSE SLOPING SILL

3.4 ROOF





WEST-FACING SLATE ROOF SHOWING MISSING SLATES



UPLIFTED COUNTER FLASHING (ARROW) ON REAR ELEVATION



OPEN FLASHING JOINT AT REAR ELEVATION ABOVE STANDING SEAM ROOF



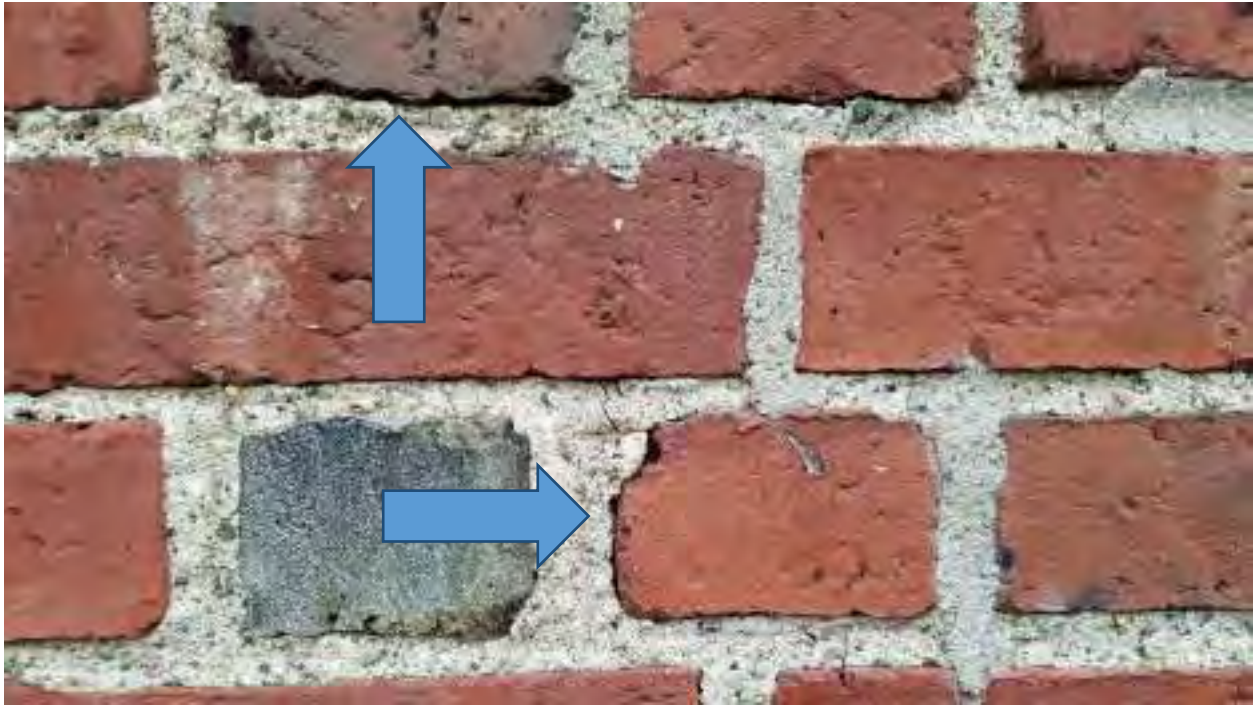
POSSIBLE LEAK AT PARAPET COPING CAUSING INFILTRATION INTO WALL & EFFLORESCENCE



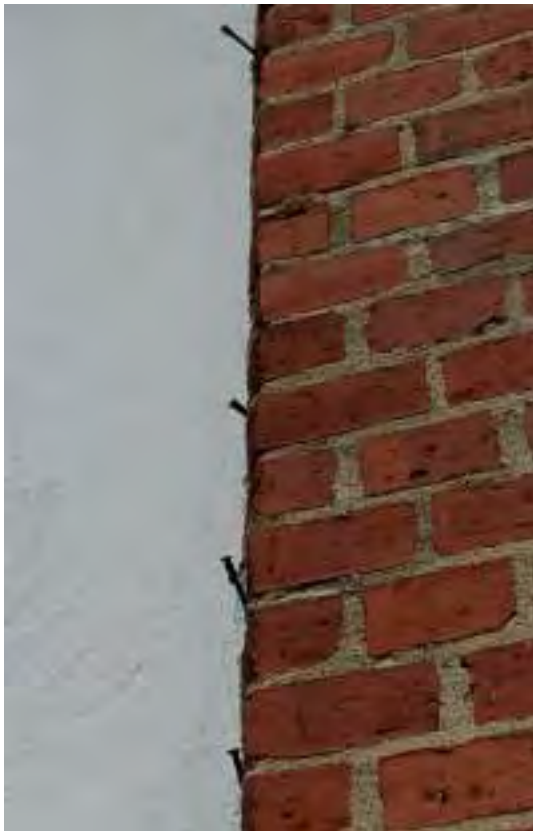
SHOWING POSSIBLE INFILTRATION ON WEST ELEVATION CAUSING EFFLORESCENCE



SHOWING POORLY EXECUTED REPOINTING DONE PREVIOUSLY (WEST ELEVATION)



SHOWING TYPICAL JOINT DETERIORATION ON ORIGINAL BUILDING



RUSTY OLD FASTENERS TO BE REMOVE



MEMBRANE ROOF AT EAST ENTRY NOT PROPERLY TERMINATED (ARROW)



GUTTER WITH NO APPARENT DOWNSPOUT (EAST ELEVATION)



EXAMPLE OF DAMAGED GUTTERS (WEST ELEVATION)



DAMAGED DOWNSPOUT



UNCONNECTED DOWNSPOUT

Library



VEGETATION IN GUTTERS

3.5 Basements / Attics

Description:

The subject property has a full finish basement that houses active library functions, private offices, IT room, conference room and small mechanical space.

The attic has two distinct areas, the 1917 attic/storage, and the main library is vaulted ceilings with no attic in this main library. The original attic is an un-insulated space that sits under the gable section of the roof. The area has fire suppression (dry system) and is used for limited storage, house an air handling unit (AHU), electric panels servicing the roof top ah units and access to the flat roof.

The ceiling of the reading room below has been insulated with batt insulation.

Condition: Good

Basement: The basement level appears in good condition. An isolated closet in the West wall under the 1917 wing library serves as the domestic water service room. The minimally insulated space radiates the extreme cold radiating in from the masonry vestibule.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Long term repair would be to install additional walkway access in the attic space to provide service to the remote electric and hvac ducts. Without some type of walkway, service to units and ducts will become extremely hard and costly. \$3,000

Install insulation has been recommended by recent energy studies performed by the Energy Committee. Additional insulation (existing appears to be R-19) could be laid on top of the existing joists. \$7,000

3.6 ADA Compliance

The Americans with disabilities Act (ADA) and the State of Massachusetts Accessibility Code governs public accommodations and commercial properties. This report will only look at accommodations and access to public facilities that are equal or similar to those available to the general public. This report will identify areas of non-compliance, or will be in compliance if upgrades and renovations are made to the facility that trigger mandatory resolutions. However this report is not a full ADA or Accessibility Code assessment. Being "Public" facilities, upgrades to allow for employee or the general public need to be addressed to meet the provisions of Title III of the ADA Act.

Condition:

With the new addition, it appears most if not all the ADA and MAAB codes for accessibility have been met.

Library

3.7 Interior Finishes and Components

Descriptions:

Typical Interior finishes:

TYPICAL INTERIOR FINISHES				
Area	Flooring	Walls	Ceiling	trim
Main Reading Area	Carpet	Painted plaster on lath	Painted plaster on lath	Painted wood
children's and office area	Carpet	painted Painted plaster on lath	Painted plaster on lath and Suspended acoustical tile	
Basement floor	Carpet	Painted plaster on lath	Painted sheetrock and Suspended acoustical tile	
Office area	Carpet	Plaster on lath	Suspended acoustical ceiling	
Bathroom	tile	Sheetrock painted	Painted plaster on lath and Suspended acoustical tile	

Conditions: good

The rooms appear to be in good condition. There are a few areas where the paint is peeling from the plaster and sheetrock walls and ceilings. The Main 1872 wing Reading room, east side ceiling and wall is poor condition. This east facing wall and ceiling have areas where water penetration from the roof leak causing paint failing and some damage to the trim. The cause is due to the roof slate damage and water entering the building as highlighted in Section 3.4 Roofs. Painting the walls and trim is recommended on a regular basis as part of routine maintenance. Replacement Reserves are recommended for interior refurbishment, carpet replacement, plaster repairs painting, etc. Investigation of possible water infiltration (see roofing) and repair of the wood trim is recommended as an Immediate Repair.

In the lower stack level, the carpet has carpet fiber "pulls" and fraying has begun. This failure can lead to trip and falls and will need to be addressed in near term. Carpets in general appear in fair shape, but a replacement program should be factored.

Paint generally appears in fair shape. In heavy traffic areas and in children areas painting should be a five to 7 year cycle.

Library

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Assuming exterior/roof repairs are complete, repair all wood trim. \$10,000

Scrape all loose paint, prime and repaint. \$10,000

Test for and monitor moisture levels in the space to prevent further peeling.

Due to life cycle and wear carpeted areas should be budgeted for systematic replacement.

\$\$\$\$\$

4.0 BUILDING SYSTEMS

4.1. Plumbing

Description:

The domestic service enters the building from the west side into the main water service/fire service room. The water service has a main backflow preventer and separate fire service valving. The observed supply piping is copper, and the waste lines are cast iron. The plumbing fixtures are vitreous china with chrome trim. The main boiler and water heater with water storage tank with circulating pumps supply domestic hot water. Welded and threaded black iron pipe is used for gas piping within the subject property.

Condition: GOOD

There were no reported or observed problems with the plumbing size, operation or capabilities. The utilities appear to be configured and operated in a manner consistent with its intended use. As witnessed in many of the town buildings, the water servicing the town has galvanic action on all valves.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Create an aggressive testing and exercising of all the water service valves to assure their operation. Replacement of non-operational valves should be done as on-going maintenance.

4.2 HVAC

a. Heating Plant Roof top

Description:

The building is serviced by multiple gas fired AHU units to support the building and its compartmental zones. The units were installed/upgraded in the 1996 addition/renovation project. Equipment is being maintained under a town wide service maintenance contract. Boiler plant, located in the basement, are two gas fired units that supply hot water to several unit heaters, baseboard units and air handlers though out the building.

Condition: Good

Library

The boiler plant (installed in 2015) is gas fired energy efficient Lochinvar boilers. Roof top AHU units (1,2,5,7,8) are at their 16 year of a 20 year life cycle. Note RTU 3 and 4 were replaced in 2009. The systems are good and operational but near term budgeting for replacement pump motors, blower motors, and actuator valves should be planned for. A history of repairs shows that the units have begun to see failure in components such as compressors, blower motors and in anition controllers. These components replacement should be accounted for in long term planning.

b. Distribution system (FCU, exhaust)

Description:

Condition: good

The building distribution of the hvac and hot water was also installed during the 1996 addition/renovation project. The building is a combination of heated air and a radiant baseboard wall wash as a supplemental heat source

In the basement level, the radiant baseboard which supplement the air distribution system travel along the exterior wall to provide a heat wash on the exterior wall.

Based on a study provided by a vendor, exhaust fans have been wired as a “full” on system which runs 24 hours. This needs further investigation, and modifications to put this on a simple time clock operation.

Thermostats: The library spaces are on open design concept. The areas rely on the strategically located thermostat locations. An ECOBEE Energy management system has been implemented in portions of the building to better control and manage heat/cooling times and controls.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Install lockable heat/thermostat covers on all thermostat locations. \$1,000

Duct work cleaning. \$3,000

Tie exhaust fans into a timed or operational sequence. \$1,000

Plan for component replacement on the roof top units. \$20,000 per unit

4.3 Electric

Description:

800 amp electric service with new sub panels and what appears to be new electrical distribution wiring done as part of the 1996 addition/renovation project. Emergency lighting is a centrally located battery backup station that feeds low voltage egress lighting throughout the building (located in attic)

Condition: Excellent

Library

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Battery replacement, monitoring and maintenance cost need to be factored due to battery cost and the end of life cycle. \$1,000 every five years

As part of energy reduction study, the high output chandelier fixtures are recommended to be retrofitted with LED lamps of same light intensity. \$4,000

4.4 Building Fire Suppression and Fire Alarm

Description:

The property is protected by a multi-zone Fire Alarm Control panel, hard wired smoke and heat detectors, pull stations, illuminated exit lights, emergency battery lighting units, horn/light enunciators, fire extinguishers, and full coverage 4" wet sprinkler system with check valves and tamper/flow switches. The Fire department Siamese connections are located on the exterior of the building. A fire hydrant is located on a municipal sidewalk adjacent to the property. The sprinkler system and Fire alarm control panel is reportedly tested annually.

Condition: Good

Dry fire suppression pumps are showing visible oil leakage at valves.

Recommended Immediate Repairs, near term Repairs or Long Term repairs:

Based on lifecycle, the sprinkler dry system pumps, backflow preventer valves and general fire suppression status should undergo a thorough inspection. \$2,000

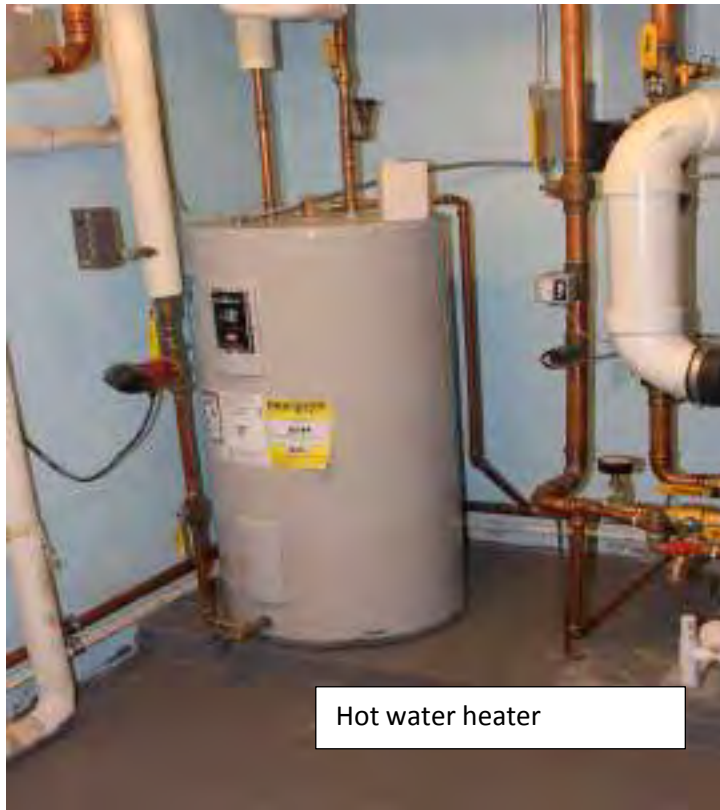
Rebuild dry system pump to extend life cycle. \$2,000

5.0 Code Concerns / Operational Concerns

Description:

Energy: The building envelope is a combination of construction types, from the 1872 heavy masonry walls with no insulation, the 1996 addition which met the insulation requirements of the building code. The areas to evaluate should be all doors, windows, roof, and wall penetrations, attic spaces. The low technology solutions on weather stripping doors, window upgrades, caulking/sealing of all wall and roof penetrations, draft stopping voids in solid walls, insulating walls in attic and sealing all passive air flow chases needs to be evaluated.

With the replacement of several roof top units due to lifecycle replacement, and engineering review and upgrades to the energy management system to better monitor and time the operational sequence may result in some cost savings.



Hot water heater



New boiler



Sprinkler



Dry sprinkler system pumps

Library

Main Library (renovated 1996) CAPITAL PLANNING BUDGET

System	sq ft 20,166																					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2034	2035	2036	2037	2038		
Site work																						
2.2 Various site work		3,000																				
2.3 Landscape affecting buildings		3,000																				
2.2 Paving										20,000												
2.2 brick walkways						5,000						5,000					5,000					
Building envelope		3,000																				
3.1 foundation																						
3.1 window well drainage		4,000										4,000								4,000		
3.3 Façade front stair		20,000											5,000									
3.3 Brick façade repair engineering			10,000																			
3.3 Brick façade repair				60,000							5,000											
3.3 Sealant replacement				20,000							5,000					5,000				5,000		
Windows																						
3.3 wood windows			20,000												7,000					7,000		
3.3 Window wells			4,000																			
3.3 Metal windows									20,000		20,000		20,000		20,000							
Door																						
3.3 Wood door			12,000					5,000					5,000				5,000					
3.3 Metal doors									10,000		1,000											
3.3 Doors (interior)										3,000						3,000			3,000	10,000		
3.3 Exterior Paint					30,000							30,000						30,000				
3.4 ROOF																						
engineering		10,000																				
EDPM roof			50,000																			
Slate								10,000										10,000	5,000			
3.6 ADA Compliance																						
3.7 Interior																						
Carpet (25+ years)			20,000						60,000					50,000								
VCT flooring (25+ years)						15,000							15,000									
Paint			20,000						70,000					40,000								
Doors								8,000							8,000					8,000		
4.1 Plumbing										2,000												
Fixtures																						
regROUT tile							2,000					1,000								1,000		
4.2 HVAC																						
Boiler 2015																						
ATC computer controls				10,000					5,000									20,000				
Fluid pumps								4,000										4,000				
Valves (ahu/vav)																						
Backflow preventers																						
Water Heater 2015		1,000	500	500	500				1,000				500	500	500							
Duct Cleaning																						
RTU units						15,000										15,000						
Vent /exhaust fan								2,000							2,000					2,000		
4.3 Electrical																						
Branch circuits																						
lighting																						
service repair				10,000																		
Fire Alarm										5,000												
4.4 Fire Suppression																						
Dry system pump					5,000																	
Dry system pipe replacement										30,000										5,000		
Total Yearly Expenditure	-	44,000	136,500	100,500	35,500	35,000	2,000	29,000	186,000	60,000	31,000	45,500	50,500	99,500	28,000	20,000	65,000	44,000	35,000	5,000	40,000	
2018																						
Escalated cost	3.0%	\$0	\$57,410	\$183,445	\$139,116	\$50,615	\$51,399	\$3,025	\$45,181	\$298,475	\$99,171	\$52,775	\$79,785	\$91,209	\$185,099	\$53,651	\$38,322	\$132,132	\$92,126	\$75,481	\$11,106	\$91,517

TRANSFER STATION



Location: 135 North Meadow Street

Assessors: Map 56 Parcel 056

Year Built 1986

Building area: 5,436 sq ft

Condition Good

Land area: 3.76 acre

1.0 PURPOSE and IMITATIONS

The purpose of this Property and Conditions Report (the Report) is to assist the Town of Medfield to assess the general physical condition and maintenance status of the property and to recommend repair and maintenance items considered significant for the property to continue its current operations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, access through building “owners” and information presented by the Town. Findings, conclusions, and recommendations in this Report are based on the methods described above, industry standards, and general observations of the equipment and its visible condition.

The report is focused on existing conditions, lifecycle of existing materials, and non-code compliant conditions. Recommendations will include items needed to bring the space/component to a safe, code compliant, and generally accepted facilities condition. The Report does not anticipate change of use, reconfiguration of space, or change in current program.

Estimated Costs are based on professional judgment and the probable or actual extent of the observed defect inclusive of the cost to design, procure, construct and manage corrections.

1.1 Condition

The Report uses terms describing conditions of the various site, building and system components. The terms used are defined below. It should be noted that a term applied to an overall system does not preclude that a part, component, or section of the system may be in a different condition.

Excellent	The component or system is in new or like new condition, and little or no deferred maintenance is recommended, or the scheduled maintenance can be accomplished with routine maintenance.
Good	The component or system is in sound condition and performing its function. It may show signs of normal aging or wear and tear, and some remedial and routine maintenance or rehabilitation work may be necessary.
Fair	The component or system is performing adequately at this time but is obsolete or is approaching the end of its useful life. The component or system may exhibit Deferred Maintenance, evidence of a previous repair, or workmanship not in compliance with common accepted practices. Significant repair or replacement may be recommended to prevent further deterioration, prevent premature failure, or to prolong its useful life.
Poor	The component or system has either failed or cannot be relied upon for continued use performing its original function, exhibits excessive Deferred Maintenance or is clearly in a state of disrepair. Repair or replacement is recommended.

1.2 Abbreviations

The Report may use abbreviations to describe various site, building, or system components of legal descriptions.

ACT	Acoustical Ceiling Tile	GFI	Ground Fault interrupt (circuit)
AHU	Air handling unit	GWB	Gypsum Wall Board
BTU	British Thermal unit (heat measurement)	HVAC	Heating, Ventilating, Air Conditioning
CMU	Concrete Masonry Unit	HWH	Hot Water Heater
EDPM	Rubber membrane roofing	MDP	Main electrical distribution panel
EUL	Expected Useful Life (life cycle)	PTAC	Package through wall A/C unit
FCU	Fan Coil Unit	RTU	Roof top Unit
FHA	Forced Hot Air	MSBC	Massachusetts State Building Code
IBC	International Building Code	VAV	Variable Air Volume box
ACM	Asbestos containing material	VCT	Vinyl Wall covering (floor tile)
ADA	Americans with Disabilities Act	MAAB	Mass. Architectural Access Barriers

2.0 SITE CONDITIONS

2.1 Topography

Description:

Site is a flat and treed along the outer periphery. *Condition and Observation:*

Recommended Repairs: none

2.2 Pavement, Parking, and drainage structures

Description:

Site is largely paved to accommodate the use. Parking and access appears adequate. Area has no curbing.

Main drop off lanes are cracking and have had several applications of crack sealer

Transfer Station

Condition and Observation:

Asphalt area in general looks acceptable but showing signs of accelerated failure. Areas of wear, and asphalt degradation can be observed.

The site drainage is focused toward the rear of the lot and area catch basins

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Systematic replacement plan of areas in disrepair is required.

2.3 Landscaping

Description:

The site is predominantly asphalt. The outer area is wooded and houses dirt piles with contaminant. As reported, the contaminated soil is in process of classification and resolution. The wooded area has been left to grow wild.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

none

2.4 Municipal Services and Utilities

a. Water and sewer

Medfield has its own water and sewerage

b. Gas/Oil

c. Electric

Eversource

3.0 BUILDING CONDITIONS

3.1 Sub Structure/Foundation

Description:

Poured concrete foundation and slab. The foundation walls are assumed to have spread footing

Condition and Observation:

Generally the foundation appears to be in good shape. No visible sign of cracking or movement were observed.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

None

3.2 Super Structure

Description:

The building is an engineered pre-manufactured steel frame building with metal roof and siding. The system has a heavy column and beam support with structural roof and wall girts that span the supports. Metal roof deck and metal wall panels are screwed into the girt system.

Condition and Observation:

Based on overall appearance and observed general conditions of the building, the superstructure appears to be sound and in good condition. There are areas in the structure where metal panel are in poor shape or have experienced rusting at the base of the panel where water sits and attacked an unfinished edge and have damaged the panels. It should be noted that this unheated and corrosive environment causes the metal fasteners to break down faster than the metal structure/panel system. These small but crucial elements keep water out of the structure, are usually the key spot where the metal panel starts to deteriorate, and prevents deformation of the metal panel.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

None

3.3 Facades

a) *Description* Facades: metal panel

The façade is a typical metal panel for a pre-engineered building. Typically this façade has a 50-60 year life cycle. The panels overlap design is fastened with metal screws with washers to prevent moisture infiltration.

Condition: Good to Fair

The condition of the observed metal panels is generally good. There are areas that the fasteners/washer assembly is fatigued and should be addressed. As noted in Section 3.2, Super Structure, areas of damaged panels needs to be inspected. Light rusting on metal panels is observed where the panel meets the drip edge flashing at the Kalwall polycarbonate window panel. The panel appeared to be cut to fit at the window header, and more than likely did not have a finished treatment applied to the base of the panel. The edge has rusted approximately 4 to 6 inches from the base.

b) *Description* Windows and Doors: Fair

The windows are aluminum framed polycarbonate window typically found in commercial construction applications. The polycarbonate window appears to be in fair condition. UV rays have “clouded” opaque finish of the polycarbonate finish reducing its translucent and ability to provide some lighting to the interior. This break down in translucent is common with the age of the material.

Main garage doors are a steel commercial door system typically found on commercial construction. Condition appears to be in fair condition.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Have a structural engineer inspect the exterior metal panel fasteners, and replace damaged units.

Replace significantly damaged metal panels at the Kalwall window.

Power wash entire building and spot paint panels that have rusted.

Budget for large door motor replacement due to age.

3.4 Roofing

Description:

Metal panel roof structure which is typical for a pre-manufactured pre-engineer steel building. The panels, much like the wall panels are overlapped and are fastened to the structural girt system with metal screws with washers. There are mechanical roof penetrations for ventilation.

Condition: Good to Fair

While a majority of the roof appears to be in good condition. The concern is the age of the building may have areas of the roof that may develop some small leaking. Leaking on a metal roof is generally found at locations where the fasteners anchor the roof panel to the roof girt system. Failure occurs due to age/ acidic weather reacting to scratches causing rust or the fastener /washers degraded begin to rust the panel and allow for water infiltration. All roof penetrations should be inspected thoroughly to assure there weather tightness.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Have a roof engineer inspect the exterior metal panel fasteners and flashing details at the cheek walls.

Immediate repairs should focus on the full inspection and replacement of metal screw panel fasteners of the roof deck, roof penetration flashings, and caulking.

Perform a roof assessment and determine if the roof needs and emulsion roof coating to weatherproof and extend life.



Asphalt is has
extensive crackseal.
Replacement is
required



Rusting metal
protector plate
Siding has minor
damage

Transfer Station



Transfer Station

CAPITAL PLANNING BUDGET

sq ft 5,436

System	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2032	2034	2035	2036	2037	2038	
Site work																						
2.2 Paving			8,000							20,000												
Building envelope																						
3.1 General carpentry/siding repair									5,000					5,000					5,000			
3.1 engineering				5,000																		
3.3 Siding/ kalwall repair					30,000						10,000										100,000	
3.3 Sealant replacement					5,000						5,000								5,000			
3.3 powerwashing					5,000										5,000							
Windows																						
3.3 windows											5,000											
Door																						
3.3 Exterior door					5,000				20,000										5,000			
3.3 Doors (interior)										3,000							3,000		50,000			
3.3 Exterior Paint					50,000																	
3.4 ROOF																						
engineering				2,000	5,000															10,000		
metal roof											5,000					5,000					5,000	
3.6 ADA Compliance																						
3.7 Interior																						
Paint interior					25,000										25,000							
4.1 Plumbing																						
Fixtures replace age																						
Hot water heater																						
4.2 HVAC																						
Vent /exhaust fan								2,000						2,000						2,000		
4.3 Electrical																						
Branch circiuts		2,000																	8,000			
lighting									8,000		2,000											
Fire Alarm										5,000												
4.4 Fire Suppression																						
																					5,000	
Total Yearly Expenditure	-	2,000	8,000	7,000	125,000	-	-	2,000	33,000	28,000	27,000	-	-	7,000	30,000	5,000	3,000	-	73,000	12,000	110,000	
2018																						
Escalated cost	3.0%	\$0	\$2,610	\$10,751	\$9,690	\$178,220	\$0	\$0	\$3,116	\$52,955	\$46,280	\$45,966	\$0	\$0	\$13,022	\$57,483	\$9,581	\$6,098	\$0	\$157,431	\$26,655	\$251,672

MEMORIAL SCHOOL



Location: 59 Dale Street

Assessors: Map 49 Parcel 032

Year Built 1953/1955 addition/ renovated 1997

Building area: 54,387 sq ft

Condition: Good

Land area: 17.6 acres (shared with Dale St)

1.0 PURPOSE and LIMITATIONS

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MEMORIAL SCHOOL

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AHU	Air handling unit	GWB	Gypsum Wall Board
BTU	British Thermal unit (heat measurement)	HVAC	Heating, Ventilating, Air Conditioning
CMU	Concrete Masonry Unit	HWH	Hot Water Heater
EDPM	Rubber membrane roofing	MDP	Main electrical distribution panel
EUL	Expected Useful Life (life cycle)	PTAC	Package through wall A/C unit
FCU	Fan Coil Unit	RTU	Roof top Unit
FHA	Forced Hot Air	MSBC	Massachusetts State Building Code
IBC	International Building Code	VAV	Variable Air Volume box
ACM	Asbestos containing material	VCT	Vinyl Wall covering (floor tile)
ADA	Americans with Disabilities Act	MAAB	Mass. Architectural Access Barriers

2.0 SITE CONDITIONS

2.1 Topography

Description:

Site is a flat and treed along the rear. Actual building site sits slightly above the road elevation. Large shared fields and little league field abuts the property.

Condition and Observation:

Recommended Repairs: See 2.2

2.2 Pavement, Parking, and Drainage Structures

Description:

Site is paved to accommodate the use. Parking and access appears adequate. There is a limited asphalt playground area.

MEMORIAL SCHOOL

Condition and Observation:

Asphalt area in general looks in good shape. Areas of wear and asphalt degradation can be observed in the area of the bus circle. The heavy wear in this area will require a monitoring and spot repair. Other areas of the drive/parking require crack sealing and relining of pavement marking.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

The bus drop off circle of the parking lot will need spot repair and crack sealing. General crack repairs on other areas. \$10,000 Replace in ten years \$100,000

2.3 Landscaping

Description:

Minimal landscaping exists. The flat site has lawn areas around most of the structure. The northwest corner of the lot has a fenced in playground. The south of the building is open soccer and little league fields. Courtyards are mostly grass with a few stand alone trees.

Condition and Observations:

Trees in the south east corner of the school need some pruning to prevent branches from getting close to the building and create other issues. Low shrubs in front are in need cut back and pruning.

The small playground is overused and the large conifer tree root system has suffered significant shallow root damage from the normal wear and tear of the playground. The use has compacted soils around the drainage structures, and playground equipment to the point that this is in need of a regrading and upgrade.

At the rear door used to direct students to the playground, the "grass" area is so beaten down from foot traffic pot holes/mud holes exist.

Recommended Repairs:

Landscape Engineering to determine what is the best surface and grading required to make the playground a better site and to stabilize the area to prevent further use degradation. \$10,000

Rebuild playground area to eliminate hazards site as site drainage and tree root exposure/trip hazard. \$100,000

Add asphalt walks where natural foot traffic occurs to eliminate mudholes. \$10,000

MEMORIAL SCHOOL

2.4 Municipal Services and Utilities

a. Water and sewer

Medfield has its own water and sewer

b. Gas

Columbia Gas

c. Electric

Eversource



MEMORIAL SCHOOL



Main Recess door. Note traffic wear and north facing area does not permit grass/vegetation to grow.
Install an impervious landscape material.

MEMORIAL SCHOOL

3.0 BUILDING CONDITIONS

3.1 Sub Structure/Foundation

Poured concrete foundation walls and poured slab on grade. The foundation walls are assumed to have spread footing.

Condition and Observation:

Generally the foundation appears to be in good shape. No visible sign of cracking or movement were observed.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves: None

3.2 Super Structure

Description:

The Building super structure is steel columns, beams, and steel roof trusses. The steel frame cavity wall structure supports the exterior brick façade. The older front section was built in 1953 and the masonry walls of the cafeteria and Gym are load bearing masonry CMU with 4" face brick. The 1955 portico is steel framed with wood decking on the roof.

Condition and observation:

The condition is in good shape.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Clean and repaint portico steel and ceiling \$10,000

3.3 Facades

a) Description Facades: (Brick, metal soffit,)

The brick façade of the original load bearing masonry is a solid construction with no cavity wall.

Condition: GOOD

b) Description Windows and Doors:

The windows are double glazed energy efficient aluminum framed window typically found in commercial construction. These windows were replaced in the 1996 renovation and addition. Condition appears to be in Good condition.

MEMORIAL SCHOOL

Main entry is a double glazed aluminum commercial store front system typically found on commercial construction. Condition appears to be in good condition.

Areas require spot masonry repointing and flashing work.

Exterior door are weathering and need minor repairs and repainting to extend life cycle.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

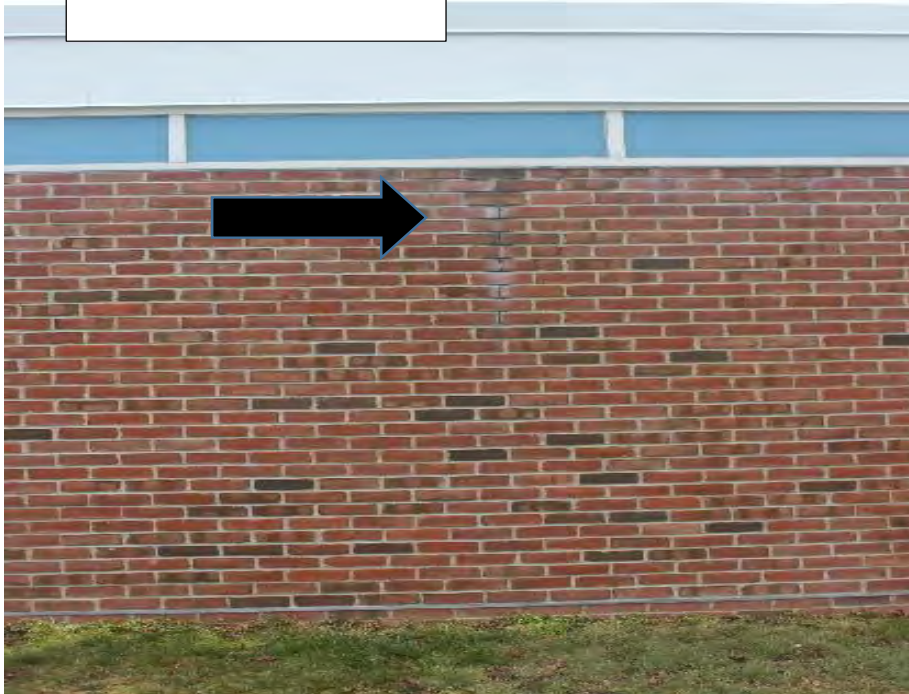
Life cycle of caulking and sealants needs to be inspected and evaluated. \$20,000

Spot repointing and flashing repairs \$10,000 every five years



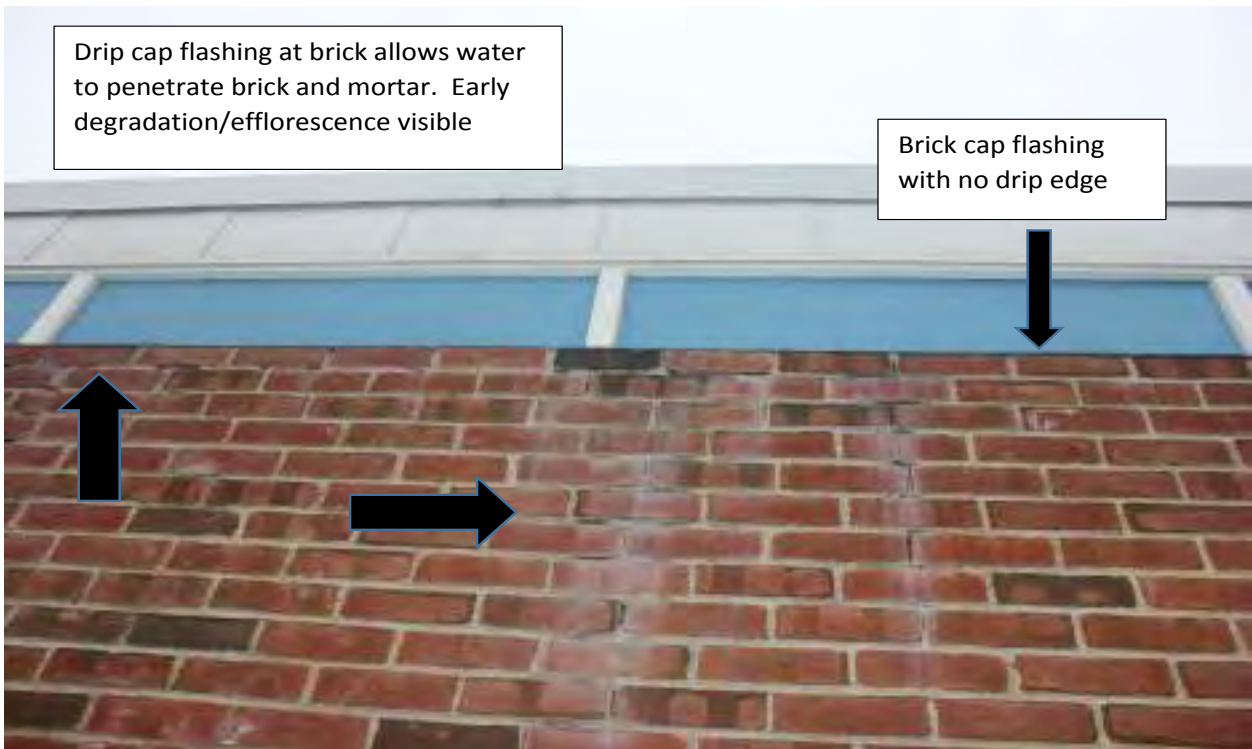
MEMORIAL SCHOOL

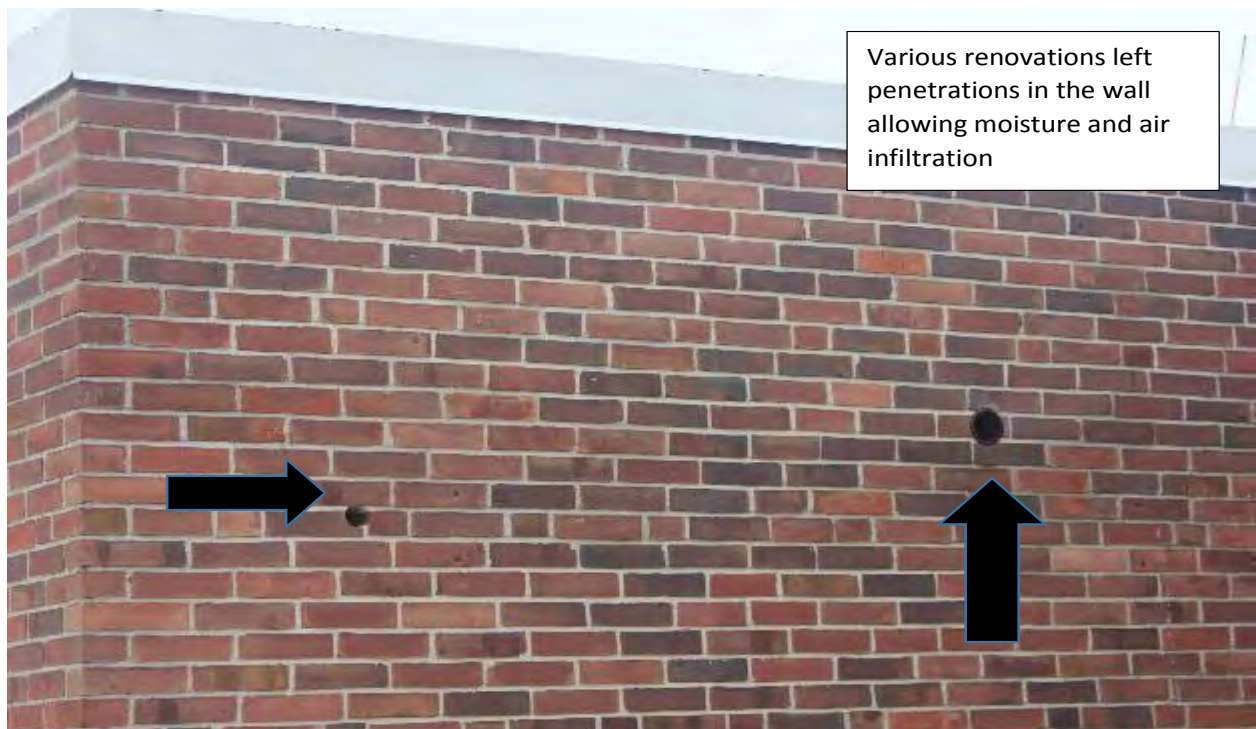
Water penetration at
flashing



Drip cap flashing at brick allows water
to penetrate brick and mortar. Early
degradation/efflorescence visible

Brick cap flashing
with no drip edge





MEMORIAL SCHOOL



MEMORIAL SCHOOL



Frame rusting and
repainting required



MEMORIAL SCHOOL

3.4 Roofing

Excerpts from the Russo Barr Engineering report

4. MEMORIAL SCHOOL

The Memorial School is a single story, steel framed building with brick masonry walls that includes additions of varying ages. The total area of roofing is approximately 60,800 square feet. There are three (3) types of roofing at this site: modified bitumen built-up roofing with gravel surfacing (BUR) and two ages of modified bitumen built-up roofing with mineral cap sheet surfacing (Mod Bit). There have been sporadic leaks throughout the facility. Numerous and extensive repairs have been performed on all areas of the roofs.

A. BUR Roofs

The BUR roof system covers approximately 32,700 square feet and appears to be over 20 years old. The condition of the BUR roofs is poor. Built-up flashings at metal roof edges are separating from the sheet metal and seams are failing at curbed penetrations. Walkway pads are curling. Slope to drain is minimal at best. Two pitch pockets have failed sealer. Ponding water exists at many areas near roof edges and the ponding appears to coincide with leak locations. This roof is near the end of its service life. Complete removal and replacement is recommended.

B. Mod Bit Roofs (white cap sheet)

The Mod Bit roofing system (with white cap sheet) covers approximately 23,300 square feet and appears to be approximately 15 years old. The roof covering is adhered to flat rigid board insulation applied to roof decks are nearly flat or slope at approximately 3" per foot to gutters. The condition of this roof is fair to poor; much of the lower roof edges negatively slope. Tie-ins to other roof systems are cracked and split open. The resulting ponded water also coincides with reports of leakage into the building. Extensive patching of the roof edges may perform well for a very short term but proper repair should include reconstruction of the roof edges to promote positive drainage. This roof is near the end of its service life. Complete removal and replacement is recommended.

MEMORIAL SCHOOL

C. Mod Bit Roofs (black cap sheet)

The Mod Bit roofing systems (with black cap sheet) covers approximately 4,800 square feet and appear to be greater than 20 years old. These roofs slope to roof drains at approximately 3" per foot. The condition of these roofs is failed. Much of the lower roof edges negatively slope. The resulting ponded water also coincides with reports of leakage into the building. This roof is near the end of its service life. Complete removal and replacement is recommended.

D. Recommendations

Short Term: Short-term repairs should include the following:

- Remove ponded water and seal all laps in the Mod Bit cap sheets.
- Strip in all splits in bituminous membranes.

The estimated cost to perform short-term repairs and investigations is **\$8,000 to \$10,000.**

Long Term: Long-term repairs should include the following:

- Promptly remove and replace all BURGS and Mod Bit roofing and underlying insulation. Tapered insulation will be required at some areas.
- Remove and replace all roof drains. Snake all roof drain lines.
- Rebuild roof edges are required to eliminate low spots.

The estimated cost to perform long-term repairs is **\$1.5M to \$1.9M**

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Budget \$10,000 per year until replacement

Roof engineering design \$200,000

Near term replacement is recommended. While not in failure, the roof replacement should be scheduled in 8 years. \$2,000,000

3.5 Basements / Attics

Description:

NONE EXIST

3.6 ADA Compliance

The Americans with disabilities Act (ADA) and the State of Massachusetts Accessibility Code governs public accommodations and commercial properties. This report will only look at accommodations and access to public facilities that are equal or similar to those available to the general public. This report will identify areas of non-compliance, or will be in compliance if upgrades and renovations are made to the facility that trigger mandatory resolutions. However this report is not a full ADA or Accessibility Code assessment. Being "Public" facilities, upgrades to allow for employee or the general public need to be addressed to meet the provisions of Title III of the ADA Act.

Condition:

The current building is compliant. Upgrades address in the 1996 addition met the codes at that time for compliance. No non conformities were observed.

3.7 Interior Finishes and Components

Descriptions:

Typical Interior finishes:

Specialties Finishes (Cells):

Locations	Floor	Walls	Ceilings
Offices	Carpet	Painted sheetrock	Acoustical tile
Corridors	VCT	Painted sheetrock/CMU	Acoustical tile
Bathrooms	Tile	Painted sheetrock	Acoustical tile
Class rooms	VCT /Carpet	Painted sheetrock	Acoustical tile
Library	Carpet	Painted sheetrock	Acoustical tile

MEMORIAL SCHOOL

Conditions:

Most areas are in good condition. Carpeted areas are showing their age. Systematic replacement of the heavily wear areas in the main offices)

The VCT tile in the Cafeteria is in fair condition. The constant wear and tear of the cafeteria floor cracks and loosens the vct tile. Periodic removal and replacement has been ongoing.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Repair possible replacement of the cafeteria flooring. Observations indicate that the sub surface slab has defects that transmit thru the vct tile creating natural failure points on the floor Removal and proper subbase treatment is required. . \$20,000

Replace carpeted areas in main offices and library \$10,000 office \$50,000 library

4.0 BUILDING SYSTEMS

4.1. Plumbing

Description:

The domestic service enters the building from the west side into the main water service/fire service area in the basement. The water service has a main backflow preventer and separate fire service valving. The observed supply piping is copper, and the waste lines are cast iron. The plumbing fixtures are vitreous china with chrome trim. The main boiler and water heater with water storage tank with circulating pumps supply domestic hot water. Welded and threaded black iron pipe is used for gas piping within the subject property.

Condition: Good

There were no reported or observed problems with the plumbing size, operation or capabilities of the building in general. All work was done during the 1996 renovation.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

None

MEMORIAL SCHOOL

4.2 HVAC

a. Heating Plant

Description:

The building is serviced by a gas fired HB SMITH package boiler plant in the mechanical room which supplies hot water to various AHU units to support the building and its classroom Fan Coil units. The units were installed in the 1996 with the original construction. The main supply pumps are also located in the space.

Hot water tank is gas fired, also installed in the 1996 renovation to the building, and is located in the Mechanical room.

The main condensing/chiller unit is an exterior ground mounted unit.

The building is controlled with a Johnson Controls building management system. The system installation occurred in the 1996 renovation.

Condition: Good

b. Distribution system (VAV, FCU,, exhaust)

Description:

The building is supplied with conditioned air through three air handling units that provide conditioned air in three zones. The communications/IT closet on the second floor requires year round air movement to cool the equipment.

Condition: good

The building distribution of the HVAC and hot water was also installed during the 1998 construction project. The building is a combination of heated air and a radiant baseboard wall wash as a supplemental heat source.

The communications/IT closet on the second floor does not have enough supply or exhaust air to cool the space. Ceiling tiles were removed from ceiling to allow hot air to leave the machine space

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

General comment - many of the components of the HVAC system are nearing the end of the lifecycle. Motors, pumps, BMS control software lifecycles are 10 to 15 years. A system component replacement budget needs to be implemented. Pumps, actuators, motors, condenser/contactors should be planned for replacement in the near term. Table 2

Immediate replacement/upgrade of the energy management system should be addressed. Upgrade of the system is required, and re-commissioning should be addressed during this upgrade to assure proper operation of the HVAC equipment. (Utility supplier may offer some rebates for this work upgrade/re-commissioning work)

Water heater is nearing its lifecycle and should be a near term repair before failure occurs.
\$100,000

The Johnson Controls building management system is in need of updating and a recommissioning. The system was identified in an energy audit as a software version that needs upgrade. Generally the industry upgrades software and the communication platform every ten years. \$10, 000

Roof top AHU units are in good shape, but components within the units (blower motors, furnace ignition/fire chambers) are nearing the life cycle . Replacement of components needs to be anticipated and budgeted for. See Table

4.3 Electric

Description:

800 amp electric service with new sub panels installed in the 1998 construction project.

Emergency power is supplied by a Diesel fueled emergency generator system..

Condition:

All systems are in good condition.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term repair is to have a electrical specialist survey company inspect all circuit breakers or operation and effectiveness. The pro-active survey will determine if there are any circuit breaker concerns. \$10,000

4.4 Building Fire Suppression and Fire Alarm

Description:

The property is protected by a multi-zone Fire Alarm control panel, hard wired smoke and heat detectors, pull stations, illuminated exit lights, emergency battery lighting units, horn/light enunciators, fire extinguishers, and full coverage 4" wet sprinkler system with check valves and tamper/flow

MEMORIAL SCHOOL

switches. The Fire department Siamese connections are located on the exterior of the building.. A fire hydrant is located on a municipal sidewalk adjacent to the property. The sprinkler system and Fire Alarm control panel is reportedly tested annually.

Condition: GOOD

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves: None

5.0 CODE/OPERATIONAL CONCERNS

Description:

Security:

MEMORIAL SCHOOL

Memorial School

CAPITAL PLANNING BUDGET

sq ft 54,387																					
System	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2032	2034	2035	2036	2037	2038
Site work																					
2.2 Various site work Design		10,000									5,000				100,000				5,000		
2.2 Paving							30,000														
2.2 walkways							5,000														
2.3 Cut back trees on site				10,000																	
2.3 Landscape affecting buildings				15,000																	
2.3 Playground area			10,000	100,000																	
Building envelope																					
3.3 Façade																					
3.3 Brick façade repair																					
3.3 Sealant replacement						20,000				10,000					10,000					10,000	
Windows																					
3.3 Repair window						10,000				5,000					5,000					5,000	
3.3 Window replacement																			30,000	300,000	
Door																					
3.3 Metal doors			50,000							20,000							2,000				
3.3 Doors (interior)										5,000							5,000				
3.3 Weatherization			10,000							5,000							5,000				
3.4 ROOF																					
engineering roof							150,000														
roof repair	8,000	5,000	5,000	5,000	5,000															5,000	
Roof replacement						2,000,000															
3.6 ADA Compliance																					
3.7 Interior																					
Carpet (25+ years)							20,000					40,000									
VCT flooring (25+ years)							10,000				8,000				10,000	8,000			10,000	8,000	
Paint							10,000														
Acoustic ceilings						20,000							10,000								
4.1 Plumbing										2,000											
regROUT tile											2,000										
Replace Hotwater heater					100,000												2,000			2,000	
Replace water shut off valves					20,000																
4.2 HVAC																					
Boiler 1996													800,000								
ATC computer controls			7,000										10,000								
HVAC engineer							5,000						5,000								
Fluid pumps													50,000								
Roof top unit				10,000									500								
Valves (ahu/vav)			500	500	500									500					500	500	
Backflow preventers					1,000					1,000					1,000					1,000	
Duct Cleaning						15,000	15,000											15,000	15,000		
4.3 Electrical																					
Branch circuits testing			10,000																		
lighting					5,000	20,000															
Generator														20,000							
Fire Alarm										5,000										15,000	
4.4 Fire Suppression																					
Comprehensive inspection and head replacement									10,000											5,000	
Total Yearly Expenditure	8,000	15,000	92,500	140,500	131,500	2,235,000	95,000	-	10,000	38,000	30,000	195,500	820,500	20,500	111,000	23,000	14,000	15,000	30,500	33,500	348,500
2018																					
Escalated cost	3.0%	\$10,134	\$19,572	\$124,312	\$194,485	\$187,488	\$3,282,173	\$143,696	\$0	\$16,047	\$62,808	\$51,073	\$342,810	\$1,481,914	\$38,136	\$212,687	\$44,070	\$28,459	\$31,407	\$65,776	\$797,343

DALE STREET SCHOOL



Location: Adams Street

Assessors: Map 49 Parcel 032

Year Built 1942 renovated 1962/1996

Building area: 47,341sq ft

Condition: Fair to Poor

Land area: 16 acres

(shared with Memorial School)

1.0 PURPOSE and LIMITATIONS

The purpose of this Property and Conditions Report (the Report) is to assist the Town of Medfield to assess the general physical condition and maintenance status of the property and to recommend repair and maintenance items considered significant for the property to continue its current operations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, access through building “owners” and information presented by the Town. Findings, conclusions, and recommendations in this Report are based on the methods described above, industry standards, and general observations of the equipment and its visible condition.

The report is focused on existing conditions, lifecycle of existing materials, and non-code compliant conditions. Recommendations will include items needed to bring the space/component to a safe, code compliant, and generally accepted facilities condition. The Report does not anticipate change of use, reconfiguration of space, or change in current program.

Estimated Costs are based on professional judgment and the probable or actual extent of the observed defect inclusive of the cost to design, procure, construct and manage corrections.

1.1 Condition

The Report uses terms describing conditions of the various site, building and system components. The terms used are defined below. It should be noted that a term applied to an overall system does not preclude that a part, component, or section of the system may be in a different condition.

Excellent	The component or system is in new or like new condition, and little or no deferred maintenance is recommended, or the scheduled maintenance can be accomplished with routine maintenance.
Good	The component or system is in sound condition and performing its function. It may show signs of normal aging or wear and tear, and some remedial and routine maintenance or rehabilitation work may be necessary.
Fair	The component or system is performing adequately at this time but is obsolete or is approaching the end of its useful life. The component or system may exhibit Deferred Maintenance, evidence of a previous repair, or workmanship not in compliance with common accepted practices. Significant repair or replacement may be recommended to prevent further deterioration, prevent premature failure, or to prolong its useful life.
Poor	The component or system has either failed or cannot be relied upon for continued use performing its original function, exhibits excessive Deferred Maintenance or is clearly in a state of disrepair. Repair or replacement is recommended.

Dale Street

1.2 Abbreviations

The Report may use abbreviations to describe various site, building, or system components of legal descriptions.

ACT	Acoustical Ceiling Tile	GFI	Ground Fault interrupt (circuit)
AHU	Air handling unit	GWB	Gypsum Wall Board
BTU	British Thermal unit (heat measurement)	HVAC	Heating, Ventilating, Air Conditioning
CMU	Concrete Masonry Unit	HWH	Hot Water Heater
EDPM	Rubber membrane roofing	MDP	Main electrical distribution panel
EUL	Expected Useful Life (life cycle)	PTAC	Package through wall A/C unit
FCU	Fan Coil Unit	RTU	Roof top Unit
FHA	Forced Hot Air	MSBC	Massachusetts State Building Code
IBC	International Building Code	VAV	Variable Air Volume box
ACM	Asbestos containing material	VCT	Vinyl Wall covering (floor tile)
ADA	Americans with Disabilities Act	MAAB	Mass. Architectural Access Barriers

2.0 SITE CONDITIONS

2.1 Topography

Description:

Site is a flat and treed along the rear. Actual building site sits above the road elevation by 4-5 feet. Large shared fields and little league field abuts the property.

On Adams Street, the operational front of the building, parking on the grass, parent pick up and drop off have created rutting of the lawn and yards and is becoming unsightly. The Dumpster location is at the corner of Dale and Adam Street abutting a garage access drive to the below grade basement. Dumpsters are partially blocked on one side by an 8ft fence.

Recommended Repairs: See 2.2

Dale Street

2.2 Pavement, Parking, and Drainage Structures

Description:

Site is paved to accommodate the use. Parking and access appears adequate. Newly created parking lot to the east supports most staff vehicle. The operational front on Adams Street is a semicircular drive with a loading dock and limited parking

At the Dale Street side of the building also has a semi-circular drive.

There is a large asphalt playground area in the rear or north side of the building.

A large playground is in the rear of the school adjacent to the asphalt playground.

There are concrete walks crossing the Dale Street front yard to access the building from the street.

Condition and Observation:

Areas of wear and asphalt degradation can be observed in the area of the Adams Street side bus circle. The heavy wear in this area will require a monitoring and spot repair. There is no drainage and surface water runs down the drive creating water and heaving problems where the drive intersects the street. Other areas of the drive/parking require crack sealing and relining of pavement marking.

The Dale Street semi-circular drive is in poor shape with much of the asphalt is broken up, significant cracking and uneven due to heavy wear.

The basement level access drive, that services the garage door storage facility, is in poor shape with much of the asphalt is broken up, significant cracking and uneven due to heavy wear.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

The bus drop off circle of the parking lot will need spot repair and crack sealing. C. Table 1

2.3 Landscaping

Description:

Minimal landscaping exists. The slightly sloped site has lawn areas around most of the structure. The northeast corner of the building has a fenced in playground. The south of the building has large species conifer trees in the traditional front (south Side) of building along with fully matured rhododendrons and other shrubs.

Condition and Observations:

Trees in the south of the school need some pruning to prevent branches from getting close to the building and create other issues. Low shrubs in front are in need cut back and pruning.

Dale Street

The large playground is overused and the large oak tree root system has suffered significant shallow root damage from the normal wear and tear of the playground. The use has compacted soils around the drainage structures, and playground equipment to the point that this is in need of a regrading and upgrade.

Recommended Repairs

Landscape Engineering to determine what is the best surface and grading required to make the playground a better site and to stabilize the area to prevent further use degradation.

Rebuild landscape area to eliminate hazards site as site drainage and tree root exposure/trip hazard

2.4 Municipal Services and Utilities

- a. Water and sewer
Medfield has its own water and sewerage
- b. Gas
Columbia Gas
- c. Electric
Eversource

3.0 BUILDING CONDITIONS

3.1 Sub Structure/Foundation

Poured concrete foundation walls and poured slab on grade. The foundation walls are assumed to have spread footing.

Condition and Observation:

Generally the foundation appears to be in good shape. No visible sign of cracking or movement were observed.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves: None

3.2 Super Structure

Description:

The 1941 Building super structure is constructed with a cast in place reinforced concrete coffered pan system with a combination heavy masonry walls and steel frame as support. The 1941 building roof is a steel frame with full dimension wood planking. The original building was built as a civil defense/bomb shelter. The construction is over engineered and appears in good condition.

Dale Street

The 1962 addition is a steel framed structure with a bulb “T” and tectum decking roof system.

To the north of the 1962 wing are two classrooms that are pre-engineered buildings (1980’s?) set on a poured in place foundation.

The original Dale street front has 9 sets of exterior stairs constructed of concrete *that service the 1941* building entrances.

The 1962 Adams Street entrances are poured in place concrete stairs and access ramp system that has cast in place metal rail system. The cast in place loading dock servicing the kitchen is located on the Adams Street side of the building.

The Dale Street entrance portico has a classic entrance supported by four large (2ft diameter) wood columns. The columns support the large frieze structure and portico roof.

Condition and observation:

The condition is in Fair to poor shape.

Dale Street Entrance: This entrance shows extensive deterioration in the stair structure, structural columns, and the soffit area at the columns supports. The deteriorated concrete at the stairs has allowed water penetration into the joints. Repairs have been made to the poured stairs, but cracks in the stairs and at the patches are beginning to reappear. Moisture and freeze thaw cycles have led to the joints to further deteriorate. Steel handrail rail system was installed in the cast in place stair. The steel rail has rusted and expanded within the concrete. This expansion has led to additional structural cracking in the concrete, affecting it integrity. These failures could lead to trip hazards.

Adams Street entrance stairs, walks and loading lock all show fatigue in the concrete. Significant cracking and spalling of the concrete appear to be caused by degradation, salt and rusting metal rails imbedded in the concrete. The cast in place loading dock servicing the kitchen on the Adams Street side of the building.

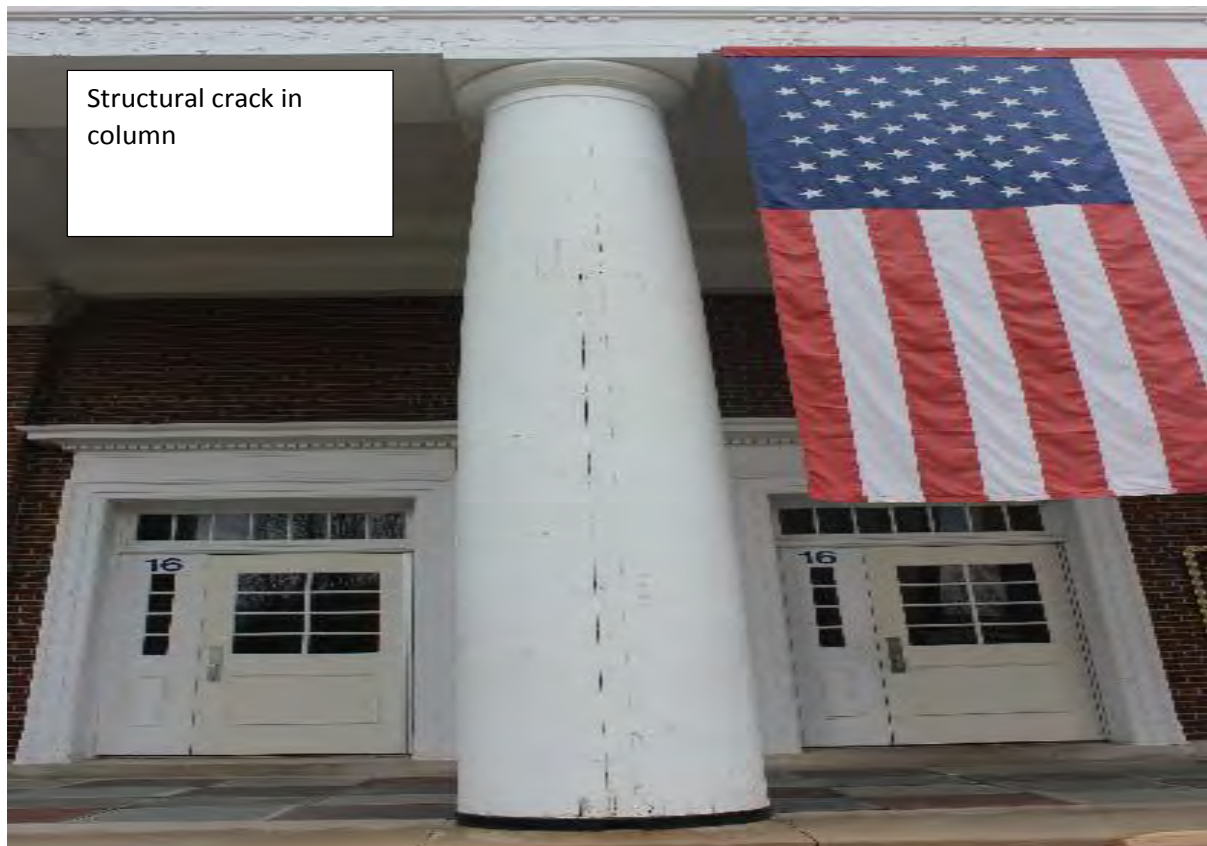
The structural wood columns have large cracking in the glued and finger jointed slats that make up the columns. Causes of the cracking could be from water entering then top of the column This moisture entering in the column and not weeping out the bottom creates an internal issue. Moisture within the interior wood wants to wick out of the wood as the sun heats the column. The trapped moisture in the freeze thaw cycles expanded and created the massive cracking across the several slats. The exposed cracks allow more moisture in the column exacerbating the problem.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Engineer review of the structural components and columns of the Dale Street Portico and repair is needed. Table 1

Repair structural columns, bases, and stair/handrails of the Dale Street portico

Dale Street



Structural crack in column



Rot in column base

Dale Street

3.3 Facades

a) Description Facades: (Brick, metal soffit,)

The predominant brick façade of the original 1941 load bearing masonry is a solid construction with no cavity wall. The 1962 and 1996 buildings are a veneer brick application. The brick façade in general looks good. Age appropriate deterioration is occurring. The exposed mortar joints have exposed aggregate which indicated the outer layer of the mortar is wearing away. Spot areas of repointing are required. Areas that need to be addressed first are where vertical joints of the base level band coarse sits forward of the vertical wall.

Various areas of mortar have fallen out or have deteriorated requiring spot repointing. Original through wall flashings, flashing at doors and windows appear to be thinning or worn away at the edge and have exceeded the life expectancy. Re-evaluation of the flashing is required.

Condition: GOOD

b) Description Windows and Doors:

The windows are double glazed energy efficient aluminum framed window typically found in commercial construction. These windows were replaced in the 1996 renovation and addition. Condition appears to be in Good condition.

Windows in the 1962 window wall are galvanized hollow metal frame and are showing significant wear. Scraping and repainting will extend the life of the window. The windows provide little energy efficiency and have exceeded the life expectancy.

Main entry is a double glazed aluminum commercial store front system typically found on commercial construction. Condition appears to be in good condition.

All doors throughout the building have had extensive wear, and show signs of rot at metal doors and jamb, wood doors have had multiple repairs and lack all energy efficiency.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

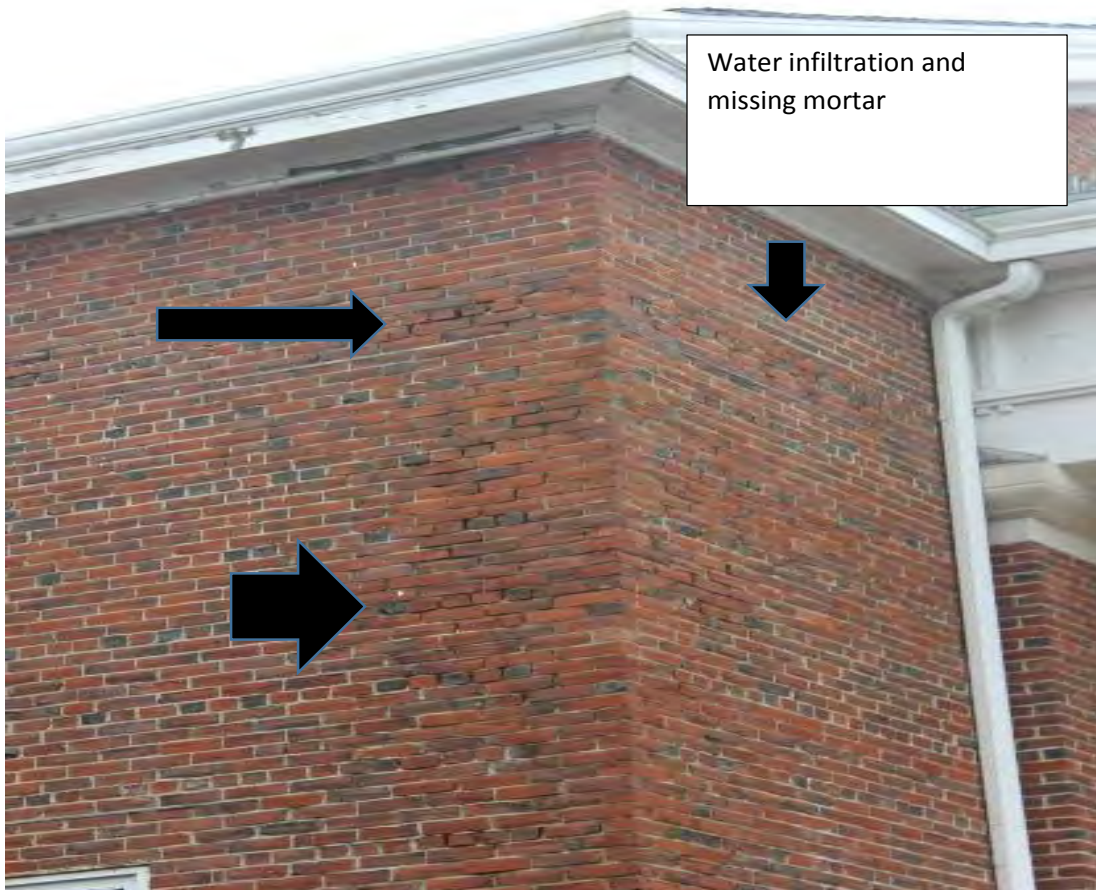
Life cycle of caulking and sealants needs to be inspected and evaluated. Replace as part of regular yearly maintenance. Table 1

Replacement on the windows in the 1962 addition should be anticipated due to lifecycle and energy efficiency. Table 2

Masonry repointing on lower vertical band courses should be done immediately, along with areas of excessive mortar failure.

Systematic replacement of exterior doors and weatherproofing upgrades are required. Table 1

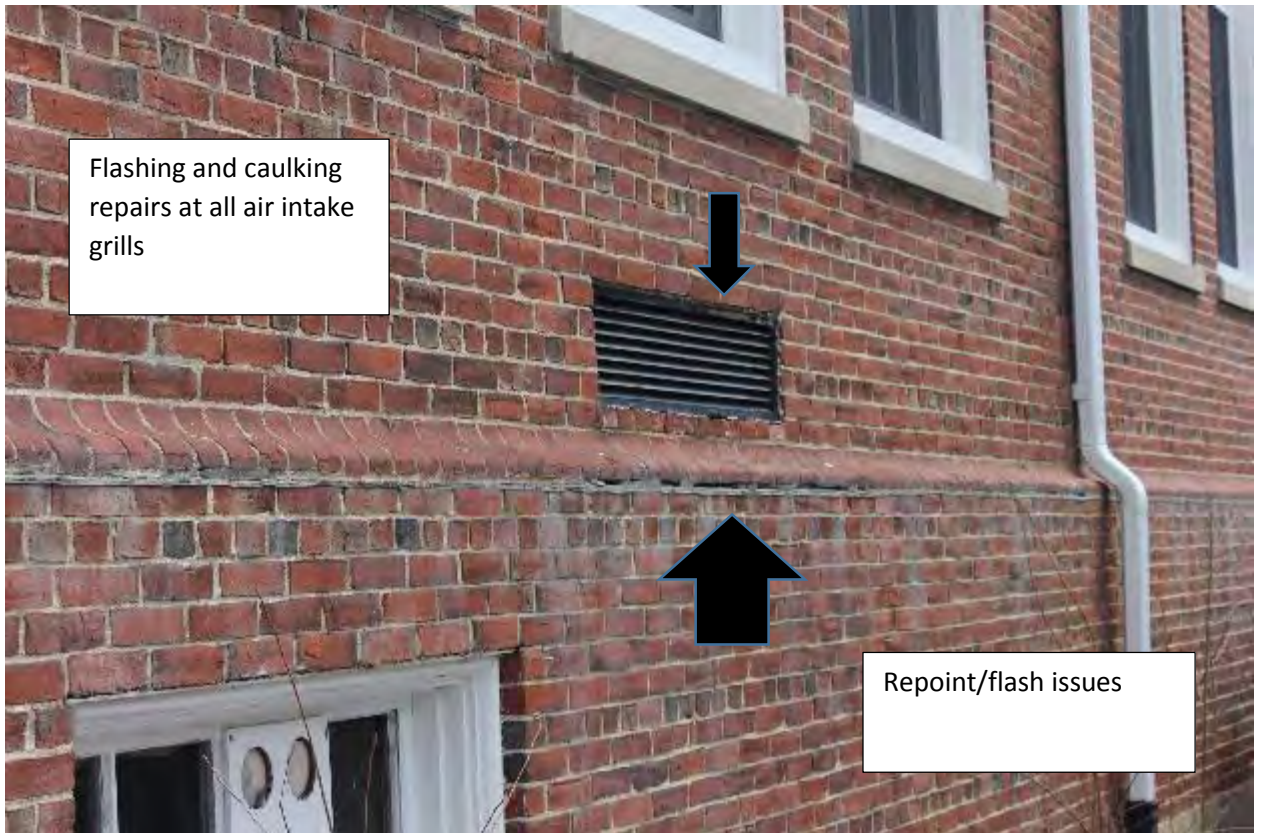
Dale Street



Dale Street



Vertical exposed course
repointing/ flashing
issues



Flashing and caulking
repairs at all air intake
grills

Repoint/flash issues



Wood trim rot, flashing and exterior paint need to be addressed



Concrete failing on step Rails rusting at concrete step

Dale Street



Typical 1960 window single pane, non insulated panel, failing caulking and paint



Typical exterior door
rusting door, missing
weatherstripping,
requiring paint

Dale Street

3.4 Roofing

Description: The Original 1941 building is a slate roof building with snow guards on the lower 4 feet of the roof. The color appears to be a standard Mottle green slate found in Vermont. Gutter on the upper roof are partially in place and working. An aluminum gutter on the east and west side of the building exist.. These areas have also been scheduled for repair in the summer of 2017. Additional gutter support anchors are required.

The 1962 addition is a membrane roof replaced in the 1996? There are several spot area roofs that are asphalt base built up roofing or tar and gravel. Currently, active leaks can be found in these roofs and repairs are scheduled in the summer of 2017.

Roofing in the modular classrooms is an EDPM membrane roof

Condition:

The slate roof has approximately 50- 100 broken or damaged slate that require repair. (Work planned for July 2017) The east side of the building has become the student bus drop off. Current snow guards are incapable of stopping a snow slide during an active storm (witnessed by custodial forces) which has destroyed gutters. Gutters sections along the west side of the building have been damaged by snow and 50-80 feet are not operable and no longer functional. Flashing on the 1941 building is meeting the end of life expectancy and edges have cracking and fraying.

Spot Leaking is observed on the sloped 1962 roof along the extended soffit indicating leaking is in the membrane

Flat built up roofs currently have active leaking and need immediate repair.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term replacement is recommended. While not in failure, the roof replacement should be scheduled in 5 years in the 1962 section. Table 2

Significant slate repair is required immediately to prevent further damage and leaking. Table 1

Replace damaged sections of aluminum gutter of the 1941 building and add required snow fencing. Table 1

Replace the flat roof build up areas with new membrane roofing. Table 1

Water entering roof and getting into brick cavity. Roof failure and brick mortar failure



Gutter has deflected due to snow. Leaks in gutter allow water to wash down brick creating excessive moisture



Dale Street



Dale Street

3.5 Basements / Attics

Description:

Under the 1945 structure is a basement Mechanical room, a mid-landing storage/custodial office, and a crawl space (height 7 ft). The Crawl space on the west (Adams St side) has a concrete floor and acts as a storage area for paper/furniture etc. The remainder of the basement area is a dirt floor. There is some storage/junk collecting area. The space is mostly a chase for all plumbing, gas, and mechanical equipment.

Condition:

3.6 ADA Compliance

The Americans with Disabilities Act (ADA) and the State of Massachusetts Accessibility Code governs public accommodations and commercial properties. This report will only look at accommodations and access to public facilities that are equal or similar to those available to the general public. This report will identify areas of non-compliance, or will be in compliance if upgrades and renovations are made to the facility that trigger mandatory resolutions. However this report is not a full ADA or Accessibility Code assessment. Being "Public" facilities, upgrades to allow for employee or the general public need to be addressed to meet the provisions of Title III of the ADA Act.

Condition:

Upgrades address in the 1996 addition met the codes at that time for compliance. Because of age, a full Accessible study should be performed to assess compliance throughout the structure.



Non-Compliant Handicap ramp and rail system



Handicap accessible lift in stair (No longer allowed by code) Note no elevator to second floor.

Dale Street

3.7 Interior Finishes and Components

Descriptions:

Typical Interior finishes:

Specialties Finishes:

Locations	Floor	Walls	Ceilings
Offices	Carpet	Painted plaster	Acoustical tile
Corridors	VAT	Painted plaster CMU, Glazed Tile	Acoustical tile
Bathrooms	Tile	CMU	Acoustical tile
Class rooms	VAT /Carpet	Painted plaster	Acoustical tile
Library	Carpet	Painted sheetrock	Acoustical tile

Conditions:

The walls of the 1942 Building are predominantly brick/block and plaster. The newer additions are standard steel stud and sheetrock applications. The walls have spot areas of disrepair do to age and some previous water problem. Cracking in the plaster is due to age, past water issues and movement and can be addressed.

Most areas are in good condition. Carpeted areas are showing their age. Systematic replacement of the heavily wear areas main offices)

The VCT tile in the Cafeteria is in fair condition. The constant wear and tear of the cafeteria floor cracked and loosened the vct tile. Periodic removal and replacement has been ongoing.

Most floors are VAT and have long past there life expectancy.

Wood flooring in the gym and stage is approximately 70 years old, and there are signs of nail heads and thinning wood at the tongue portion of the joint is cracking. This indicates that the wood has been worn thin. Further sanding may not be permitted.

Ceilings in the 1942 building have 12x12 acoustical ceiling tile are glued to substrate or stapled to strapping. Corridors on the first floor are concrete waffle slab and second floor corridors are plaster.

The 1960 addition is exposed ceiling with tectum roof panels that are exposed in the interior.

Interior doors and trim are original to the building. The material conditions and deterioration is consistent with a well used school of the same age.

Dale Street

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

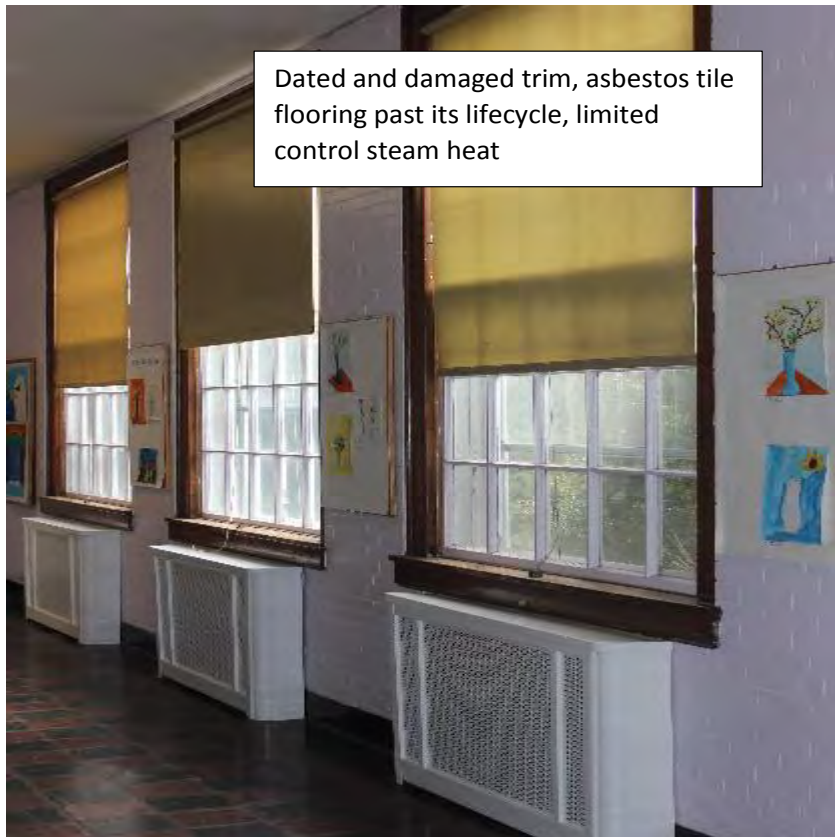
Replacement of all VCT flooring is needed. Table 2

Repair damage and cracking plaster. Table 1

Replace water stained and damaged acoustical ceiling. Table 1

Replacement of the gym floor will be required. Table 2

Refinish all doors, wood trim, and jambs. Table 2



Dated interior fixtures

Dale Street

4.0 BUILDING SYSTEMS

4.1. *Plumbing*

Description:

The domestic service enters the building from the west side into the main water service/fire service area in the basement in a small meter pit.. The water service has a main backflow preventer and separate fire service valving. The observed supply piping is threaded brass and copper in the 1942 building. The waste lines are cast iron.

The plumbing fixtures are vitreous china with chrome trim. The gang bathrooms off the gym shower rooms are no longer are in use.

The building uses a combination of an energy efficient gas fired water heater with water storage tank with circulating pumps supply domestic hot water and on the second floor of the 1941 building has electric “point of use “ water heaters mounted under sinks. Welded and threaded black iron pipe is used for gas piping within the subject property.

Condition: Poor

The main service entry valve (owned by the Town), is currently leaking. The Town is aware and plan on replacement in the summer of 2017. Valve pit is a small pit installed with the 1942 building. New backflow and valving requirements have made the installation of a new water service difficult.

The majority of the feed piping in the 1942 building is threaded brass piping. A majority of the gate valves are original and due to mineral content in the water, non-exercising of the valves, and the dissimilar metals of the plumbing components, the valves are “frozen” in the open position. Recent valve replacement at critical zone locations has been performed, to establish a water shut off location in case of plumbing failure.

Toilets and sinks are original and replacement parts do not exist. Toilet rooms adjacent to the gym have only cold water.

Hot water heater was recently replaced with an energy efficient unit.

Recent gas leak occurred within the building. Emergency shut down occurred. It was determined that remote gas lines were abandoned in place and the joints have rusted.

Dale Street

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

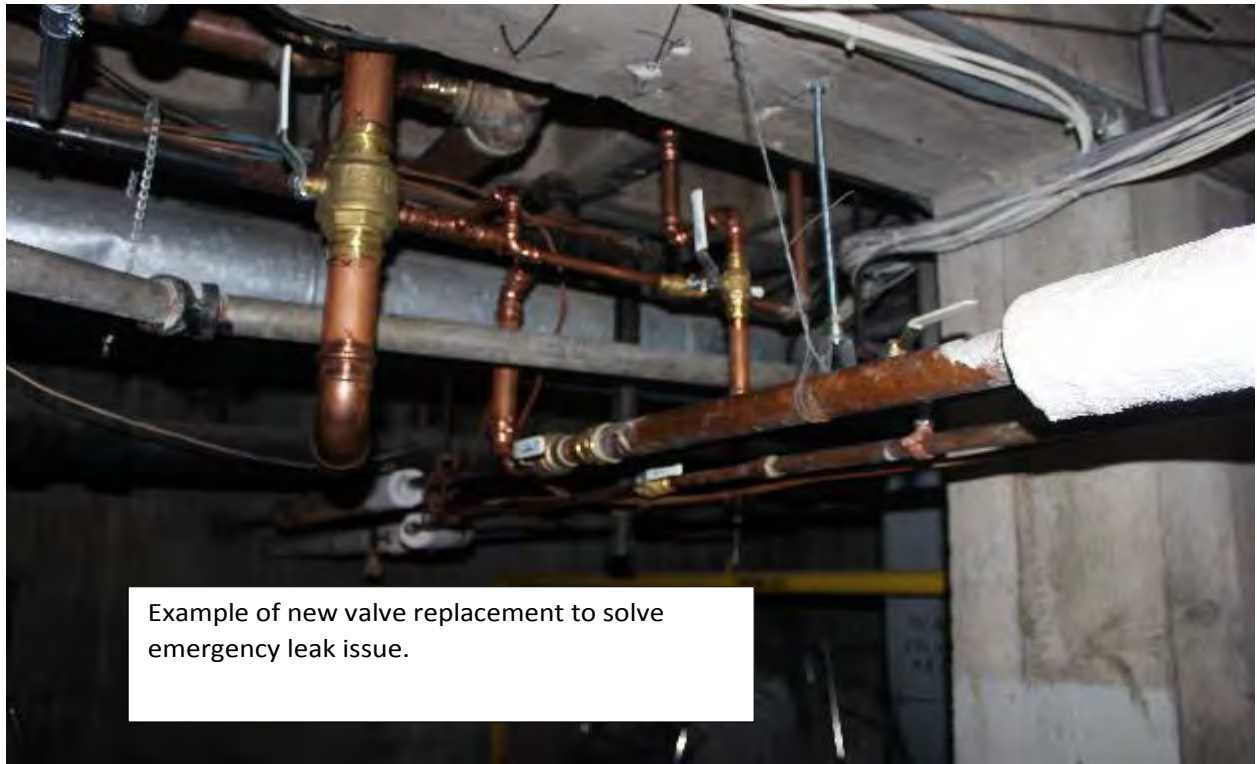
Replace zone valves with new ball valves to assure access to shut down in case of an emergency.
Table 1

Evaluate all supply water piping in the basement of the building and remove piping no longer in use. Table 2

Remove all unused or abandoned gas piping as required by code. Table 2

Systematic replacement of the toilets and flushometers. Table 2

Upgrade all supply water piping to replace the brass piping with copper to avoid pipe failure.



Example of new valve replacement to solve emergency leak issue.



Hot water heater
kitchen Asbestos
tank behind is
building hot water.

Dale Street



Dale Street

4.2 HVAC

a. Heating Plant

Description:

The building is serviced by a gas fired 2 Weil McLain model 688 package boiler plant in the mechanical room which supplies low pressure steam to various AHU units to support the building and its classroom radiator units. The units were installed in the 1994 due to failure of units that have been abandoned in place. The main steam trap pumps are also located in the space.

The steam piping is schedule 40 black steel and insulated. The condensate is returned to a floor mounted vacuum return system. It should be noted that the steam return has steam traps located throughout the building. A steam trap survey was performed and only a couple of traps were found to be leaking. Return piping in the boiler room has rotted thru and has significant leaking. A temporary patch was installed, until summer of 2017. Cutting and re-welding of a new pipe section is required.

It should be noted that all previous boilers, piping, and gas piping was abandoned in place by simply capping lines at the decommissioned unit. This poor decommissioning has lines that are fully charged and sitting idle. The concern is that interior degradation of the piping could lead to leaking/ failure. An abandoned gas line developed a leak during school in 2017. Columbia Gas had to shut down service and an emergency gas repair was required to rectify the situation.

The current boiler breaching and intake uses some of the old abandoned in place boiler duct work. This is not a good and workman like installation. All new work should not have relied on existing units that now have been abandoned.

Hot water tank heater is gas fired and was installed in the 2014 Unit is located in the mid-level mechanical/custodial room.

Condition: Fair to poor

b. Distribution system (steam, exhaust)

Description:

The steam distribution and condensate return piping system is original to the building and many of the horizontal runs occur in the basement level crawl spaces. The supply steam is scheduled 40 piping and the return condensate is schedule 80 black steel. Much of the piping has fiberglass insulation with confirmed asbestos insulation on the joints and elbows.

Automatic Temperature control is pneumatic consist of two (2) individual air storage tanks each containing a single compressor and motor. System was installed around 1989. Each air tank, as well as the refrigerant air dryer blow down to the floor that slightly pitches towards the floor drain. Gravity of the floor pitch is the only way the water is directed to a floor sump.

Dale Street

Classrooms have a unit ventilator and cast iron radiation for local heat distribution. The pneumatic thermostat, and some local zone valve controls regulate the heat of these spaces.

Exhaust air is ducted thru galvanized ducts and discharge through the roof through an old belt driven main exhaust.

The 1962 library café area is addressed thru AHU units. The 1996 addition has self-contained gas fired roof top units.

Exhaust in the kitchen area is operational yet quite antiquated. The supply exhaust units to the cooking area does not appear to be engineered and may not effectively move air.

Window air conditioners are used in the administration area along with small split system units.

Condition: fair to poor

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

General comment - many of the components of the HVAC system are nearing the end of the lifecycle. Motors, pumps, steam piping pneumatic controls are all antiquated. The performance, while operational, is not energy efficient and not balanced. Through-out the building there are warm and cold spots because the original design focus does not meet the current user operation. Other than the steam boilers, all other equipment is original to the building, has undergone limited repair, and needs to be considered for a major component replacement. Steam condensate piping in the basement level, specifically in the boiler room is rotting out. A replacement in its entirety is needed. , Table 2

Immediate replacement/upgrade of the pneumatic system should be addressed because of age and operational problems. Upgrades of the system are required, and re-commissioning should be addressed during this upgrade to assure proper operation of the HVAC equipment. Table 1

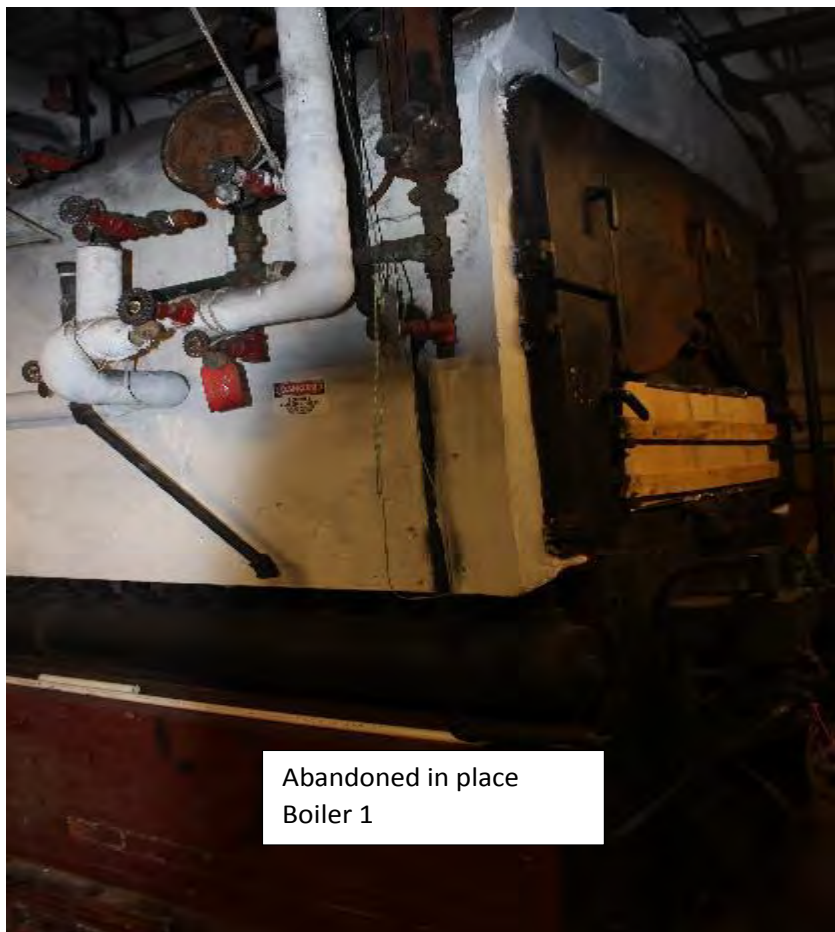
Removal and proper capping of all decommissioned piping is required to avoid component failure during middle of heating season on non-operational piping. Table 1

Full and complete HVAC study and evaluation is required to determine a course of action to assure operational needs for the next 10 years. Table 1

Roof top AHU units are in good shape, but components within the units (blower motors, furnace ignition/fire chambers) are nearing the life cycle. Replacement of components needs to be anticipated and budgeted for. Table 2



Existing operable boilers



Abandoned in place
Boiler 1

Dale Street

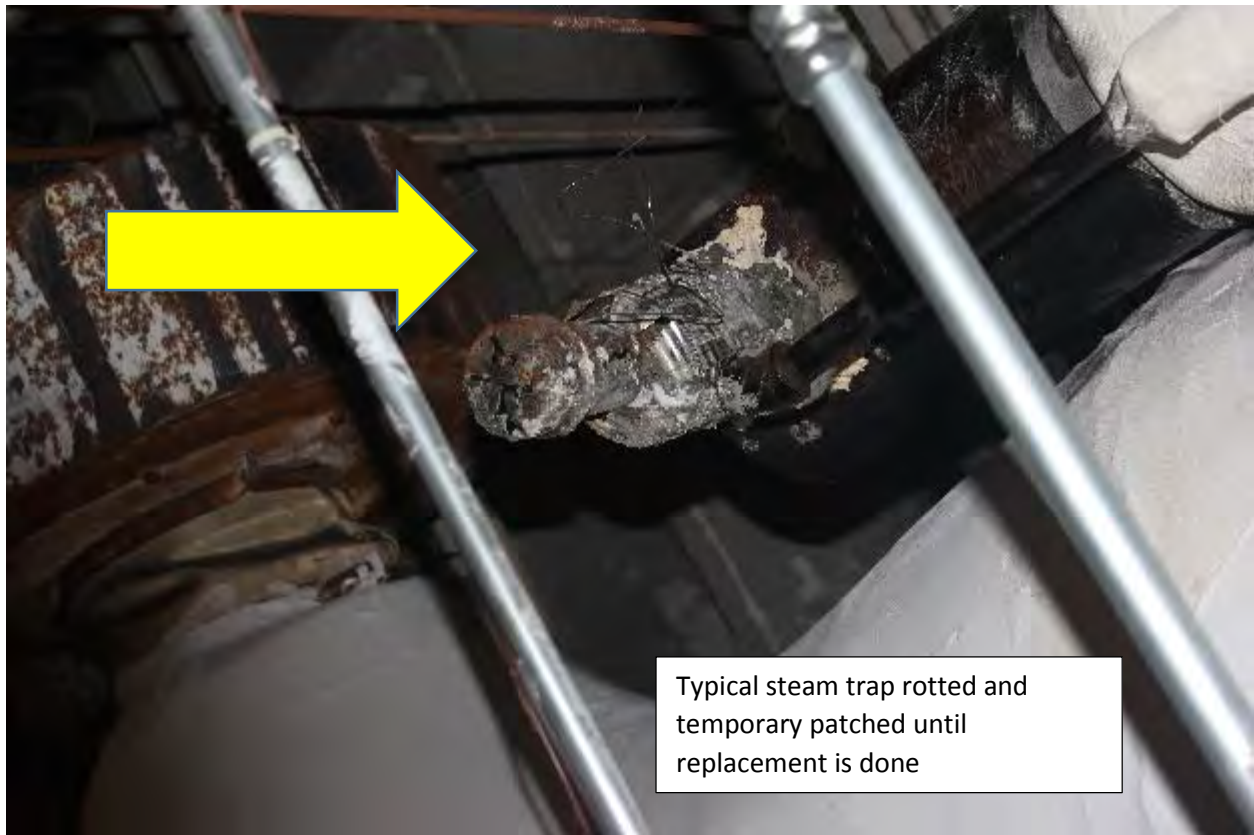


Abandoned condensate tank and pump



Abandoned boiler 2

Dale Street



Typical steam trap rotted and temporary patched until replacement is done



Second abandoned steam trap pump.

Dale Street

4.3 Electric

Description:

600 amp electric service with 120/208V three phase exist. Electric service switch gear has been replaced in the 1941 building, but the wiring throughout the structure is original. The sub-panels that feed the 1962 additional are original to that time. All panels are at capacity and have no room for additional circuitry.

Emergency power is supplied by a natural gas fueled emergency generator system installed in the 1990's. This emergency power unit provides emergency power to egress lighting, fire alarm, refrigerators and freezers.

It is unclear if all the heating circuits are tied to emergency power.

Condition:

All systems are in poor. The building has minimal outlets throughout the classrooms and building. Many of the spaces utilize multi-outlet power strips. Wiring in the 1945 building is original.

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves:

Near term repair is to have an electrical specialist survey company inspect all circuit breakers or operation and effectiveness. The pro-active survey will determine if there are any circuit breaker concerns. Table 1

Systematic replacement of electrical subpanels and wiring should be performed so added power outlets can be installed to eliminate power strips. Table 2

A full engineering review of the power and power distribution needs to be made to fully understand what is operational. Table 1

4.4 Building Fire Suppression and Fire Alarm

Description:

The property is protected by a multi-zone Fire Alarm control panel, hard wired smoke and heat detectors, pull stations, illuminated exit lights, emergency battery lighting units, horn/light enunciators, and fire extinguishers. Fire Alarm: The existing fire alarm system has 12 zones and includes manual pull stations, horn/strobes units. The 1960's addition appears to be operational and functioning. All equipment predates much of the current codes and ADA requirements. There is no fire suppression in the building

Condition: poor

Dale Street

Recommended Immediate Repairs, Near Term Repairs, or Replacement Reserves: None

Fire detection and alarm have long past its lifecycle and replacement to meet code and ADA handicap regulations is required. Table 2

If the building undergoes a major renovation, Massachusetts Building Codes will require full fire suppression be installed in the building. Table 2

5.0 CODE/OPERATIONAL CONCERNS

The history of Deferred Maintenance of this building has been a series of repairs/additions as needed without a thought of a comprehensive renovation plan. An example of this poor planning is in the boiler room. A large boiler room, has had three major boiler installations and reconfigurations without removing the old boilers, abandoned gas lines, electric lines, steam lines and other equipment. The space therefore has several generations of asbestos, electric lines fully powered but abandoned in place, gas lines which were abandoned in place but fully charged with gas. (This issue came to light where a gas leak in an old pipe which rotted required an emergency gas shut down and repair.) Piece meal repairs can occur for a short period to keep the building operational, but at a cost premium. The concern with this building is the building has reached a point where all components have far exceeded their life expectancy, and operationally are in extremely poor shape. A catastrophic failure of heating or plumbing components will result in a building shut down for several days. There are no good as-built plans to determine what is active and operational or abandoned. This would require engineering to inspect and test and label what is operational and what is abandoned. The amount of asbestos in the boiler room would raise the cost of work exponentially. The space is so limited because of all the abandoned equipment, that access and working within this building space would require asbestos removal which would take several days.

With regards to plumbing, fine thread brass, copper, and old valves all exist though-out the building. Many of the valves have frozen in the open position and are non-functioning. Toilet/urinals are old and non-typical. Repairs/part replacement is difficult and costly. Similar to the boiler room, asbestos removal of all pipe insulation throughout the building is required to due repairs, which increases cost and time significantly.

Recommendation:

The Town should begin to study what it wants to use this building for in the short term as well as long term, so comprehensive repairs can be planned for consistent with the goals for the long term use.

Complete renovation of this building for school use is estimated to be \$21-25 Million (\$440/sq ft).

Complete renovation of this building for a mixed use (offices/recreation) is estimated to be \$17-18 million (or \$350/sq ft).

Dale Street

Dale Street School

CAPITAL PLANNING BUDGET

System	sq ft 47,341																				
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2032	2034	2035	2036	2037	2038
Site work																					
2.2 Various site work Design		10,000																			
2.2 Paving				100,000																	
2.2 walkways				10,000																	
2.3 Cut back trees on site				10,000																	
3.1 Sub-structure																					
Drainage at gym ext.stairs(8/31)		50,000																			
3.2 SuperStructure																					
3.2 structural engineer		30,000																			
3.2 structural repair to front portico			400,000																		
Building envelope																					
3.3 Façade																					
3.3 Brick façade engineering		10,000				100,000															
3.3 Brick façade repair			100,000				1,000,000														
3.3 Sealant replacement			50,000				100,000														
Windows																					
3.3 windows curtain wall café wing							200,000														
3.3 sealants				10,000																	
3.3 auditorium							100,000														
Door																					
3.3 Metal doors			10,000																		
3.3 Doors (interior)							50,000														
3.3 Weatherization																					
3.4 ROOF																					
engineering roof			200,000																		
roof repair	18,000	25,000																			
Roof replacement				2,400,000																	
3.6 ADA Compliance			10,000																		
3.7 Interior																					
Carpet (25+ years)					10,000																
VCT flooring (+70 years)							300,000														
Paint							100,000														
Acoustic ceilings							50,000														
4.1 Plumbing																					
Fixtures																					
regROUT tile							100,000														
Replace tempering valve	12,000	20,000																			
Replace Hotwater heater												80,000									
Replace water shut off valves			20,000																		
dishwasher			50,000																		
4.2 HVAC																					
Boiler 1988?								100,000	800,000												
hvac controls			40,000																		
HVAC engineer			40,000																		
Fluid pumps								4,000	4,000												
Roof top unit				10,000		10,000															
Valves (ahu/vav)			1,000	1,000	1,000																
Backflow preventers			1,000						1,000												
Duct Cleaning				10,000																	
Fan coil units 45 units					3,000																
Vent /exhaust fan					15,000																
4.3 Electrical																					
Branch circuits testing			10,000																		
engineering upgrade			200,000			50,000															
electric repair/upgrade				2,000,000																	
Fire Alarm							50,000														
4.4 Fire Suppression																					
major reno will require a system							2,000,000														
5.0 Operational																					
Asbestos			20,000						500,000			100,000									
Total Yearly Expenditure	30,000	145,000	1,162,000	4,541,000	29,000	160,000	4,150,000	104,000	1,305,000	-	-	180,000	-	-	-	-	-	-	-	-	-
Escalated cost 2018 3.0%	\$38,003	\$189,192	\$1,561,631	\$6,285,806	\$41,347	\$234,965	\$6,277,247	\$162,029	\$2,094,142	\$0	\$0	\$315,631	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0