CAPITAL NEEDS ASSESSMENT



Prepared for:

Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945



Eveleth School

3 Brook Rd
Marblehead, Massachusetts

EBI Project No. 1320000044

March 5, 2020

EBI Consulting
environmental | engineering | due diligence

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March 5, 2020

Ms. Michelle L. Cresta
Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945

Subject: Capital Needs Assessment, Eveleth School
3 Brook Rd, Marblehead, Massachusetts
EBI Project #1320000044

Dear Ms. Michelle L. Cresta:

Attached please find our *Capital Needs Assessment*, (the *Report*) for the above-mentioned asset (the Subject Property). During the property survey and research, our property surveyor met with agents representing the Subject Property, or agents of the owner, and reviewed the property and its history. The *Report* was completed according to the terms and conditions authorized by you. The gathering of data and information for this *Report* has been completed in general conformance with ASTM E 2018 – 15.

The exclusive purpose of the *Report* is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools* in its Due Diligence effort in evaluating the Property.

This *Report* was performed utilizing methods and procedures consistent with established commercial practices and in conformance with industry standards. The suggestions represent *EBI's* opinion based on written, graphic or verbal information, the property condition and data available to us at the time of the survey. Factual information regarding operations, conditions or data provided by the Client, occupants, owner or their representative has been assumed to be correct and complete.

The *Report* speaks only as of its date in the absence of a specific written update of the *Report* signed and delivered by *EBI Consulting*.

EBI Consulting is an independent contractor, not an employee of either party to this transaction, and its compensation was not based on the findings or recommendations made in the *Report* or on the closing of any business transaction.

Thank you for the opportunity to prepare this *Report* and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully submitted,

Don P. Gerardi Jr, PE.
Acquisitions Senior Project Manager
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Dennis L. Davis 918.924.1642
Reviewer/Equity Services, National Program Director
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EXECUTIVE SUMMARY TABLE

Property Name:	**Eveleth School**	*Property Type:*	**School**
Address:	**3 Brook Rd**	*Property Age:*	**61**
City and State:	**Marblehead, Massachusetts**	*No. of Units or Tenants:*	**1**
Site Survey Date:	**February 9, 2021**	*Square Feet:*	**13,500**
Report Date:	**March 29, 2021**	*Analysis Term (Yrs.):*	**20**
EBI Project #:	**1320000044**		

Section #	Section Name	Critical Repairs	Non-Critical Repairs	Capital Needs
2.0	**SITE CONDITIONS**			
2.1	Site Features			
2.2	Landscaping & Site Improvements	$1,896		$6,716
2.3	Pavement and Parking		$9,360	$69,539
2.4	Site Amenities			$75,732
2.5	Utilities			
3.0	**STRUCTURE**			
3.1	Substructure			
3.2	Superstructure			
4.0	**BUILDING ENVELOPE**			
4.1	Roofing	$161,514		$7,202
4.2	Facades			$237
4.3	Windows & Doors	$2,343		$20,414
5.0	**BUILDING INTERIORS**			
5.1	Basements/Attics/Penthouses			
5.2	Interior Finishes & Components		$235	$60,000
6.0	**ACCESSIBILITY**			
6.1	Accessibility Compliance	$6,000		
7.0	**BUILDING SYSTEMS**			
7.1	Building Plumbing	$3,000		$34,580
7.2	HVAC			$186,900
7.3	Building Electrical	$2,050		$19,135
7.4	Building & Site Fire/Life Safety			
7.5	Elevators & Conveying Systems			
8.0	**MUNICIPAL RESEARCH**			
8.1	Municipal Information & Zoning			
8.2	Building & Planning Department			
8.3	Fire Department			
9.0	**HAZARDS**			
9.1.1	Seismic			
9.1.2	Flood Zone			
9.1.3	Wind Zone			
9.2	Suspect Mold and Moisture			
	TOTALS:	**$176,803**	**$9,594**	**$480,455**

	Dollars per sf/yr	Dollars per unit/yr	
Present Value of Capital Needs Cost Estimate	$1.77946	$24,022.74	$480,455
Inflated Value of Capital Needs Cost Estimate	*$2.00479*	*$27,064.65*	*$541,293*
Critical Repairs Cost Estimate	$176,803		
Non-Critical Repairs Cost Estimate		$9,594	
Total Deferred Maintenance Cost Estimate, After Multiplier	$186,398		

EXECUTIVE SUMMARY

PROPERTY DESCRIPTION

The Subject Property, known as Eveleth School, is located in Marblehead, Massachusetts at 3 Brook Rd in Essex County. The Subject Property was reportedly constructed in 1960. The Subject Property consists of a one-story approximately 13,500-gross square foot[1] elementary school building located on a 3.416-acre lot. The building contains a partial basement boiler room.

The elementary school building is irregular-shaped and has rough dimensions of 226 feet in length and 72 feet in depth.

The interior of the property is laid out with a central lobby that bisects the building, and common corridors provide access to classrooms, offices, and the combination space.

The Subject Property building systems are antiquated and considered unsafe due to their age also the components are typically not readily available for systems of the age of this building.

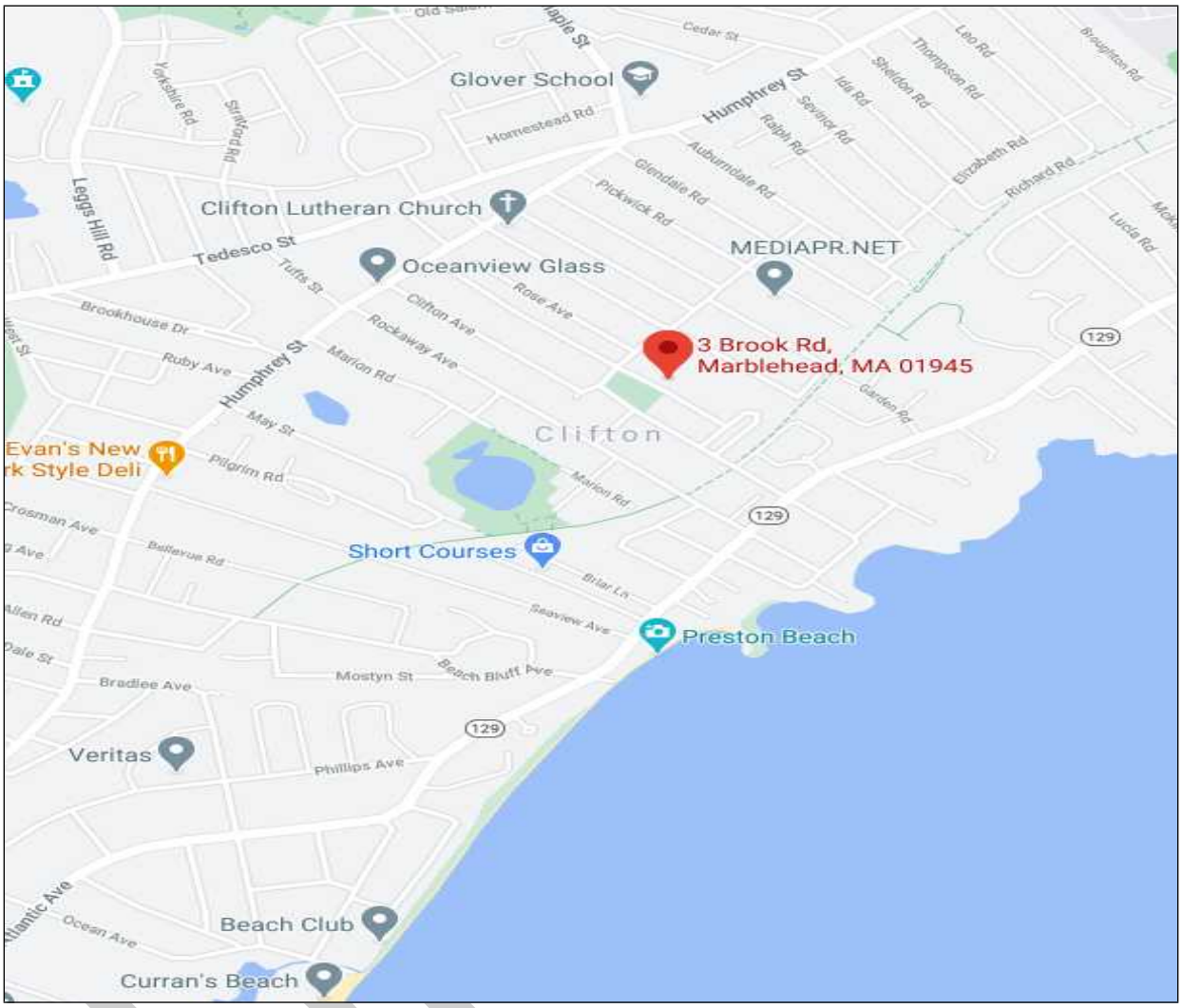
LOCATION

The Subject Property is located approximately 94 feet east of the intersection of Turner Road and Green Street. The Subject Property has approximately 656 feet of frontage along Turner Road.

Local surface arteries, Interstate, and state highway systems provide access to the property. The Subject Property is located approximately 0.30 miles northwest of Route 129.

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1 **Gross square footage** obtained from the tax assessor's records.



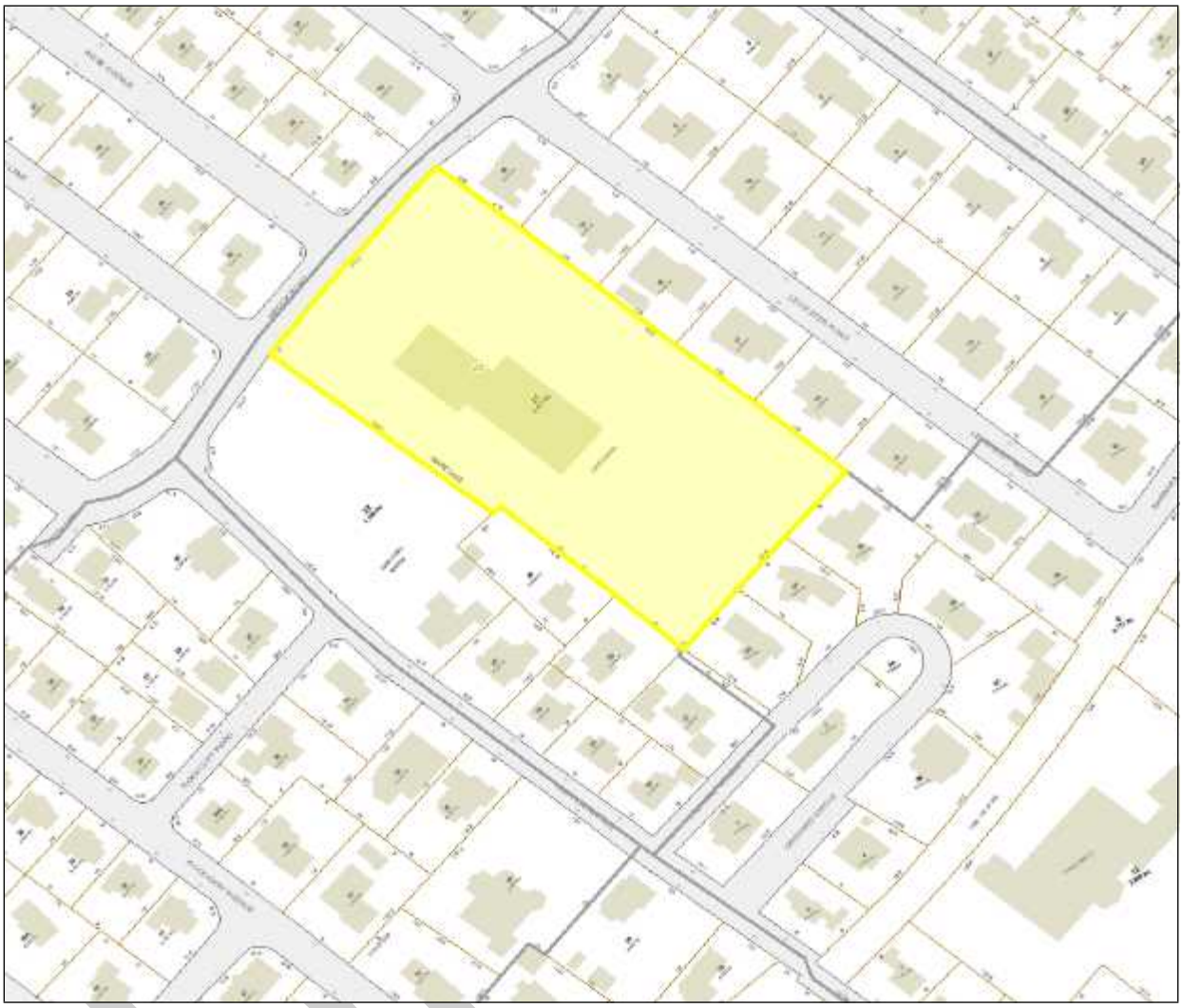
Location Map

A single entry drive provides access to the Subject Property from the adjacent road frontage. The property is improved with an asphalt-paved vehicle drive lane and parking area located along the northeast side of the building.

The site is gently rolling, with moderate slopes to the south toward Leicester Street. The site is generally flat with only minor slopes around the building to accommodate site drainage. A wooded area is located along the southeast property line.

Property use in the vicinity of the Subject Property is primarily characterized by residential development.

According to the *Marblehead GIS*, the Subject Property is currently owned by the *Town of Marblehead School Department*. The Subject Property includes one irregular-shaped parcel totaling 3.416 acres of land. *Marblehead Assessor* records indicate that the Subject Property assessor parcel number is 25-21-0.



Tax Map

SITE OBSERVATION & OBSERVATION SUMMARY

Don Gerardi Jr. of *EBI* surveyed the property on February 9, 2021, and was accompanied by and interviewed Mr. Todd Bloodgood, Director of School Facilities, and Mr. Mike Ellconus, Electrician both with the *Town of Marblehead.* At the time of the survey, the weather was cloudy and approximately 25º Fahrenheit. During the survey, representative areas of the site, interior areas, common areas, educational spaces, mechanical spaces, mechanical equipment, and building components were observed.

Overall, the Subject Property appears to be in good to fair condition with a moderate level of deficiencies observed. This *Report* recommends certain actions, repairs, and replacements as Critical Repairs, Non-Critical Repairs, and Capital Needs, commensurate with our observations. Additional less notable issues may be present that require attention as part of routine maintenance. Please refer to each specific report section for details.

CAPITAL, MAINTENANCE & OWNER/TENANT RESPONSIBILITY

Maintenance, repair, and replacement of the roof, facades, landscaping, pavement and parking, tenant space interior finishes, plumbing, mechanical, electrical, HVAC, elevator and conveying, life safety systems and components at the property is reportedly the responsibility of the Subject Property owner.

General day-to-day maintenance is reportedly handled by the school facilities department. The maintenance technicians are reportedly qualified to handle general repairs. Repair and maintenance of specialty and large-scale equipment, i.e., major HVAC equipment, roofing, fire and smoke detection, and alarm systems, etc., are subcontracted to outside vendors. The level and quality of on-site maintenance repairs reviewed while at the site were of good workmanship and materials. In general, the Subject Property appears to have been constructed within industry standards and has been well maintained.

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CRITICAL REPAIRS AND REPLACEMENT RESERVES

Itemized Immediate and Short Term repairs, as well as Capital Needs are provided as part of this *Report*. The cost estimates shown on the tables are based on data obtained from the Owner for items already planned, quotes from contractors, *EBI's* in-house Equity database costs and our experience with costs and estimates for similar issues, property and building types, city cost indexes, and assumptions regarding future economic conditions. These projected costs are augmented by cost estimate resource documents such as the *National Construction Estimator*, *Means Building Construction Cost Data*, or *Means Facilities Maintenance and Repair Cost Data Publications*.

CRITICAL REPAIRS & NON-CRITICAL REPAIRS - TABLE 1

Each of the Immediate Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at a Subject Property.

Each of the Short Term Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Short Term Repair, and/or that cannot be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

CAPITAL NEEDS - TABLE 2

Each of the Replacement Reserve items noted during the survey are listed on the following pages on Table 2 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by *Report* section. Routine or customary annual maintenance items are not reported or included in this *Report* unless otherwise noted.

DEFICIENCY PRIORITIES #1 TO #4

Each of the deficiencies and costs noted during the survey are prioritized in the following manner:

Priority 1: Current Critical, Conditions in this category require immediate action to:

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility to operation
- Correct an environmental hazard

Priority 2: Potentially Critical, Conditions in this category, if not corrected expeditiously will become critical within a year. Situations within this category include:

- Intermittent operations

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- Rapid deterioration
- Potential life safety hazards
- Environmental non-compliance

Priority 3: Recommended, conditions in this category require appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further. These are not required for the most basic function of the facility; however, Priority 3 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 4: Does not meet current codes/standards, "Grandfathered" conditions in this category include items that do not conform to existing codes, but are "grandfathered" in their condition. No action is required at this time, but should be considered as an upgrade or if substantial work is to be undertaken in contiguous areas, certain existing conditions may require correction

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Table 1 - Critical and Non-Critical Repairs

Eveleth School
3 Brook Rd
Marblehead, Massachusetts
EBI Project # **1320000044**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 1

Building Area: 13,500
Number of Units: 1
Property Age: 61
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	*PRIORITY*	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
2.0	**SITE CONDITIONS**											
2.1	Site Features		None			20.0%						
2.2	Landscaping / Improvements	**#1**	Repair areas of deteriorated/damaged asphalt sidewalk	75	$21.07	20.0%	$25.29	per square foot	$1,896.44			Repair trip hazard sidewalk and walkway
2.3	Pavement/ Parking	**#2**	Patching, crack sealing, sealing and striping of asphalt pavement	21,400	$0.36	20.0%	$0.44	per square foot		✔	$9,359.85	Patching, crack sealing, sealing and striping of asphalt pavement
2.4	Amenities		None			20.0%						
2.5	Utilities		None			20.0%						
3.0	**STRUCTURE**											
3.1	Substructure		None			20.0%						
3.2	Superstructure		None			20.0%						
4.0	**BUILDING ENVELOPE**											
4.1	Roof	**#1**	EPDM 60 mil roof replacement	13,500	$9.97	20.0%	$11.96	per square foot	$161,514.00			EPDM roof replacement due to age and active leaks
4.2	Facades		None			20.0%						
4.3	Windows and Doors	**#2**	Replace exterior metal insulated common doors	1	$386.00	20.0%	$463.20	each	$463.20			Replacing damaged exterior metal door
4.3	Windows and Doors	**#2**	Window glazing	250	$6.26	20.0%	$7.52	per linear foot	$1,879.35			Glazing on metal framed windows

Table 1 - Critical and Non-Critical Repairs

Eveleth School
3 Brook Rd
Marblehead, Massachusetts
EBI Project # **1320000044**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 1

Building Area: 13,500
Number of Units: 1
Property Age: 61
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	QUANTITY	UNIT COST	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (Including Markup)	UNIT DESCRIPTION	ESTIMATED CRITICAL REPAIR COST	Non-Critical Repair?	ESTIMATED NON-CRITICAL REPAIR COST	COMMENTS OR ADDITIONAL DESCRIPTION
5.0	**BUILDING INTERIORS**											
5.1	Bsmt/Attic		None			20.0%						
5.2	Interior F & C	**#2**	Acoustical ceiling tile	120	$1.63	20.0%	$1.95	square foot		✔	$234.54	Replace stained acoustic ceiling tiles
6.0	**ACCESSIBILITY**											
6.1	Accessibility	**#4**	Complete accessibility compliance upgrades	1	$5,000.00	20.0%	$6,000.00	allowance	$6,000.00			Complete accessiblity compliance upgrades
7.0	**BUILDING SYSTEMS**											
7.1	Plumbing	**#1**	Evaluation of galvanized supply piping by qualified professional	1	$2,500.00	20.0%	$3,000.00	allowance	$3,000.00			Evaluation of copper piping by qualified professional
7.3	Electric	**#2**	Perform IR survey	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050.20			Perform IR survey
7.4	F/L Safety		None			20.0%						
7.5	Elevators		None			20.0%						
8.0	**MUNICIPAL RESEARCH**											
8.1	Municipal Information & Zoning		None			20.0%						
8.2	Building & Planning		None			20.0%						
8.3	Fire Department		None			20.0%						
9.0	**NATURAL HAZARDS**											
9.1.1	Seismic		None			20.0%						
9.1.2	Flood Zone		None			20.0%						
9.1.3	Wind Zone		None			20.0%						
9.2	Suspect Mold & Moisture		None			20.0%						
								DEFERRED MAINTENANCE:	**CRITICAL**		**NON-CRITICAL**	Note:
									$176,803		**$9,594**	Priority 1: Current Critical
												Priority 2: Potential Critical
								TOTAL:	**$186,398**			Priority 3: Recommended
												Priority 4: Non-Compliant with current standards

TABLE 2 - CAPITAL NEEDS OVER TERM

Eveleth School
3 Brook Rd
Marblehead, Massachusetts
EBI Project # **1320000044**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 1

Building Area: 13,500
Number of Units: 1
Property Age: 61
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	AVERAGE EFFECTIVE USEFUL LIFE	EFFECTIVE AGE	REMAINING USEFUL LIFE	TOTAL QUANTITY OVER TERM	APPROXIMATE QUANTITY PER YEAR	UNIT COST (adjusted by location factor)	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (including Markup)	UNIT DESCRIPTION	ESTIMATED COST PER YEAR	Annual Costs																				RECOMMENDED TOTAL OVER THE TERM
														2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
				YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20												
2.0	**SITE CONDITIONS**																																	
2.1	Site Features		None	-						20.0%																								
2.2	Landscaping / Improvements	**#3**	Replace building-mounted light fixtures	20	18	2	6	6	$125.00	20.0%	$150.00	each	$900		900																				$900
2.2	Landscaping / Improvements	**#3**	Repair areas of deteriorated/damaged asphalt sidewalk	25	10	15	230	230	$21.07	20.0%	$25.29	per square foot	$5,816																5,816						$5,816
2.3	Pavement/Parking	**#3**	Patching, crack sealing, sealing and striping of asphalt pavement	5		5	85,600	21,400	$0.36	20.0%	$0.44	per square foot	$9,360					9,360					9,360					9,360					9,360	$37,439
2.3	Pavement/Parking	**#3**	Asphalt overlay	30	25	5	21,400	21,400	$1.25	20.0%	$1.50	per square foot	$32,100					32,100																	$32,100
2.4	Amenities	**#3**	Replace playground equipment	20	8	12	1	1	$25,000.00	20.0%	$30,000.00	each	$30,000												30,000										$30,000
2.4	Amenities	**#3**	Replace playground loose surfacing	6	1	5	6,900	2,300	$2.39	20.0%	$2.87	per square foot	$6,602					6,602						6,602							6,602				$19,805
2.4	Amenities	**#3**	Signage, Entrance/Monument	25	15	10	1	1	$6,606.20	20.0%	$7,927.44	allowance	$7,927										7,927												$7,927
2.4	Amenities	**#3**	Replace 16' gazebo	20	8	12	1	1	$15,000.00	20.0%	$18,000.00	each	$18,000												18,000										$18,000
2.5	Utilities		None	-						20.0%																								
3.0	**STRUCTURE**																																	
3.1	Substructure		None	-						20.0%																								
3.2	Superstructure		None	-						20.0%																								
4.0	**BUILDING ENVELOPE**																																	
4.1	Roof	**#3**	Gutter and downspout replacement	30	15	15	713	713	$8.42	20.0%	$10.10	linear foot	$7,202																7,202						$7,202
4.2	Facades	**#3**	Renew/recaulk expansion & control joints	15	10	5	168	84	$1.17	20.0%	$1.41	linear foot	$118					118																118	$237
4.3	Windows and Doors	**#3**	Window glazing	12	10	2	800	400	$6.26	20.0%	$7.52	per linear foot	$3,007		3,007												3,007								$6,014
4.3	Windows and Doors	**#3**	Periodic repair of broken windows	2	var		10	1	$1,200.00	20.0%	$1,440.00	allowance	$1,440		1,440		1,440		1,440		1,440		1,440		1,440		1,440		1,440		1,440		1,440	$14,400
5.0	**BUILDING INTERIORS**																																	
5.1	Bsmt/Attic		None	-						20.0%																								
5.2	Interior F & C	**#3**	Common area refurbishment - psf	8	3	5	5,000	2,500	$10.00	20.0%	$12.00	per square foot	$30,000					30,000								30,000									$60,000
6.0	**ACCESSIBILITY**																																	
6.1	Accessibility		None	-						20.0%																								
7.0	**BUILDING SYSTEMS**																																	
7.1	Plumbing	**#3**	Replace submersible sump pump, Cast Iron (1/2 HP)	10	8	2	4	2	$588.29	20.0%	$705.95	per pump	$1,412		1,412										1,412										$2,824
7.1	Plumbing	**#3**	Plumbing fixture replacement	20	18	2	6	6	$1,200.00	20.0%	$1,440.00	each	$8,640		8,640																				$8,640
7.1	Plumbing	**#3**	Replace commercial gas-fired water heater (<200 MBH)	15	10	5	2	1	$9,631.61	20.0%	$11,557.93	each	$11,558					11,558																11,558	$23,116
7.2	HVAC	**#3**	Replace gas/oil-fired steam boiler (2040 MBH)	30	27	3	1	1	$155,750.28	20.0%	$186,900.33	each	$186,900			186,900																			$186,900
7.3	Electric	**#3**	Replace Circuit Breaker (30 Amp)	60	58	2	8	8	$905.51	20.0%	$1,086.61	each	$8,693		8,693																				$8,693
7.3	Electric	**#3**	Replace Circuit Breaker (60 Amp)	60	58	2	6	6	$1,070.66	20.0%	$1,284.79	each	$7,709		7,709																				$7,709
7.3	Electric	**#3**	Replace Circuit Breaker (200 Amp)	60	58	2	1	1	$2,278.00	20.0%	$2,733.60	each	$2,734		2,734																				$2,734
7.4	F/L Safety		None	-						20.0%																								
7.5	Elevators		None	-						20.0%																								
8.0	**MUNICIPAL RESEARCH**																																	
8.1	Municipal Information & Zoning		None	-						20.0%																								
8.2	Building & Planning		None	-						20.0%																								
8.3	Fire Department		None	-						20.0%																								
9.0	**NATURAL HAZARDS**																																	
9.1.1	Seismic		None	-						20.0%																								
9.1.2	Flood Zone		None	-						20.0%																								
9.1.3	Wind Zone		None	-						20.0%																								
9.2	Suspect Mold & Moisture		None	-						20.0%																								
													ANNUAL RECOMMENDATIONS, UNINFLATED		34,534	186,900	1,440	89,738	1,440		1,440		18,727	6,602	50,852	30,000	4,447	22,377	1,440	6,602	1,440		22,476	**$480,455**
													INFLATION FACTOR, IN PERCENTAGE 1.030	100.00%	103.00%	106.09%	109.27%	112.55%	115.93%	119.41%	122.99%	126.68%	130.48%	134.39%	138.42%	142.58%	146.85%	151.26%	155.80%	160.47%	165.28%	170.24%	175.35%	
													ANNUAL RECOMMENDATIONS, INFLATED @ 3.00% AFTER YEAR ONE		**$35,570**	**$198,283**	**$1,528**	**$95,203**	**$1,528**		**$1,528**		**$19,868**	**$7,004**	**$53,949**	**$31,827**	**$6,531**	**$33,848**	**$2,243**	**$10,594**	**$2,380**		**$39,412**	**$541,293**

Note:
Priority 1: Current Critical
Priority 2: Potential Critical
Priority 3: Recommended
Priority 4: Non-Compliant with current standards

PRESENT VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR **$1.78**

INFLATED VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR ***$2.00***

1.0 PURPOSE & LIMITATIONS

The exclusive purpose of this *Capital Needs Assessment* (the *Report*) is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools*, in its Due Diligence effort in evaluating the Property. Amendments to EBI's limitations as stated herein that may occur after issuance of the Re*port* are considered to be included in this *Report. EBI's* liability to the client wishing to use this *Report* is limited to the cost of the *Report*. By accepting draft and final Reports, *Marblehead Public Schools* agrees to these terms and limitations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, easily accessible or made accessible by the property contact and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property. Municipal information was obtained through file reviews of reasonably ascertainable standard government record sources, and interviews with the authorities having jurisdiction over the property. Findings, conclusions and recommendations included in the *Report* are based on our visual observations in the field, the municipal information reasonably obtained, information provided by the Client, and/or a review of readily available and supplied drawings and documents. No disassembly of systems or building components or physical or invasive testing was performed. EBI renders no opinion as to the property condition at un-surveyed and/or inaccessible portions of the Subject Property. EBI relies completely on the information provided during the site survey or provided or obtained during the writing of the draft *Report*, whether written, graphic or verbal, provided by the property contact, owner or agent, or municipal source, or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. EBI assumes no responsibility for property information or prior reports withheld or not provided during preparation of the *Report* for any reason whatsoever. The observations in this *Report* are valid on the date of the survey. EBI uses the date of first occupancy to establish the Subject Property age.

The contents of the *Report* may not represent a detailed analysis by individual consultants of the Subject Property façades, roof, paving, mechanical, electric, plumbing, elevator, sprinkler, or fire and life safety systems depending on the scope of work selected by *Marblehead Public Schools.* The extent of the physical survey for the production of this Report has been limited, by contract and agreed upon Scope of Work, (consistent with the guidelines of the ASTM E 2018 – 15 Scope of Work, as referenced below) to visual observations and a walk through of the property. Assumptions regarding the overall condition of the property have been developed based upon a survey of representative areas of the Subject Property. As such, no representation of *all* aspects of *all* areas or components is made.

Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at the Subject Property. Routine, normal or customary annual maintenance or preventative maintenance items are not reported or included in this *Report*.

Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Short Term Repair, and/or that can't be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

This assessment is based on the evaluator's opinion of the physical condition of the improvements and the estimated expected remaining useful life of those improvements, based on his observations in the field at the time of the survey, and the written or verbal information received. The conclusions presented are based on the evaluator's professional judgment. The actual performance of individual components or systems may vary from a reasonably expected standard and may be affected by circumstances that are not readily ascertainable or viewable, or that occur after the date of the survey.

Where quantities cannot be determined from information provided or physical takeoffs, lump sum estimates or allowances are used. The costs shown are based on professional judgment and the apparent or actual extent of the observed defect, including the cost to design, procure, construct and manage the repair or replacement. Where property-unique or specialty equipment is present, EBI relies solely on data regarding maintenance and/or replacement costs provided by the designated site contact or on-site individuals with first-hand knowledge of the specific equipment.

EBI provides Pre-Survey Questionnaires for completion by the designated site or property contact, as provided by *Marblehead Public Schools* or their agent. The information requested in the questionnaire assists in our research of the Subject Property to obtain pertinent property data, discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs, and pending repairs and improvements. If the completed Pre-Survey Questionnaire is not returned as of this *Report*, this is a limiting factor in our analysis. If the questionnaire is returned at a later date showing a material difference from information provided in the Report, we will forward the questionnaire to you under separate cover. If no response is received, or no material difference is noted in the questionnaire, our Report will not be modified.

EBI may not have been provided with roof design or installation details and may not have been provided with warranty information (see Section 3.4). EBI has relied on general industry performance of similar type roofs and general observations of the surface covering of the roof to determine if roof replacement is warranted during the analysis term. EBI is not responsible for roof failure that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

EBI may not have been provided with façade reports and cannot opine on costs to repair façades of buildings five stories or more without receipt of current façade reports (see *Section 3.3*). EBI has relied on general industry performance of similar façade systems and general observations of the surfaces of the façades to determine if repair or replacement is warranted during the analysis term. EBI is not responsible for façade failures that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

If the municipality in which the Subject Property is located has governing ordinances requiring façade studies, and a copy is not provided to EBI, this is a limiting factor in our assessment and analysis. Prudent property management will have had façade reports completed on their high-rise property, and if a copy of the report is not provided to EBI, this too, is a limiting factor in our assessment and analysis.

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The gathering of data and information for this *Report* was completed in general conformance with ASTM E 2018 – 15 Standard Guide for Property Condition Assessment: Property Condition Assessment Process, and with the scope of services approved by the client.

The survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. The level of care and skill exercised is also commensurate with the fees charged for EBI's services. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The *Report* speaks only as of its date, in the absence of a specific written update of the *Report*, signed and delivered by EBI.

Limiting factors

Any additional information that becomes available after *EBI's* survey and draft submission concerning the Subject Property should be provided to *EBI* so that *EBI's* conclusions may be revised and modified, if necessary, at additional cost. This *Report* has been prepared in accordance with *EBI's Standard Conditions for Engagement*, which is an integral part of this *Report.*

DEVIATIONS FROM THE GUIDE

EBI includes an analysis of estimated Capital Needs in this *Report*. *EBI* uses an approximate threshold of $1,000 in aggregate for reporting Critical & Non-Critical Repair or Replacement Reserve items. Material life, safety, health, fire or building code violation or building or property stabilization issues observed at the Subject Property will be reported regardless of cost.

CONDITION

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

Excellent	The component or system is in new or like new condition and no deferred maintenance is recommended.
Good	The component or system is sound and performing its function, and/or scheduled maintenance can be accomplished through routine maintenance. 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 at a capacity that is considered to be acceptably sufficient but may be obsolete or is approaching the end of its expected useful life. The component or system may exhibit evidence of deferred maintenance, previous repairs, or workmanship not in compliance with commonly accepted standards. Repair or replacement may be recommended in the near-term of the loan to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its expected useful life.
Poor	The component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its typical expected useful life, excessive deferred maintenance or state of disrepair. Present condition could contribute to, or cause, the deterioration of other adjoining elements or systems. Repair or replacement is recommended.

ABBREVIATIONS

EBI may use various abbreviations to describe various site, building or system components or legal descriptions. Not all abbreviations may be applicable to all *Reports.* The abbreviations most often utilized are defined below.

ACT	Acoustic Ceiling Tile
ABS	Acrylonitrile-Butadiene-Styrene
ADA	Americans with Disabilities Act
AHU	Air Handling Unit
APA	American Plywood Association
BTU	British Thermal Unit (a measurement of heat)
BTUH	British Thermal Units per Hour
BUR	Built Up Roof
CFM	Cubic Feet per Minute
CMU	Concrete Masonry Unit
CPVC	Chlorinated Poly Vinyl Chloride
DWH	Domestic Water Heater
EIFS	Exterior Insulating Finishing System
EPDM	Ethylene Propylene Diene Monomer
EUL	Expected Useful Life, Effective Useful Life
FF&E	Furniture, Fixtures & Equipment
FCU	Fan Coil Unit
HCP	Handicapped Person
FEMA	Federal Emergency Management Agency
FHA	Forced Hot Air
FHW	Forced Hot Water
FIRM	Flood Insurance Rate Map
FOIA	Freedom Of Information Act
FOIA	Freedom Of Information Act
FRT	Fire retardant treated plywood
GFI	Ground Fault Interrupt (circuit)
GWB	Gypsum Wall Board
HCP	Handicapped Person
HID	High Intensity Discharge (lighting)
HVAC	Heating, Ventilating and Air Conditioning
KW	Kilowatt
KVA	Kilovolt Ampere
MBH	Thousand BTUs per Hour
MDP	Main Distribution Panel
OSB	Oriented Strand Board
PEX	Polyethylene Cross-Linked Tubing
PTAC	Packaged Terminal Air Conditioning (Unit)
PVC	Poly Vinyl Chloride
RTU	Roof Top Unit
RUL	Remaining Useful Life
TPO	Thermoplastic polyolefin
SEER	Seasonal Energy Efficiency Rating
UBC	Uniform Building Code
VAV	Variable Air Volume box
VCT	Vinyl Composition Tile
VWC	Vinyl Wall Covering

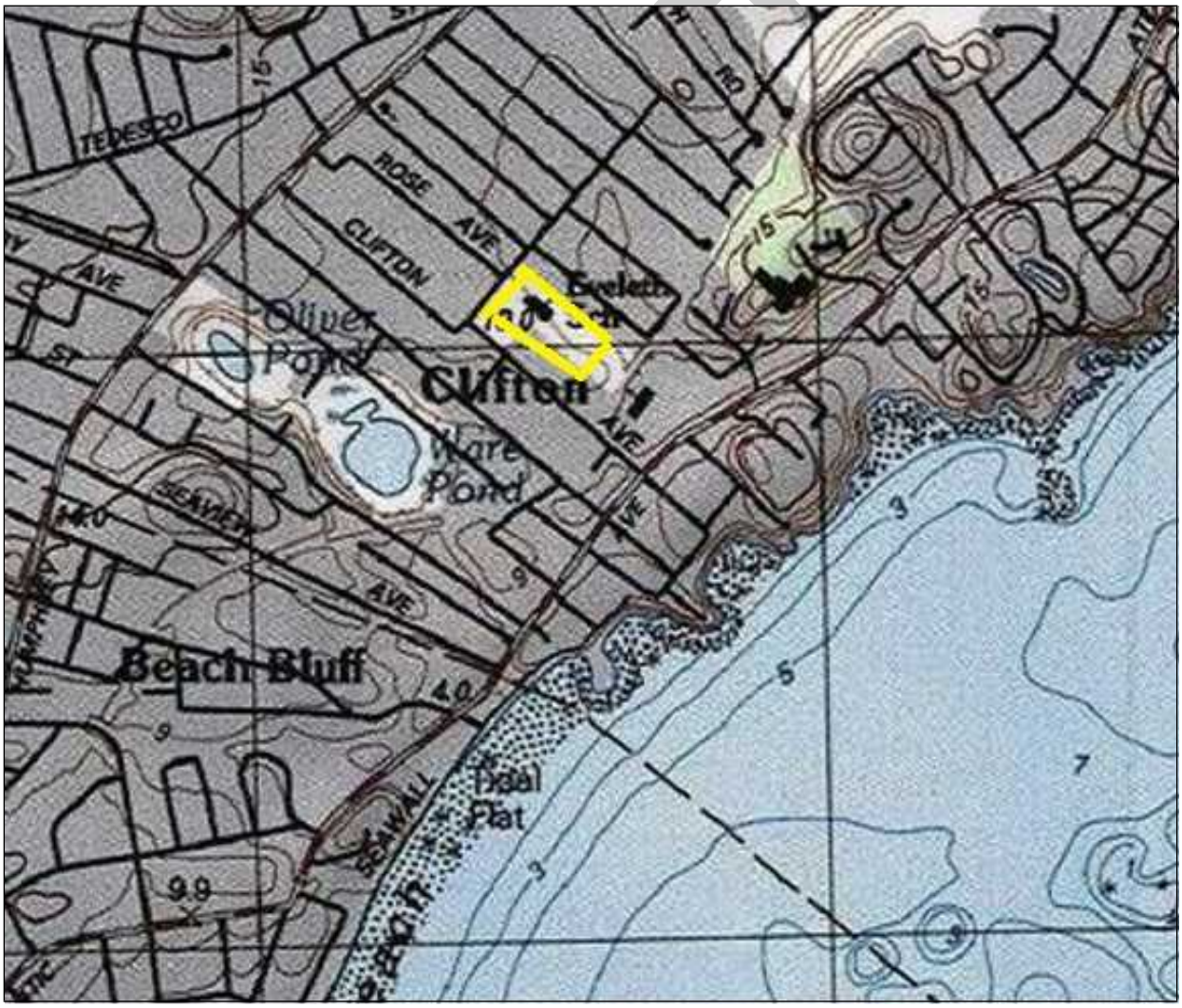
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2.0 SITE

2.1 TOPOGRAPHY & DRAINAGE

DESCRIPTION

The Subject Property is located at an elevation of approximately 25 feet above mean sea level (msl). The topography of the Subject Property is relatively flat with minor slopes to accommodate site drainage. The Subject Property is located in a relatively flat area, and the general slope of the surrounding region is to the southwest (see Topo Map below).



Topographic Map

	
Topography along the northwest property line	Topography along the northeast property line
	
Topography along the southeast property line	Topography along the west property line

OBSERVATIONS

No topography problems were reported or observed. Slopes pitching drainage away from the building appear to be adequate. Detriments or problems such as ground fractures, settlement areas, or evidence of erosion or chronically standing water were not observed. Slopes within parking areas appeared to be adequate for stormwater control.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.2 LANDSCAPING & SITE IMPROVEMENTS

DESCRIPTION

The property has municipally-owned, dense landscaping at the front of the site, and along the southern Subject Property perimeter. Landscaping includes deciduous and evergreen trees, shrubs, ground cover, and lawns.

Asphalt sidewalks are provided for pedestrian traffic. The concrete sidewalks are assumed to be approximately 4-inches in thickness and with steel reinforcement.

Lighting is provided by building-mounted lights providing exterior building lighting around the building and along pedestrian walkways.

The Subject Property has chain link fencing along the southeast perimeter.



Landscaping at the front entrance



Landscaping along the southern perimeter

OBSERVATIONS

The property landscaping appears to be in good condition, although some areas show signs of distress due to typical winter conditions.

The pylon sign at the main entrance is in good overall condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for refurbishment during the analysis term.

The sidewalks appear to be in fair condition with observed areas of deterioration and trip hazards. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for routine concrete sidewalk repairs during the analysis term.

Based on observed and reported conditions, Critical Repairs are recommended for trip hazard repairs.

The exterior light fixtures appear to be in good condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for exterior light fixture replacement during the analysis term.

The fencing along the south property line is in good condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for fencing repairs during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Repair asphalt sidewalk trip hazards**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace building-mounted light fixtures**
- **Repair asphalt sidewalks**
- **Repair fencing**

2.3 PAVEMENT AND PARKING

DESCRIPTION

According to a count in the field, the property is improved with parking areas for 21 cars, including zero accessible space. See *Section 3.6 Americans with Disabilities Act Accessibility Guidelines (ADAAG)* for additional accessible parking information for people with physical disabilities.

The property has approximately 172 feet of drive lane, and the parking is laid out along the drive lane.

The parking areas have asphalt pavement, and the loading areas also have asphalt pavement.

Facilities noted that two areas of asphalt pavement totaling approximately 10,050 square feet were located on the southeast side of the Subject Property.

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Play-yard pavement example	Representative pavement
	
Pavement and parking at front (North) entrance	Representative pavement

OBSERVATIONS

No problems were reported regarding the adequacy of the parking areas.

The asphalt-paved areas are in good to fair condition. Minor cracking, settlement, alligatoring in the pavement were noted in a few locations. Based on observed and reported conditions, Non-Critical Repairs are recommended for patching, crack sealing, sealing, and striping of the asphalt pavement.

Based on its reported age, current condition, and expected useful life, Capital Needs are recommended asphalt overlay, during the analysis term.

The parking area sealant and striping are in good condition, with indications of average wear. The facilities representatives noted that striping was completed within the past two years. Based on the observed condition of the parking and drive areas and the average effective useful life of pavement and pavement sealants and striping, the application of sealants and striping of the parking and/or lane markings are recommended as Capital Needs during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Patching, crack sealing, sealing, and striping of asphalt pavement**

Please see Table 2 for the recommended Capital Needs listed below:

- **Asphalt overlay**
- **Patching, crack sealing, sealing, and striping of asphalt pavement**

2.4 SITE AMENITIES

DESCRIPTION

A gazebo is located on the northwest side of the property.

A wooden pylon sign with the schools name on it is located at the main entrance.

To the southeast of the school building is a playground.



Typical wooden gazebo



Playground example

OBSERVATIONS

The gazebo located at the front of the building appears to be in good overall condition. Based on the reported age, current condition, and expected useful life, Replacement Reserves are recommended for gazebo replacement during the analysis term.

Pylon signage is located at the main entrance and smaller signage is located at the secondary entrances. The pylon signs are supported by wood posts.

The playground equipment appears to be in good condition. Based on the reported age, current condition, and expected useful life, playground equipment, and loose surfacing replacement is recommended as a Capital Need during the reserve term.

RECOMMENDATIONS

Please see Table 1 for the recommended Immediate Repairs listed below:

- **None**

Please see Table 1 for the recommended Short Term Repairs listed below:

- **None**

Please see Table 2 for the recommended Replacement Reserves listed below:

- **Replace 16' gazebo**
- **Refurbishment of the pylon sign**
- **Playground equipment replacement**
- **Playground loose surfacing replacement**

2.5 UTILITIES

2.5.1 Water & Sewer

DESCRIPTION

The *Town of Marblehead water and Sewer Department* provides water and sewer service to the Subject Property site. The sewer is discharged into the municipal lines beneath the abutting street.

2.5.2 Gas/Oil

DESCRIPTION

National Grid provides propane service to the Subject Property. No oil service is provided to the Subject Property.

2.5.3 Electrical

DESCRIPTION

Marblehead Municipal Light Department (MMLD) provides electric service to the site. The service enters the property overhead to a pole at the south side of the site and then runs underground to a panelboard. The utility reportedly owns and maintains the lines up to the building.

2.5.4 Storm Drainage

DESCRIPTION

The stormwater flow from the site is directed by the site topography, resulting in sheet flow dispersal to curbs extending along the perimeter of the parking area and the adjacent road frontages. The buildings' downspouts discharge to the Subject Property topography. The drainage system is the responsibility of the Subject Property owner.

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Incoming water service



Incoming gas service



Equipment Placard



Representative electrical equipment



Aluminum gutter example



Downspouts discharge to the Subject Property topography

OBSERVATIONS

There were no other reported or observed problems with the Subject Property water, sewer, gas, electric, or stormwater drainage systems. The utilities appeared to be configured and operating in a manner consistent with their intended use and reportedly adequate to meet the needs of the Subject Property.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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3.0 STRUCTURE

3.1 GENERAL INFORMATION

Design information was not obtained or provided to *EBI* for review.

3.2 SUBSTRUCTURE

DESCRIPTION

The majority of the Subject Property substructure was not visible due to the surrounding grade. Construction documents were not available for our review. Based on our visual survey the property appears to have cast-in-place, reinforced concrete foundations supporting the exterior walls and load-bearing interior walls and/or columns.

Concrete slabs-on-grade of underdetermined thickness are provided throughout the building. The design and construction of the foundation footings are intended to properly spread out the building's vertical loads without exceeding the bearing capacity of the underlying soil.

The concrete floor slabs are typically reinforced with welded wire mesh or steel reinforcement bars or fiber mesh for added flexural strength and to minimize cracking. The concrete slabs are generally constructed over a compacted gravel or sand base and vapor barrier to aid in preventing water migration from the bearing soil to the slab.

In cold climates, the footings are constructed below the prescribed frost level to minimize movement due to freeze-thaw conditions. Varying sizes of steel reinforcing bars typically exist in the foundation walls and footings for tensile and bending strength.

In cold climates, the slabs and/or foundation walls are often insulated around the perimeter of the building. Foundation wall servings as retaining walls for basement areas of the building generally are constructed with waterproofing and drainage systems to prevent moisture infiltration.

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Representative slab on grade	Foundation view from the east side of the building

OBSERVATIONS

The majority of the Subject Property substructure was not visible due to the surrounding grade. The substructure appears to be sound and in good condition. No indications of problems with the substructure were reported or observed. Unless visible, EBI's assessment of substructure condition is primarily based on obvious irregularities with the superstructures (including limited observations of exterior and interior construction and finishes) and the condition of the slab-on-grade when present. The condition of substructure hidden construction elements, or defects not readily observable, cannot be opined on and is beyond the standard scope of work for this project.

Based on limited observations, the substructures appear to be in good overall condition and are performing as designed. No obvious indications of irregularities, including differential settlement, sloped floors, significant cracks, out-of-plumb building elevations, or other perceived movements, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.3 SUPERSTRUCTURE

DESCRIPTION

Based on *EBI's* visual survey and experience with similar structures, and review of available construction drawings the Subject Property's superstructure consists of steel columns and steel girders supporting steel floor and roof beams The roof structure likely consists of rigid insulation on steel decking, supported by steel beams. Lateral resistance is provided by a combination of floor and roof diaphragms, and interior and exterior braced walls.

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Steel framing connection	Roof framing in the gymnasium/cafe

OBSERVATIONS

The superstructures are partially obscured from view by interior and exterior finishes. Unless visible, EBI's assessment of superstructure condition is predominantly based on obvious irregularities with exterior and interior construction and finishes. Concealed and/or obscured structural systems or connections were not viewed. The condition of the hidden structural defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the superstructures appear to be in good overall condition and appear to be performing as designed. No obvious indications of irregularities, including significant floor and/or roof deflections, significant cracks, noticeably out-of-plumb building elevations, or other perceived structural defects, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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4.0 BUILDING ENVELOPE

4.1 ROOFING

DESCRIPTION

During the site survey, the roof was accessed through a roof hatch and surface-mounted ladder located in a utility room, and representative areas of the roof were observed. *EBI* was not provided with roof design or installation details and was not provided with warranty information. Reportedly, no warranty is in place on the Subject Property roof.

The Subject Property has a low-slope, fully-adhered, 45 mil thick EPDM-membrane roof. Low-slope roof membranes terminate at vertical interfaces (equipment platforms, parapets, and/or facades) with metal or membrane flashings. Roof penetrations are typically flashed with EPDM-membrane.



Representative roof



Representative roof



Representative roof



Representative roof

OBSERVATIONS

In estimating the condition and effective useful life of roofs, *EBI* has relied on general industry performance of similar type roofs and general observations of the surface covering to determine if a replacement is warranted during the analysis term.

During our site visit, the majority of the roof was covered with snow, making observations limited. From the limited observation, the EPDM roof appears to be in fair to poor condition. The roof is a replacement and approximately 25 years old. Roofs of this type typically have an average effective useful life of approximately 15 to 20 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. The roof maintenance consists of mastic touchup and re-coating of seams and roof penetrations every two to three years. Based on the reported age, current condition, and expected useful life, roof replacement is recommended as a Critical Need during the analysis term.

Evidence of presumably active roof leaks in the form of stained ceiling tiles was observed. Facilities noted on-going roof leaks.

Gutters and downspouts observed are in condition. Based on observed and reported conditions Capital Needs are recommended for damaged gutter replacement.

The roof was accessed from an external ladder.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **EPDM roof replacement**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 – Capital Needs for the recommended items listed below:

- **Gutter and downspout replacement**

4.2 FAÇADES

DESCRIPTION

Primary exterior materials consist of a red brick veneer with decorative spandrel panel curtain walls. The southern section of the building is covered in a painted wooden panel.

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Front entrance



Representative west side facade



Representative east side façade with metal-framed curtain wall



Interior look of metal-framed curtain wall



Wooden panel façade on the south side of the building



Representative west side façade with decorative spandrel panel curtain walls

OBSERVATIONS

The estimate of the façade condition is based on limited observation of representative observed areas of the exterior walls and the age of the improvements. Façade observations for a multi-story building are limited to exterior finishes of the ground level façades and those portions of the façades observable from adjacent roof areas or adjacent buildings. This does not represent a comprehensive or in-depth façade survey. Therefore, observations in this *Report* cannot be the sole source of façade analysis. Concealed and/or obscured façade material attachment systems were not viewed. hidden defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this assessment.

The observed areas of the brick veneer appear to be in good overall condition. Based on the age and the condition of the brick exterior walls, it is recommended that a dedicated repair program be instituted for anticipated degradation of the mortar joints and overall exterior wall performance. Walls should be routinely checked for fractured, spalling, or missing mortar joints, and cleaning or tuckpointing of the brick and joints should be performed where necessary as part of routine maintenance.

The observed sealants along the control and panel joints appear to be in good condition overall. Based on the reported age, current condition, and expected useful life, sealant, and control joint renewal is recommended as a Capital Need during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Control joint sealant renewal**

4.3 WINDOWS AND DOORS

DESCRIPTION

Steel-framed single-hung, fixed and hopper windows with single-pane glass are located along all elevations of the building.

The exterior doors consist of average-quality, commercial-grade, dual-leaf, aluminum, and glass doors accessing the lobby areas. Secondary entrances and service doors are dual-leaf aluminum and glass units. Service and access doors are metal. The doors are furnished with standard hardware, and panic hardware was observed at emergency exit doors.

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Representative windows northwest side of the building	Representative windows and external doors East side of the building
	
Typical metal frame hopper window	Typical metal and glass secondary door
	
Aluminum glass main entrance door	Typical hopper and fixed, single pane windows

OBSERVATIONS

Aside from normal wear, the observed doors appear to be in good condition. Door replacement is not anticipated during the analysis term. However, a metal secondary door was observed to be damaged which created gaps at the bottom and recommended for replacement as an immediate repair work item. Based on their observed condition, reported age, and average effective useful life, Critical Repairs are recommended for their replacement during the analysis term.

The curtain wall window systems appeared to be in good to fair overall condition. Several of the windows exhibit failure of the seals between panes and may require painting and renewal of the sealants. The window gaskets are reported to be 61 years old, and the gaskets were cracked, brittle, shrunken, and loose in several locations around the building. Based on observed and reported conditions Critical Repairs are recommended for the repair of damaged components.

Based on their observed condition, reported age, and average effective useful life, Capital Needs are recommended for window glazing during the analysis term. Additionally, based on the reported age, current condition, and expected useful life, window replacement is recommended as a Capital Need during the analysis term.



Cracked, brittle, shrunken, and loose window putty



Damaged metal secondary door

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Window glazing**
- **Replace metal secondary door**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Window glazing**
- **Window replacement**

5.0 Building Interiors

5.1 Basements/Attics/Penthouses

Description

The Subject Property has a partial basement. The basement is located on the west side of the building and used for mechanical purposes. The basement is accessed by fifteen stairs.

No attic spaces are present at the property.



Basement looking south



Stairs to the basement

Observations

There were no reported or observed problems with the Subject Property basement.

Recommendations

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

5.2 Interior Finishes & Components

Description

The interior areas into which entry was made possible by the site contact are finished with average quality materials consistent with similar property use types. The finishes generally consist of the materials listed in the table below.

TYPICAL INTERIOR FINISHES

AREA OR ROOM	FLOOR	WALLS	CEILING
Lobby	Vinyl tile	Glazed brick	Glued acoustic tile
Administrative offices	Vinyl tile	Painted GWB/Painted CMU	Glued acoustic tile
Corridors	Vinyl tile	Painted GWB	Glued acoustic tile
Gymnasium/ Cafeteria	Vinyl tile/wood stage	Painted GWB/Painted CMU	Exposed beams
Classrooms	Vinyl tile	Painted GWB /Painted CMU	Glued acoustic tile
Library	Vinyl tile	Painted GWB/Painted CMU	Glued acoustic tile
Restrooms	Ceramic mosaic tile	Ceramic tile, painted GWB	Glued acoustic tile

The lobby area of the building has vinyl tile, painted GWB and CMU walls, and glued acoustic tile ceilings. Classrooms and cafeteria spaces typically include vinyl tile floors, painted GWB walls, and glued acoustic tile ceilings. Corridor walls include painted CMU walls.



Representative corridor



Representative office



Representative classroom CMU wall



Representative classroom

	
Representative bathroom	Representative bathroom Gymnasium/Cafe

OBSERVATIONS

A representative sampling of the elementary school areas was surveyed. The interior spaces are in good overall condition. Stained ceiling tiles were observed in the classrooms. See Section 4.1 for further details. Based on the observed conditions, Non-Critical Repairs are recommended for the replacement of all stained ceiling tiles.

The corridors were generally in good condition. Based on their reported age and estimated remaining useful life and current condition, corridor refurbishment, including painting the walls and trim, and flooring replacement is recommended as a Capital Need item.

The administrative offices, auditorium, and classrooms were all found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The observed restroom finishes were found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Replace stained acoustical ceiling tiles**

Please see Table 2 for the recommended Capital Needs listed below:

- **Corridor refurbishment**

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6.0 ACCESSIBILITY

DESCRIPTION

The *Americans with Disabilities Act (ADA)*, *Title III*, *28 CFR Part 36*, enacted July 26, 1990 and effective January 26, 1992, governs public accommodation and commercial properties. *Title III* of the *ADA* divides facilities into two basic categories: places of *public accommodation* and *commercial facilities*, with different obligations for each facility type. The provisions of *Title III* provide that persons with disabilities should have accommodations and access to public facilities that are equal, or similar, to those available to the general public. Assessment of any other *Titles*, or their provisions of the *ADA*, including those that govern employer and/or tenant responsibilities, is specifically excluded from this Scope of Work and *Report*. Since tenants and employers at properties are usually responsible for making their leased areas *ADAAG*-compliant, assessment for *ADAAG* compliance in these areas was not completed.

Regardless of a property's age, these areas and facilities must be maintained and operated to comply with the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)*. Facilities initially occupied after the effective date are required to fully comply with the *ADAAG*. Existing facilities constructed prior to this date are held to the lesser standard of compliance as *Title III* calls for owners of buildings occupied prior to the effective date to expend "reasonable" sums, and make "reasonable efforts", to make "practicable" or "readily achievable" modifications to remove barriers, unless said modification would create an undue financial burden on the property or is structurally infeasible. When renovating buildings occupied prior to the effective date, the area renovated, and the path of travel accessing the renovated area, must comply with the *ADAAG*. As an alternative, a *reasonable accommodation* pertaining to the deficiency must be made. The definitions of "reasonable," "reasonable efforts," "practicable." and "readily achievable," are site dependent and vary based on the owner's financial status.

Due to the unique nature of each property, the extent of analysis required, and the many variables of compliance with the *ADAAG* guidelines, the evaluation of costs for full *ADAAG* compliance is beyond the scope of this *Report*. A separate *ADAAG Compliance Audit* may be ordered and may reveal additional aspects of the property that are not in compliance.

For the purposes of this *Report* the survey is limited to visual observations of only a representative sample of areas readily observable or easily accessible, and to those areas set forth in *EBI's Modified Accessibility Compliance Checklist and Costs* included in Appendix C of this *Report*. The survey is limited to identifying potential routine maintenance or renovation actions that can increase accessibility over time and may or may not, achieve full *ADAAG* compliance. Places of *public accommodation* at the Subject Property were visually observed for general compliance with the major requirements of the ADA, taking into consideration the current use of the property, its age, and renovation history. No actual measurements were taken to verify compliance.

Questions concerning the *ADA* and the *ADAAG* may be addressed to the *United States Department of Justice (USDOJ) ADA Hotline* at (800) 514-0301 followed by touching "7" on the touch-tone keypad. Additional information is available online at the ADA.gov website.

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OBSERVATIONS

The Subject Property falls into the *public accommodation* category. Therefore, the Americans with Disabilities Act (ADA), Title III, 28 CFR Part 36, is applicable.
A visual review of the property completed in conformance with *EBI's Modified Accessibility Compliance Checklist and Costs*, identified issues of non-compliance with the *ADAAG.* Modifications to correct observed *ADAAG* deficiencies for the Subject Property and their associated estimated costs are detailed in *EBI's Modified Accessibility Compliance Checklist and Costs* immediately following.

Modifications to correct observed *ADA* deficiencies for the Subject Property and their associated estimated cost are beyond the scope of this assessment. The client should engage an accessibility specialist to determine what modifications, if necessary, are required to bring the property into compliance with *ADA* guidelines.

Except for one accessible car space, no ADA accessibility compliance was observed or reported in the Subject Property building

RECOMMENDATIONS

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Complete ADA compliance upgrades**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Eveleth School
Facility Address: 3 Brook Rd
Marblehead, Massachusetts
Property Age: 61 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

A. SCOPE OF THE ASSESSMENT

FHA		Yes	No	Not Applicable	Applicability of Standard	Assessor Comments
A.3	Were any of the residential buildings constructed for first occupancy after March 13, 1991, **or** was the last building permit issued or renewed after June 15, 1990?			✔		
A.4	Were all apartment buildings originally constructed for residential use?			✔		
A.5	Does at least one of the residential buildings have **four or more dwelling units?**			✔		
A.6	Are any of the residential buildings comprised of 100% townhouse units (two or more stories)?			✔		
Americans with Disabilities Act (ADA)		**Yes**	**No**	**Not Applicable**	**Applicability of Standard**	**Assessor Comments**
A.7	Is a leasing / business office present at the Subject Property?			✔		
A.8	Are there any commercial operations at the Subject Property, such as day care centers, retail spaces, restaurants, etc.?			✔		
A.9	If present, are commercial spaces leased and operated by a party other than the property owner?			✔		

1.0 ADA - Parking and Exterior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
1.1	Does there appear to be sufficient handicapped-accessible parking spaces with respect to the total number of reported spaces?			✔	ADA 208.2						
1.2	At least on in every six accessible spaces is required requred to be van-accessible.			✔	ADA 208.2.4						
1.3	Are accessible car parking spaces 96 inches wide minimum? (Measure from the centerline of the markings.) (NOTE: In Florida accessible spaces must be 144 inches wide minimum)			✔	ADA 502.2						
1.4	Are accessible van parking spaces 132 inches wide minimum? (Exception: Van parking spaces can be 96 inches wide minimum when the access aisle is 96 inches wide minimum.) (Measure from the centerline of the markings.)			✔	ADA 502.2						
1.5	Are there access aisles adjacent to each accessible space, and if present, are they at least 60 inches wide? (Two spaces may share an access aisle that is between them. Exception: Angled van accessible parking spaces must have the access aisle on the passenger side of the accessible space.)			✔	ADA 502.3						
1.6	Do the access aisles adjoin an accessible route? (NOTE: Compliant curb ramps present at head of access aisle, or access aisles flush with sidwalks.)			✔	ADA 502.3						
1.7	Do the **existing** ADA spaces appear to be marked with the International Symbol of Accessibility on a vertically-mounted sign?			✔	ADA 502.6						
1.8	Do the **existing** van-accessible spaces appear to be marked with a sign reading "Van-Accessible"?			✔	ADA 502.6						
1.9	Is the bottom edge of the ISA sign at least 60 inches above the finish grade of the parking space? (NOTE: "VAN ACCESSIBLE" sign can be lower than 60 inches.)			✔	ADA 502.6						
1.10	Are the clear widths of the walking surface of the accessible routes 36 inches minimum?			✔	ADA 403.5.1						
1.11	Are accessible routes free from barriers, such as stairs, steps, or vertical changes greater than 1/4"? (NOTE: a vertical change up to 1/2" is allowable if beveled with a slope no steeper than 1:2. This does not include ramps.)			✔	ADA 303.2, 303.3						
1.12	Do all protruding objects located between 27 inches above the floor and 80 inches above the floor protrude no greater than 4 inches into the circulation path if they do not have protection via a guardrail or other barrier with a bottom edge 27 inches above			✔	ADA 307.2						
1.113	Is the clear opening width of the accessible entrance door at least 32", between the face of the door and the stop, when door is open 90 degrees?			✔	ADA 404.2.3						
1.14	Is the door hardware on exterior access doors to *areas of public accommodation* operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?			✔	ADA 402.7						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Eveleth School
Facility Address: 3 Brook Rd
Marblehead, Massachusetts
Property Age: 61 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

1.15	At accessible entrances, is the door threshold height less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?			✔	ADA 404.2, 303.2						
1.16	Does the accessible route feature a stable, firm, and slip-resistant walking surface?			✔	ADA 502.4						
1.17	If not all entrances are accessible, is there a sign at the accessible entrance with the International Symbol of Accessibility?			✔	ADA 216.6						
1.18	Do all ramps on accessible pathways serving *areas of public accommodation* (including curb ramps) appear to have a slope not exceeding 1:12?			✔	ADA 405.2						
1.19	Do depressed curb ramps on accessible pathways serving *areas of public accommodation* have flared sides with a slope not exceeding 1:10?			✔	ADA 406.3						
1.20	If a ramp has a rise higher than 6", are there handrails on both sides?			✔	ADA 405.8						
1.21	Does the width between railings for ramps on accessible pathways serving *areas of public accommodation* appear to be at least 36 inches?			✔	ADA 405.5						
1.22	Is there a level landing at least 60" x 60" at the top and bottom of each ramp run?				ADA 405.7						
2.0 ADA - Interior Accessible Routes		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
2.1	Are all accessible routes at least 36" wide (32" wide through doorways)?			✔	ADA 403.5.1						
2.2	Do floor surfaces appear to be firm, stable, and slip resistant ?			✔	ADA 40.2, 302.1						
2.3	If carpeting is present, is it securely fastened, with a maximum pile height of 1/2 inch?			✔	ADA 302.2						
2.4	Do all objects on circulation paths through public areas, e.g. fire extinguishers, drinking fountains, signs, etc, protrude no more than 4" into the path, **or** if object protrudes more than 4", is the bottom leading edge at 27 inches or lower above the floor, or 80 inches or higher above the floor?			✔	ADA 307.4						
2.5	Is the door hardware on interior doors serving areas of public accommodation operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?			✔	ADA 404.2.7						
2.6	Are the door threshold heights less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?			✔	ADA 404.2, 303.2						
2.7	**For elevators in areas of public accommodation only:** Is the interior at least 54" deep by at least 36" wide?			✔	ADA 407.4.1						
2.8	**For elevators in areas of public accommodation only:** Are in-car controls no less than 15" and no greater than 48" above the floor, **or** up to 54 inches above the floor for a parallel approach?			✔	ADA 408.4.6, 407.6.1						
2.9	**For elevators in areas of public accommodation only:** Do elevator control buttons appear to be designated by both Braille and by raised standard alphabet characters (mounted to the left of the button)?			✔	ADA 407.4.1.1, 703.2						
2.10	**For elevators in areas of public accommodation only:** Are there audible signals which sound as the car passes or is about to stop at a floor?			✔	ADA 407.4.8						
2.11	**For elevators in areas of public accommodation only: I**s there a two-way emergency communication system within the elevator cab that is push-button activated, and does it providevisual indication that a rescue is on the way?			✔	ADA 407.4.9, 308						
							Total Estimated Cost of Handicapped-Accessibility Compliance Recommendations:				**$0**

7.0 BUILDING SYSTEMS

7.1 PLUMBING

DESCRIPTION

Domestic water service to the building consists of a 2 inch diameter water line which enters from under the slab into the boiler room. Domestic water pressure at the Subject Property is provided by the incoming municipal service.

The observed supply of domestic water piping is copper. Sanitary sewer drain and vent lines were observed as hub and spigot cast iron.

Backflow devices are furnished for the potable water and fire sprinkler systems at the site. The backflow preventers are located in the boiler room adjacent to the water service entrance.

The main gas meter and 4 inch service is located on the south side of the building. Welded and threaded black iron pipe is used for main gas piping throughout the Subject Property. Service lines from the main line are stainless steel to the heating equipment.

Domestic hot water is provided by one, 40,000-BTUH, 40-gallon, *Bradford White* gas-fired water heater. The water heaters are approximately ten years old.

The Subject Property domestic hot water systems are reported as follows:

SUBJECT PROPERTY DOMESTIC WATER HEATERS

MANUFACTURER	FUEL TYPE	CAPACITY	APPROX. AGE	LOCATION
Bradford White	gas	40-gallon	10	Boiler room

Two, 0.5 HP cast-iron sump pumps were observed in the boiler room.

The plumbing fixtures are vitreous china with chrome fittings. The building restrooms contain vitreous china water closets with manual flush valves. The janitor's closet contains a wall-mounted cast iron mop sink. The building contains a vitreous china drinking fountain, located in the corridor.

The student's restrooms are typically furnished with two sinks and two toilets. Each adult restroom contains one sink and one toilet.

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Typical *Bradford White* 40-gallon water heater	Adult restroom example
	
Gas Meter	Water heater and sump pump
	
Rest room	Rest room

OBSERVATIONS

Facilities noted that the domestic water supply piping was contaminated due to lead soldering. The school has been using bottled water for months. Based on its reported age, current condition, and expected useful life, Critical Repairs are recommended for the evaluation of copper piping during the analysis term.

The water closets and urinals were reportedly installed as part of the original construction in 1960. The manual flush valves for the water closets appear to be in good working order. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for the water closets during the analysis term.

The bathroom fixtures observed appeared to be in good condition and in working order. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for on-going repairs during the analysis term.

The water heater is approximately ten years old and in working order. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for replacement during the analysis term.

Sanitary sewer lines were not observable during the site visit. No issues with the sanitary sewer lines were reported.

The sump pumps are approximately ten years old and in working order. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for replacement during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Evaluation of copper piping**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Water heater replacement**
- **Plumbing fixture replacement**
- **Replace submersible sump pump, Cast Iron (1/2 HP)**

7.2 HVAC

DESCRIPTION

A summary of the HVAC equipment at the Subject Property is presented in the table below, followed by a detailed system description.

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HVAC COMPONENTS

Area Served	No. of Units	MFR., Model #	Tons or BTUs	Type of Equipment	Age (years)
Throughout	1	*H.B. Smith, No. 44 Mills*	1740.7 MBH	Retrofitted gas-fired boiler	61

The HVAC systems include low-pressure steam finned-tube radiation located around the outside walls. Unit ventilators with steam heating coil supply fresh air to classrooms, gymnasium, and the library.

The original gas-fired steam boiler utilizes air from the gymnasium as combustion air. Four exhaust fans located within mechanical rooms each serve two classrooms as well as the corridor. Exhaust fans operate when local analog thermostats exceed the thermostat setpoint. Exhaust fans also serve the library. Window air conditioners are used in the administrative areas and the Nurse's office. Classrooms and corridors have operable windows. Toilet rooms are served by ducted exhaust fans.

The heating and ventilation for the HVAC system utilize a computer and pneumatic control system.

Miscellaneous materials are currently being stored in Subject Property mechanical, and boiler rooms making access to the equipment for service and maintenance difficult.



Steam boiler retrofitted with a gas burner



Johnson control panel example

Observations

The school HVAC system was built in 1960. It was retrofitted with a gas-fired burner in 1990, and still utilizes the original heating and ventilating equipment.

The boiler appears to be in good to fair overall condition. Facilities noted problems with the burner causing it to shut down periodically. No major repair has been done to the HVAC system in the last 3 years. The average useful life of boilers of this size and type is approximately 25 to 30 years, depending upon their location, maintenance, and use type, but can be extended with proper maintenance and/or refurbishment to 35 to 40 years. The boilers are reportedly serviced on a regular basis. An interview with facilities indicated the boilers have constant issues with replacement parts not available. Based on their average effective useful life, current condition, and reported maintenance program, replacement of the boilers (*H.B. Smith*) is recommended as a Capital Need during the analysis term.

Facilities noted no building management system is installed in this school. The building is controlled with a combination of a pneumatic and electronic control system using local thermostats. Cycle operation is determined by a time clock. Facilities noted and it was observed that the pneumatic controls are largely failing and generally inoperable. Based on their average effective useful life, current condition, and reported maintenance program, replacement of the pneumatic control system is recommended during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Boiler replacement – per BTUH**

7.3 ELECTRICAL

DESCRIPTION

The main electrical service entrance is rated as a 400-Amp, single-phase, three-wire 120/240-volt main, feeding the meter located within the mechanical room. The observed services are protected by fuse breakers except for one breaker panel installed in the office area. Beyond standard ground rods or grounded connections to major piping systems, additional lightning protection was not observed.

The electrical equipment is made by *Wadsworth*. The equipment was installed in 1960 as part of the original construction. A breaker panel was added to the administration office in 2019.

The Subject Property was observed with copper branch wiring and copper feeder cables. Standard electrical devices, switches, and fixtures consistent with the Subject Property use type were also observed through the building. GFCI fixtures were observed during the survey in the restroom areas.

Lighting in the office areas is mixed with fluorescent and LED fixtures. The fixtures typically are two feet by four feet with T-12 lamps. Mechanical and support area lighting includes fluorescent tube fixtures of varying lengths (typically 4 feet and 8 feet).

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Electric meter



Fuse panel example



Fluorescent lighting example



LED lighting example

OBSERVATIONS

Facilities reported no problems with the electrical system under current use however, breakers are tripped when multiple pieces of equipment are plugged in at the same time. Based on their average effective useful life, current condition, and reported maintenance program, replace circuit breaker (100 amp) as a Capital Need during the analysis term.

The property's main electrical panelboard was installed in 1960. The breaker panels are outdated and problematic. Repairs to the panels are complicated because parts are nearly impossible to find. Based on their average effective useful life, current condition, and reported maintenance program, replacement of the panels as a Capital Need during the analysis term.

Facilities reported that an infrared (IR) survey of the building's electrical components has not been conducted in the last 5 years. Based on the age of the building and electrical components, Critical Repairs are recommended for an IR survey.

Infrared (IR) surveys are done by either electricians or testing firms specializing in this work using an infrared camera (thermal imaging) to detect relative "hot spots" in switchgear panels and breaker panels. The "hot spots" indicate higher resistance in wires, normally at connection points, and thus indicate areas that may not have proper connections between wires and termination points. The normal course of action if a "hot spot" is detected is to check the torque on the screws/bolts that hold the wire to the panel connection, as well as clean off any oxidation on the wire. Once a firm completes their survey, they typically affix inspection tags to the switchgear and breaker panels, noting the firm name and the date of testing, as well as supplying a written report to the property owner documenting their findings and the corrective action is taken.

GFCI receptacles were observed consistently in the restrooms and breakroom sink areas.

The property's main electrical disconnect switches were installed and manufactured either before or in the 1970s. The disconnect equipment is therefore 35 years of age or older, and procurement of spare parts is difficult for most of the equipment. Based on the observed condition of the disconnect switches, and the average effective useful life of main power disconnects; replacement of the main electrical switches is recommended as a Critical Need over the analysis period.

There were no other reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Perform IR survey**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace Breaker panels**

7.4 BUILDING & SITE FIRE & LIFE SAFETY

DESCRIPTION

The Subject Property has hardwired with battery-backup smoke detectors, pull stations at entrances to building entrances, illuminated exit lights with battery-backup along exit paths, horn/light annunciators in common area restrooms and corridors, and fire extinguishers spread throughout the building.

The Subject Property is equipped with an automated emergency defibrillator (AED) near the front desk and an eyewash station in the boiler room.

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Fire extinguisher with valid tag



Typical pull station



Typical illuminated exit sign



Emergency defibrillator

OBSERVATIONS

The fire extinguishers are reportedly inspected annually, were last inspected in June 2020, and appear to be in serviceable condition.

The emergency exit doors and panic hardware appear to be in serviceable condition. The doors are to swing-open into the direction of emergency egress.

Illuminated exit signs are located at the entry doors to the emergency exits and appear to be in serviceable condition. The exit signs are recommended for an annual inspection, and inoperative lamps replaced as required as part of routine maintenance operations.

RECOMMENDATIONS

Please see Table 1 for the recommended Immediate Repairs listed below:

- **None**

Please see Table 1 for the recommended Short Term Repairs listed below:

- **None**

Please see Table 2 for the recommended Replacement Reserves listed below:

- **None**

7.5 ELEVATORS AND CONVEYING SYSTEMS

DESCRIPTION

The Subject Property has no elevators.

OBSERVATIONS

Not applicable.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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8.0 Municipal Research

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed, and state, county, or local municipal departments consulted. Documentation applicable to the Subject Property in those departments was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

MUNICIPAL REFERENCES				
Resource	**Contact**	**Information Provided**	**Phone or Web**	**Date**
Town of Marblehead Assessor	online	Property ownership & size information	https://www.marblehead.org/assessors-office	1.17.2021
Town of Marblehead Building/Inspections Department	online	Code compliance & violations	https://www.marblehead.org/building-inspection-department	1.24.2021
Town of Marblehead Planning & Zoning	online	Zoning information	https://www.marblehead.org/zoning-board-appeals/pages/zoning-laws-regulations	1.24.2021
Town of Marblehead Fire Department	online	Fire history & code violations	https://www.marblehead.org/fire-department	1.24.2021

8.1 Municipal Information & Zoning

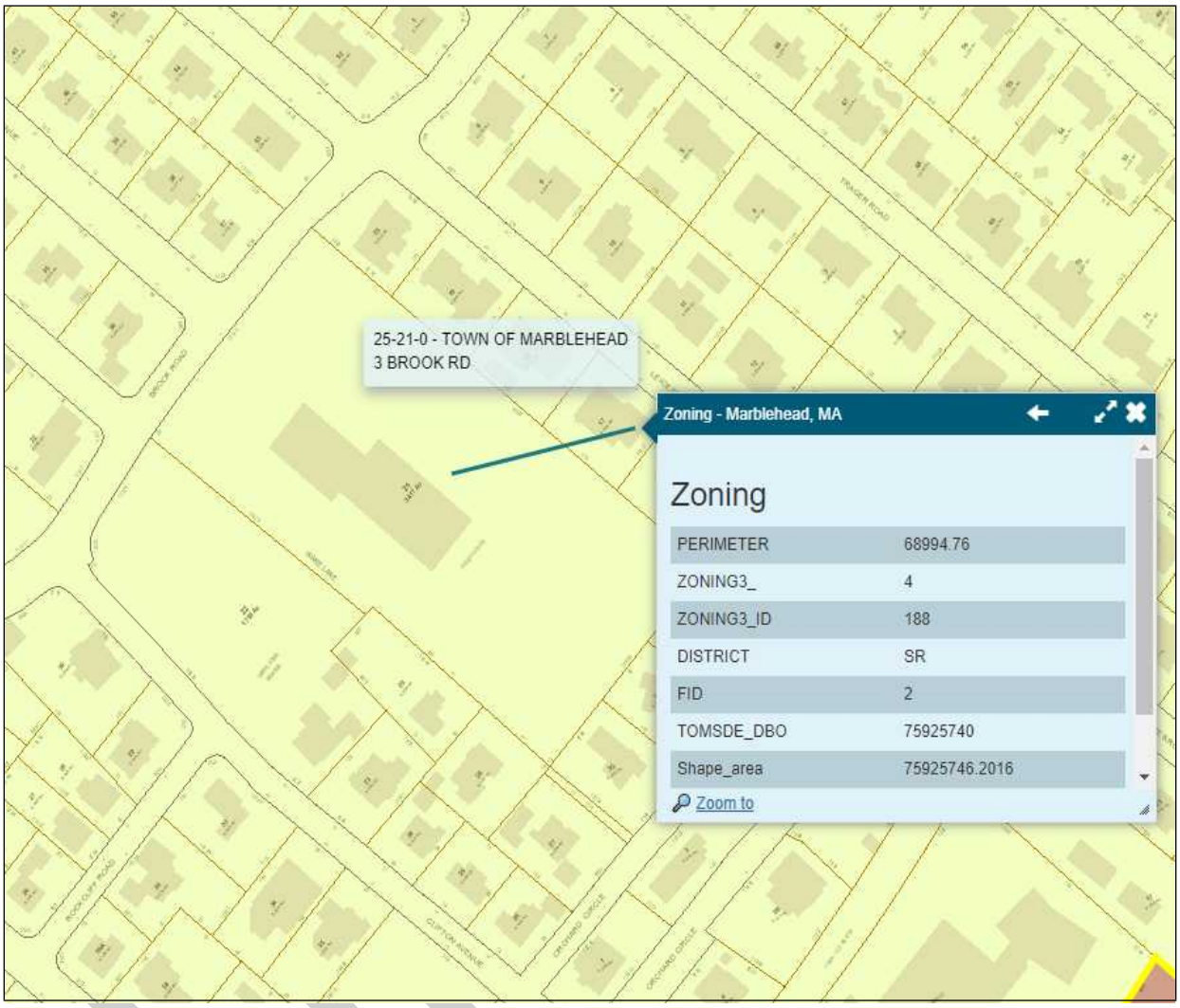
Municipal Information

Readily available, reasonably ascertainable, and publicly viewable municipal records at the *Town of Marblehead* were reviewed on-line.

Zoning

The municipal zoning office personnel were consulted, the zoning office files were reviewed, and/or the zoning ordinance was reviewed to determine the zoning of the Subject Property. According to the information provided, the Subject Property is currently located within an *SR, Single Residence* district and appears to be a conforming use.

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Zoning Map

8.2 BUILDING & PLANNING DEPARTMENT

The Municipal Building and Planning Departments were consulted for open material violations, and to obtain, readily available, reasonably ascertainable, and publicly viewable documents regarding the Subject Property.

CONCLUSION

The department interviews and/or file reviews do not show open material violations on the Subject Property.

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material

violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, our *Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

8.3 FIRE DEPARTMENT

The local fire department was consulted for open material violations.

CONCLUSION

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, *EBI's Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

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9.0 HAZARDS

9.1 NATURAL HAZARDS

DESCRIPTIONS

9.1.1 Seismic

Chapter 16 of the 1997 edition of the Uniform Building Code (UBC) was reviewed to determine the Seismic Zone of the Subject Property. Chapter 16 includes calculations for and mapping of earthquake (seismic) loads on structures. Figure 16-2, Seismic Zone Map of the United States delineates differing ratings of seismic load and shows the United States having seismic Zones ranging from 0 to 4. These ratings indicate the severity of how horizontal ground motion and sub-surface soil types affect a structure.

9.1.2 Flood Zone

The Federal Emergency Management Agency (FEMA) maps and rates flood hazard zones throughout the United States. These zones are depicted on a Flood Insurance Rate Map (FIRM), designated by Community Map and Panel numbers. The flood hazard zones range from Zone A or AE (A1 – A130), with Base Flood Elevations (BFE) determined, to Zone X, unshaded areas outside the 500-year floodplain. EBI utilizes *CoreLogic's* FloodInsights mapping system, which searches the FEMA FIRM map and panel, to obtain the Flood Zone Determination of the Subject Property.

9.1.3 Wind Zone

FEMA maps and rates wind hazard zones, Special Wind Regions, and Hurricane-Susceptible Regions throughout the United States. These zones are depicted on a Map of Wind Zones in the United States on FEMA's website – www.fema.gov/fima/tsfs13.shtm and http://www.fema.gov/graphics/library/wmap.gif.

CONCLUSIONS

9.1.1 Seismic

According to Figure 16-2 in the *UBC*, the Subject Property appears to be located in Zone 2A, with a low to moderate probability of damaging ground motion.

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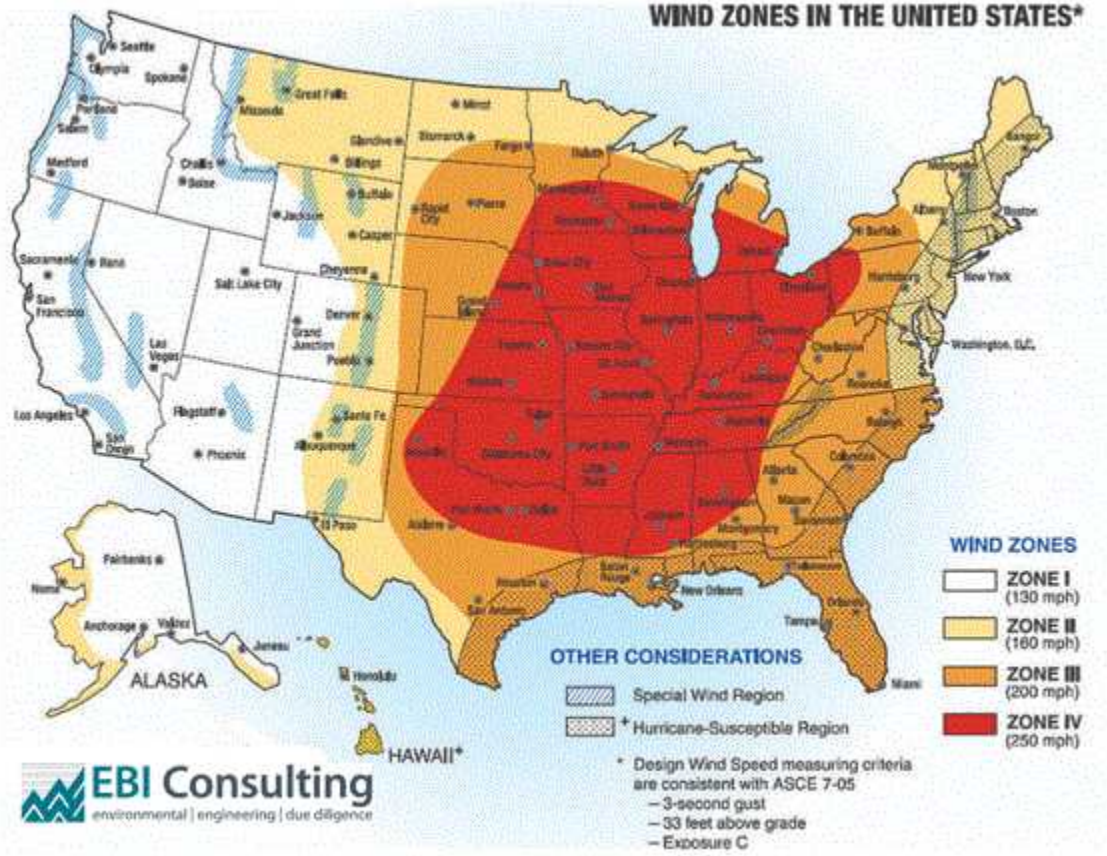


9.1.2 Flood Zone

The Subject Property Flood Zone Determination appears to be Zone X, defined as an area outside the 100- and 500-year floodplains, as shown on First American Flood Data Services' Flood Hazard Certification, Community Map #250091, Panel #0532G, dated July 16, 2014.

9.1.3 Wind Zone

Based on FEMA's Map of Wind Zones in the United States, the Subject Property appears to be located in Zone II, up to 160 mph winds. The Subject Property appears to be located in a Hurricane Susceptible or a Special Wind Region. However, the Subject Property is not located in a Special Wind Region.



9.2 SUSPECT MOLD AND MOISTURE

Interior areas of the Subject Property buildings to which access was provided, and in which building elements were readily observable, were reviewed for the presence of moisture and visible or olfactory evidence of microbial development (suspect mold). No observations were conducted within concealed locations (construction elements behind wall and ceiling finishes, and other building components, etc.). No sampling or testing was performed to confirm the presence of invisible airborne microbial elements. In addition to *EBI's* observation efforts, property personnel did not indicate the presence of moisture or suspect mold during the survey, or in *EBI*'s Pre-Survey Questionnaire.

Representative Subject Property observations and interviews revealed no obvious visual or olfactory indications of the presence of suspect mold activity. However, indications of active moisture infiltration were noted in the areas of stained ceiling tiles. Repairs to this area to address moisture infiltration are discussed under other sections of this *Report*, which are directly related to the apparent causes of the infiltration. No additional recommendations concerning moisture are made at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

10.0 REFERENCES

10.1 CONTACTS

DESCRIPTION

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed for information concerning the Subject Property. Documentation applicable to the Subject Property was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Director of School Facilities, *Town of Marblehead*	Todd Bloodgood	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021
Electrician - Facilities, *Town of Marblehead*	Mike Ellconus	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021

10.2 PERTINENT INFORMATION PROVIDED OR OBTAINED

EBI's Pre-Survey Questionnaire was forwarded to the designated property contact. The information requested in the questionnaire assists in *EBI's* research of the property to obtain pertinent property data; discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs; and pending repairs and improvements. The Pre-Survey Questionnaire was completed on site with escorts.

The following information was provided and reviewed on a cursory basis as background information of this report:

EXHIBITS RECEIVED AND REVIEWED	YES	NO	DESCRIPTION/COMMENTS
1. A.L.T.A. Survey		X	Not provided
2. Legal Description of the Property	X		Obtained by EBI
3. Location Maps	X		Obtained by EBI
4. Project Specifications		X	Not provided
5. Soils Report		X	Not provided
6. Local Building Code Compliance		X	Request submitted by EBI
7. Date of Permits and Cert. of Occupancy for Each Building		X	Request submitted by EBI
8. Building Plans:			
a. Architectural		X	Not provided
b. Structural		X	Not provided
c. Mechanical		X	Not provided

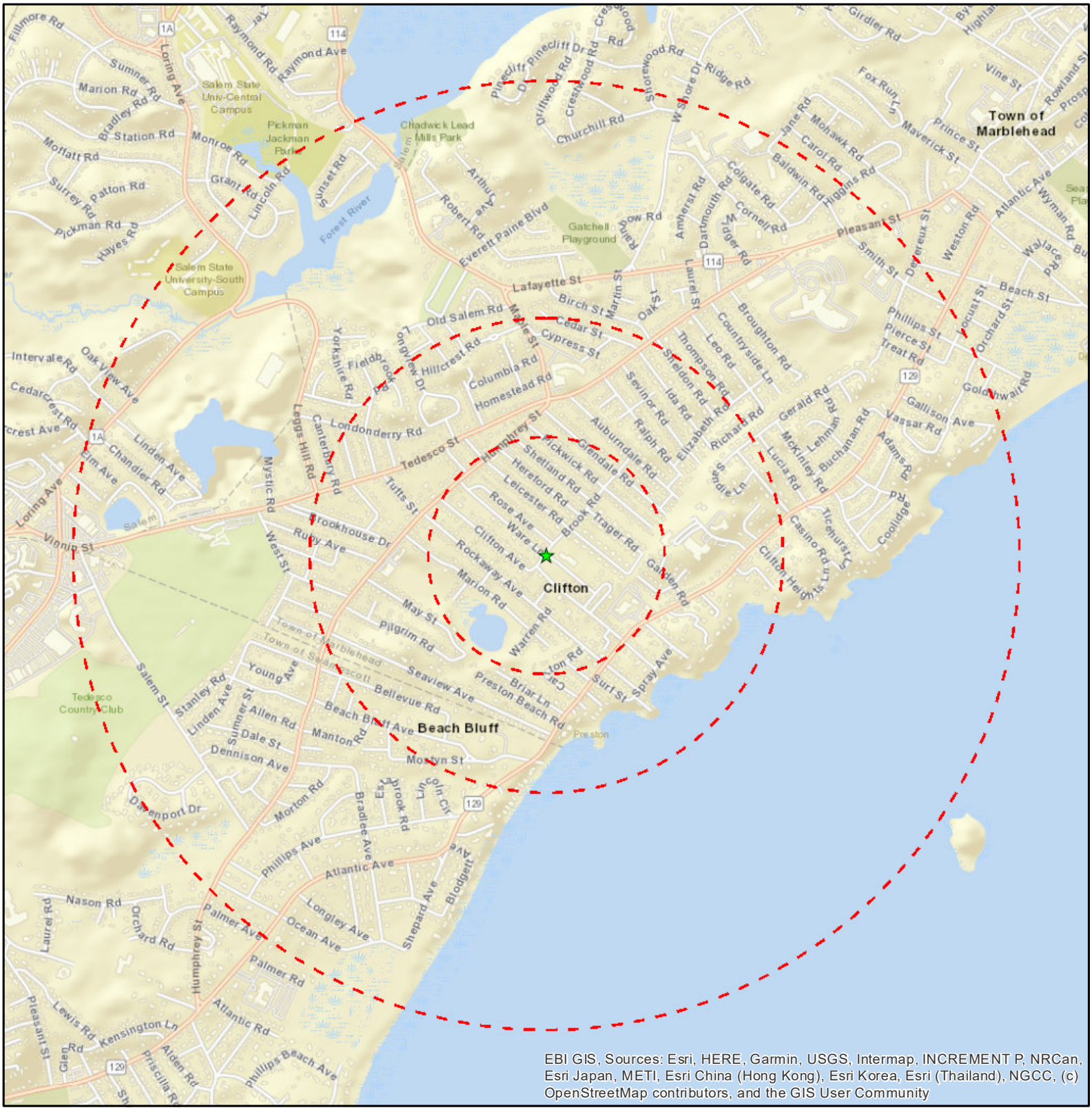
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d. Electrical		X	Not provided
e. Plumbing		X	Not provided
9. Owner's Repair List and Cost Breakdown		X	Not provided
10. Other			

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APPENDIX A - FIGURES, DRAWINGS AND PLANS

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Legend

- ★ Project Site
- Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

Date: 2/8/2021

Figure 1: Site Location Map

NULL EVELETH SCHOOL
3 BROOK RD
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000044

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Legend

- Project Site
- Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

USGS 24K Quad: Lynn, MA 1986, Marblehead South, MA 1986

Date: 2/8/2021

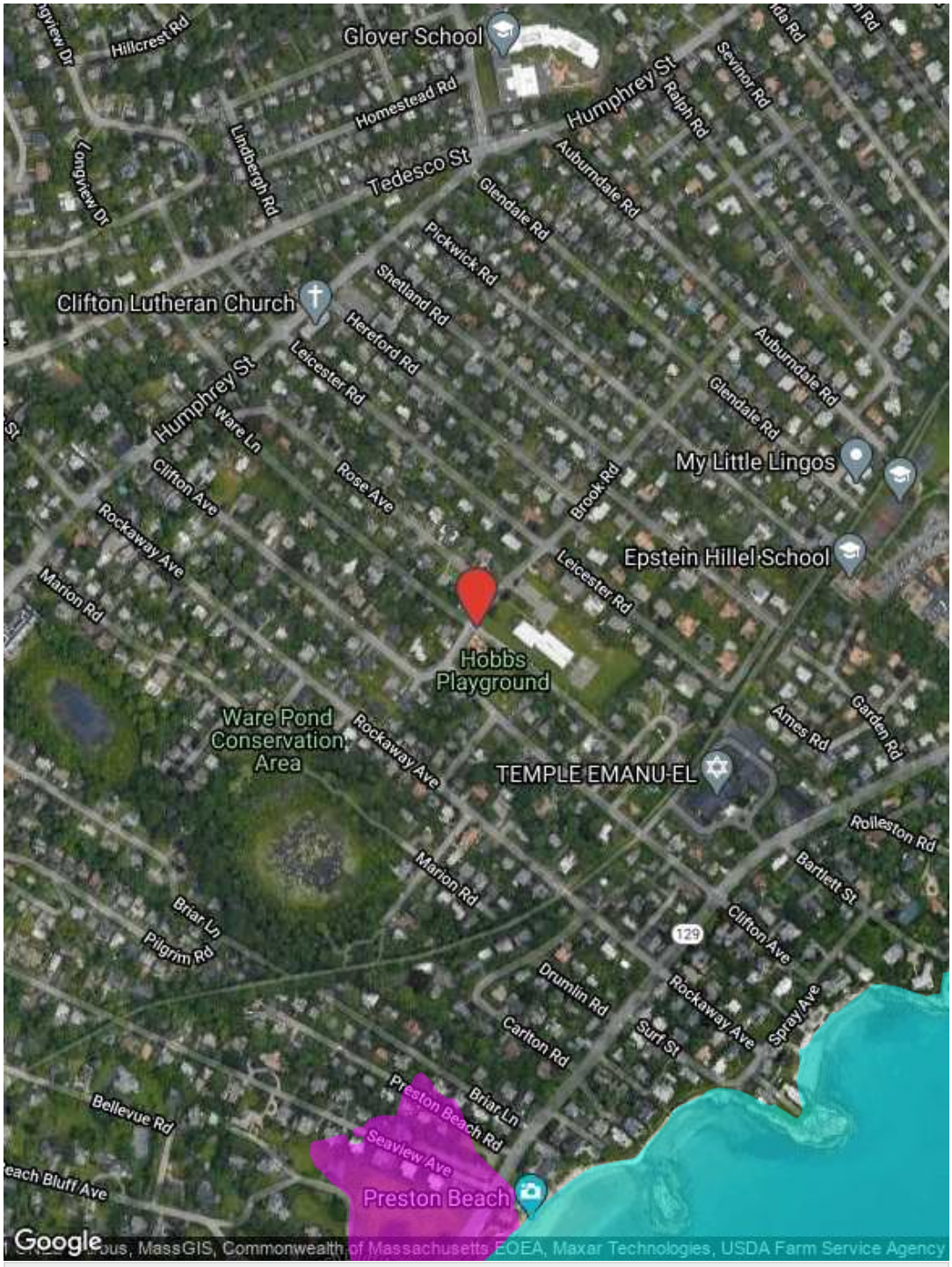
Figure 2 - Topographic Map

NULL EVELETH SCHOOL
3 BROOK RD
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000044

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Overview Map



Flood Zones: X500 or B Zone | A Zone | V Zone | D Zone | Floodway | CBRA

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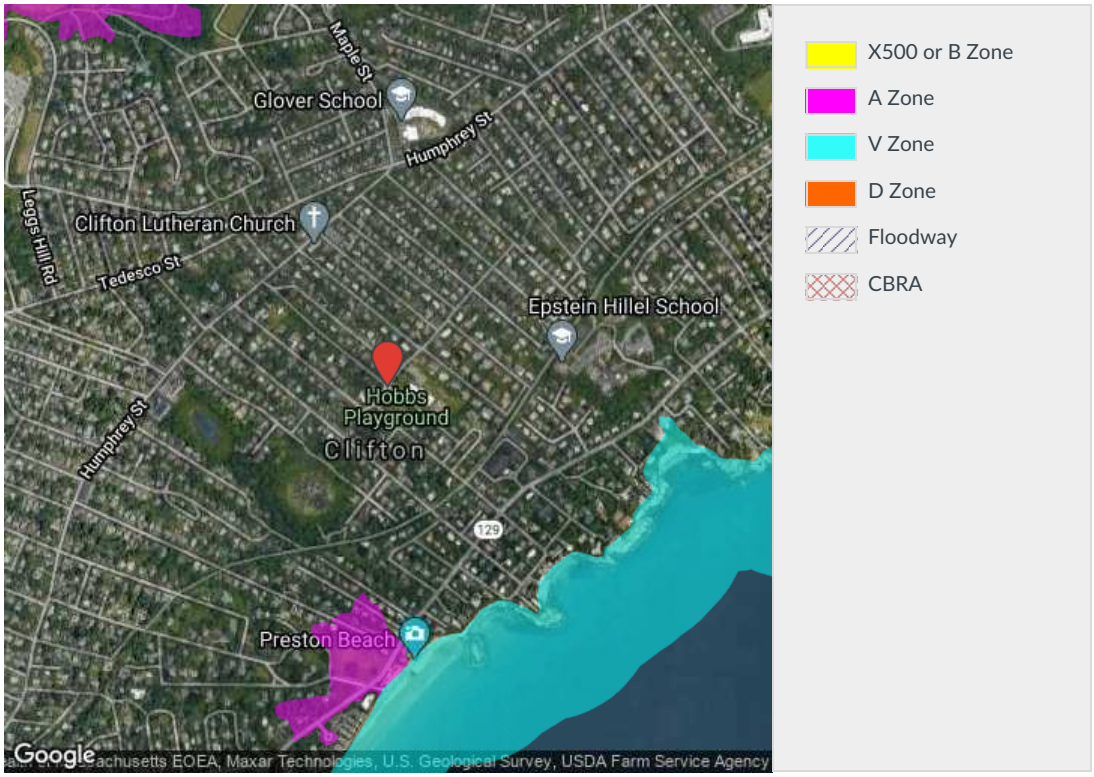
LATITUDE: 42.484636, LONGITUDE: -70.880120

LOCATION ACCURACY: *User-defined location* **LATITUDE:** 42.484636 **LONGITUDE:** -70.880120 **MATCH CODE:** **SOURCE:** **CENSUS BLOCK ID:** 250092031005010

Flood Zone Determinations Report

Flood Zone Determinations: OUT

SFHA (FLOOD ZONE)	OUT	**WITHIN 250 FEET OF FLOOD ZONE**	NO
FLOOD ZONE	X	**COMMUNITY**	250091
COMMUNITY NAME	MARBLEHEAD, TOWN OF	**PANEL**	0532G
PANEL DATE	July 16, 2014	**COBRA**	OUT
MAP NUMBER	25009C0532G	**FIPS CODE**	25009



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APPENDIX B - OTHER RELEVANT DOCUMENTS

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APPENDIX C - PROFESSIONAL QUALIFICATIONS

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Don Gerardi
Acquisitions Senior Project Manager
21 B Street
Burlington, MA 01803
Office: 508.713.3109

Summary of Experience

Mr. Gerardi has 24 years of experience in the field of facilities systems engineering. His facilities work includes project management for medical, multifamily, healthcare, assisted living, office, residential, universities, K-12, government facilities both in the United States and abroad. Mr. Gerardi performed Property Condition Assessments (PCA) and Physical Needs Assessments (PNA) for a diverse array of buildings and properties throughout the United States and abroad. Mr. Gerardi is knowledgeable with local and federal building codes, ADA requirements, and Fair Housing guidelines. Mr. Gerardi managed and performed Property Condition Assessments of numerous properties including retail, office, commercial, hospitality, industrial, residential, and assisted living facilities throughout the United States and abroad. Mr. Gerardi has experience in the equity-scope due diligence arena primarily in the engineering field and specializes in mechanical systems with mechanical engineering discipline and the construction industry. Mr. Gerardi remains active and up to date on the latest practices in his profession through continuing education seminars and training, including construction methods and practices. Mr. Gerardi is knowledgeable with ASTM Standard Guide for Property Condition Assessments, Fannie Mae and Freddie Mac protocols, accessibility standards including FHAA and ADA, and ASTM Standard Guide for Seismic Risk Assessment of Buildings.

Relevant Project Experience

STATE OF NEW MEXICO MANAGEMENT DIVISION, NM

Physical Needs Assessment, Capital Needs Assessment, Energy Audit & Section 504 Compliance
Facility Assessments including multi-story office buildings, medical facilities, correctional compounds, academic and administrative structures and support facilities. Properties ranging in age from 2 to more than 100 years old.

LAS VEGAS SCHOOL SYSTEM, CLARK COUNTY, NV

Facility Condition Assessment, Building Condition Assessment, Capital Improvement Plan Database
Assessing condition of buildings, maintenance facilities, parking and paving, and recreational facilities. Five-Year Capital Facilities plan. Prioritization of required repairs and cost estimates for each repair. Estimates for new program needs within existing structures and a projection for additional space needs due to anticipated increases in enrollment.

FIRSTENERGY CORP, MULTI STATE LOCATIONS, MD, NJ, OH, PA, WV

Capital Planning Database, Facility Condition Assessments
5-year Facility Condition Project (FCA) identifying future funding needs and assisting in development of First Energy's annual management budget.

Capital Planning Projects:

- University of Alabama
- University Texas A&M
- Baylor University
- New Mexico Corrections Department (Albuquerque, Santé Fe, Grant, Los Lunas, Las Cruces)
- Bureau of Indian Affairs
- State of Vermont
- Central California Women's Facilities (Sacramento, San Francisco, San Jose, Chowcilla, Corona)

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Don Gerardi
Acquisitions Senior Project Manager
21 B Street
Burlington, MA 01803
Office: 508.713.3109

- Canadian Defense MOD, Eagle Plains, Yukon Territory, Canada
- United States Government Facilities
- Deutsche Bank (Kuala Lumpur, Vietnam, Milan, Madrid, Malaga, Valencia)

Facilities Condition Assessment:

- Columbus Plaza – Chicago, Il
- New Jersey Housing Authority
- Baltimore Housing Authority
- Clark County School District, Clark County, NV
- Mount Vernon Place, Atlanta, Ga (IBM)
- Union Station, Seattle, WA

Property Needs Assessment:

- Elizabeth Housing Authority, Elizabeth, NJ
- Eversource – Massachusetts Natural Gas

Other related experience:

- Construction Project Monitoring
- ADA Condition Assessments (Level 2)
- A&E Project Management
- Facility Condition Assessments
- Maintenance Management

Due Diligence Consulting Includes:

- Assessments in 44 states and 5 countries.
- Assessments of multiple hotel, residential, resort and cruise ship properties.

Education

Bachelor of Science, Mechanical Engineering, Worcester Polytechnic
Associate, Structural Engineering, Worcester Polytechnic
Associate, Business Administration, University of Tennessee, Martin TN

Professional Registrations

Professional Engineer, Massachusetts, 2009

Professional Affiliations

The American Society of Mechanical Engineers (ASME)
Institution of Mechanical Engineers (IME)
Structural Engineers Association of Massachusetts (SEAMASS)
Massachusetts Building Commissioners and Inspectors Association
Southern Massachusetts Building Officials Association

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

SUMMARY OF EXPERIENCE

Mr. Davis has in excess of 37 years experience in real estate development and due diligence. He has performed a wide range of inspections including Physical Needs Assessments per Fannie Mae, Freddie Mac & HUD protocols, Property Condition Assessments to ASTM and custom protocols and Property Condition Equity Evaluations for acquisition. In addition, he has performed and managed a variety of detailed engineering investigations including infra-red roof studies, façade investigations, structural studies, MEP and fire and life safety studies. In total over the past ten years, Mr. Davis has performed more than 500 site surveys and detailed investigations and directed more than 7,500 due diligence assessments for clients.

As senior technical lead on over 50 portfolios, both nationwide and international, he has worked closely with clients to provide timely analysis and critical insight as they make their business decisions on each project. With portfolios ranging in size from 20 locations to over 600 sites, and property types including hospitality, restaurant, retail, office, industrial, and skilled nursing, Mr. Davis has successfully provided progress information on issues and each portfolio was completed on or ahead of schedule.

Mr. Davis' background includes managing design, construction, and engineering projects in over twenty states and five provinces in Canada. His experience as a consultant, owner's representative, contractor and code official brings a unique perspective to each project.

RELEVANT PROJECT EXPERIENCE

Projects on which Mr. Davis has been involved include Assessments for:

- The World Trade Center, Long Beach, California
- Anaheim Garden Walk Mall, Anaheim, California
- Boca Raton Resort and Corporate Center, Boca Raton, Florida
- Inter-Continental Hotel, New Orleans, Louisiana
- Bethesda Hotel & Conference Center, Bethesda, Maryland
- Westin Resort Properties, Puerto Vallarta, Mexico
- The Cosmopolitan, Las Vegas, Nevada (2,900 room resort)
- University Mall, North Carolina (BOMA Lease Study)
- 900 North Michigan Avenue, Chicago, IL (Constrcution Monitoring)
- Numerous large-scale retail, office, multi-family residential, hospitality, healthcare and other commercial facilities

Several large property portfolios, including:

- 8 hospitality property portfolios (ea. 75 to 600 sites)
- 10 retail/office/industrial property portfolios (ea. 100 to 335 sites)
- 3 restaurant property portfolios (ea. 150 to 530 sites)
- 7 assisted living, skilled nursing, and full nursing home property portfolios (ea. 50 to 140 sites)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

- Miscellaneous portfolios including gas service station, self-storage, resort, manufactured home and other portfolios in the US and Canada (ea. 25 to 125 sites)

EDUCATION

Bachelor of Science in Building Sciences, Rensselaer Polytechnic Institute, Troy, NY (1976)
Graduate Coursework, Architectural Design – Drexel University, Philadelphia, PA (1980)

CAPITAL NEEDS ASSESSMENT



Prepared for:

Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945



Coffin School

1 Turner Rd
Marblehead, Massachusetts

EBI Project No. 1320000045

March 29, 2020

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www.ebiconsulting.com

March 29, 2020

Ms. Michelle L. Cresta
Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945

Subject: Capital Needs Assessment, Coffin School
1 Turner Rd, Marblehead, Massachusetts
EBI Project #1320000045

Dear Ms. Michelle L. Cresta:

Attached please find our *Capital Needs Assessment*, (the *Report*) for the above-mentioned asset (the Subject Property). During the property survey and research, our property surveyor met with agents representing the Subject Property, or agents of the owner, and reviewed the property and its history. The *Report* was completed according to the terms and conditions authorized by you. The gathering of data and information for this *Report* has been completed in general conformance with ASTM E 2018 – 15.

The exclusive purpose of the *Report* is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools* in its Due Diligence effort in evaluating the Property.

This *Report* was performed utilizing methods and procedures consistent with established commercial practices and in conformance with industry standards. The suggestions represent *EBI's* opinion based on written, graphic, or verbal information, the property condition, and data available to us at the time of the survey. Factual information regarding operations, conditions, or data provided by the Client, occupants, owner, or their representative has been assumed to be correct and complete.

The *Report* speaks only as of its date in the absence of a specific written update of the *Report* signed and delivered by *EBI Consulting*.

EBI Consulting is an independent contractor, not an employee of either party to this transaction, and its compensation was not based on the findings or recommendations made in the *Report* or on the closing of any business transaction.

Thank you for the opportunity to prepare this *Report* and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully submitted,

Don P. Gerardi Jr, PE.
Acquisitions Senior Project Manager
dgerardi@ebiconsulting.com

Dennis L. Davis 918.924.1642
Reviewer/Equity Services, National Program Director
ddavis@ebiconsulting.com

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EXECUTIVE SUMMARY TABLE

Property Name:	**Coffin School**	*Property Type:*	**School**
Address:	**1 Turner Rd**	*Property Age:*	**73**
City and State:	**Marblehead, Massachusetts**	*No. of Units or Tenants:*	**1**
Site Survey Date:	**February 9, 2021**	*Square Feet:*	**30,000**
Report Date:	**March 29, 2021**	*Analysis Term (Yrs.):*	**20**
EBI Project #:	**1320000045**		

Section #	Section Name	Critical Repairs	Non-Critical Repairs	Capital Needs
2.0	**SITE CONDITIONS**			
2.1	Site Features			
2.2	Landscaping & Site Improvements	$2,665		
2.3	Pavement and Parking		$9,316	$69,214
2.4	Site Amenities			$70,567
2.5	Utilities			
3.0	**STRUCTURE**			
3.1	Substructure	$6,600		
3.2	Superstructure			
4.0	**BUILDING ENVELOPE**			
4.1	Roofing			$92,907
4.2	Facades			$5,428
4.3	Windows & Doors	$226,399		$67,712
5.0	**BUILDING INTERIORS**			
5.1	Basements/Attics/Penthouses			
5.2	Interior Finishes & Components			$225,793
6.0	**ACCESSIBILITY**			
6.1	Accessibility Compliance	$12,000		
7.0	**BUILDING SYSTEMS**			
7.1	Building Plumbing	$3,000		$30,960
7.2	HVAC		$24,000	$409,198
7.3	Building Electrical	$4,784		$11,003
7.4	Building & Site Fire/Life Safety	$5,400		$8,317
7.5	Elevators & Conveying Systems			
8.0	**MUNICIPAL RESEARCH**			
8.1	Municipal Information & Zoning			
8.2	Building & Planning Department			
8.3	Fire Department			
9.0	**HAZARDS**			
9.1.1	Seismic			
9.1.2	Flood Zone			
9.1.3	Wind Zone			
9.2	Suspect Mold and Moisture			
	TOTALS:	**$260,848**	**$33,316**	**$991,098**

	Dollars per sf/yr	Dollars per unit/yr	
Present Value of Capital Needs Cost Estimate	$1.65183	$49,554.90	$991,098
Inflated Value of Capital Needs Cost Estimate	*$1.85197*	*$55,559.13*	*$1,111,183*
Critical Repairs Cost Estimate	$260,848		
Non-Critical Repairs Cost Estimate		$33,316	
Total Deferred Maintenance Cost Estimate, After Multiplier	$294,165		

EXECUTIVE SUMMARY

PROPERTY DESCRIPTION

The Subject Property, known as Coffin School, is located in Marblehead, Massachusetts at 1 Turner Rd in Essex County. The Subject Property was reportedly constructed in 1948 with an annex added in 1962. The Subject Property consists of a two-story approximately 30,000-gross square foot[1] elementary school building located on a 1.61-acre lot.

The elementary school building is irregular-shaped. The original construction has rough dimensions of 223 feet in length and 40 feet in depth. The annex has rough dimensions of 111 feet in length and 45 deep in depth.

The interior of the property is laid out with the main lobby at the south entrance and common corridors providing access to classrooms, offices, and the combination space.

The Subject Property building systems are antiquated and considered unsafe due to their age also the components are typically not readily available for systems of the age of this building. The site-representative stated the building is scheduled for decommissioned within 2021.

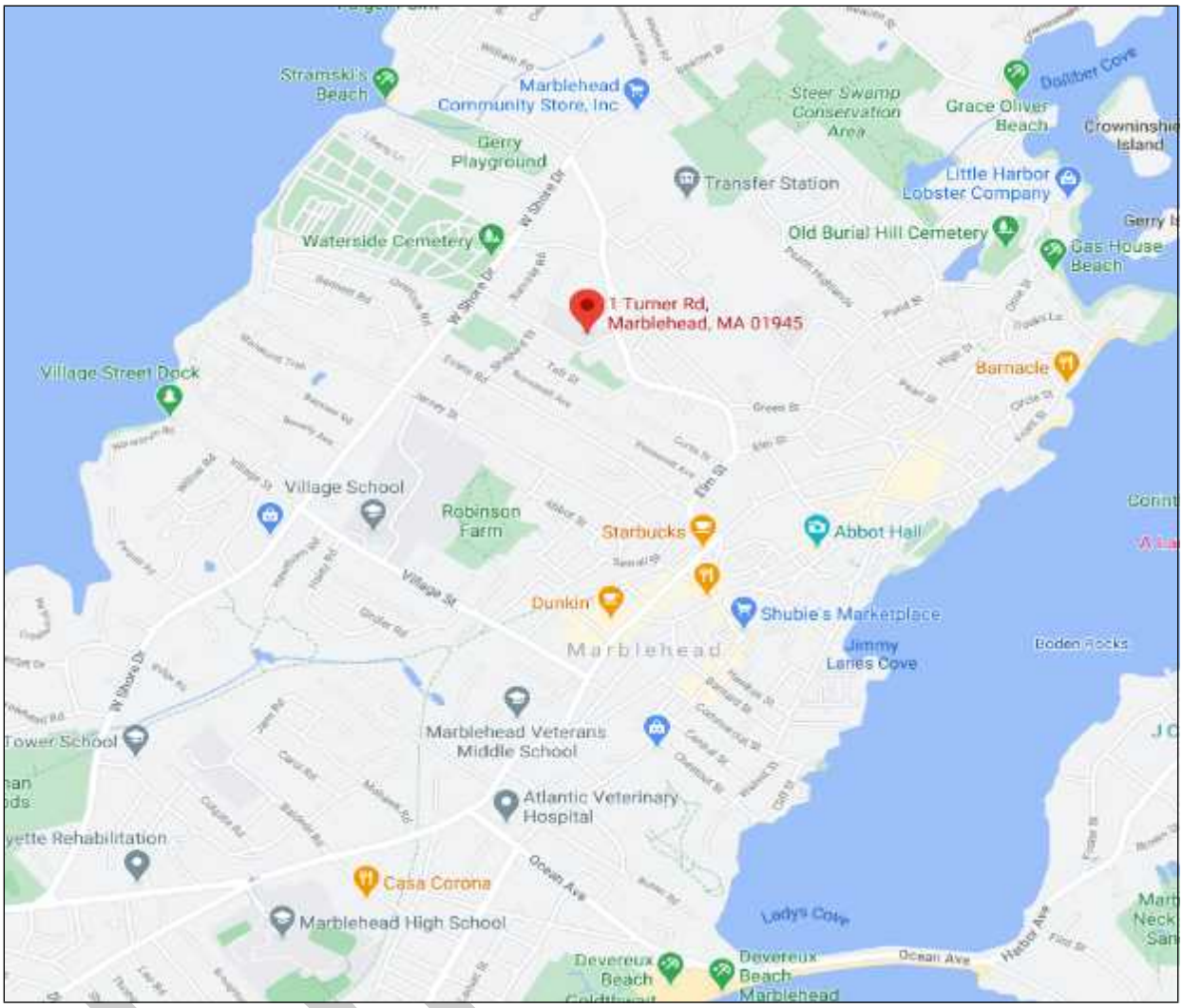
LOCATION

The Subject Property is located approximately 94 feet east of the intersection of Turner Road and Green Street. The Subject Property has approximately 656 feet of frontage along Turner Road.

Local surface arteries, Interstate, and state highway systems provide access to the property. The Subject Property is located approximately 1 mile northeast of Route 114.

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1 **Gross square footage** obtained from the tax assessor's records.



Location Map

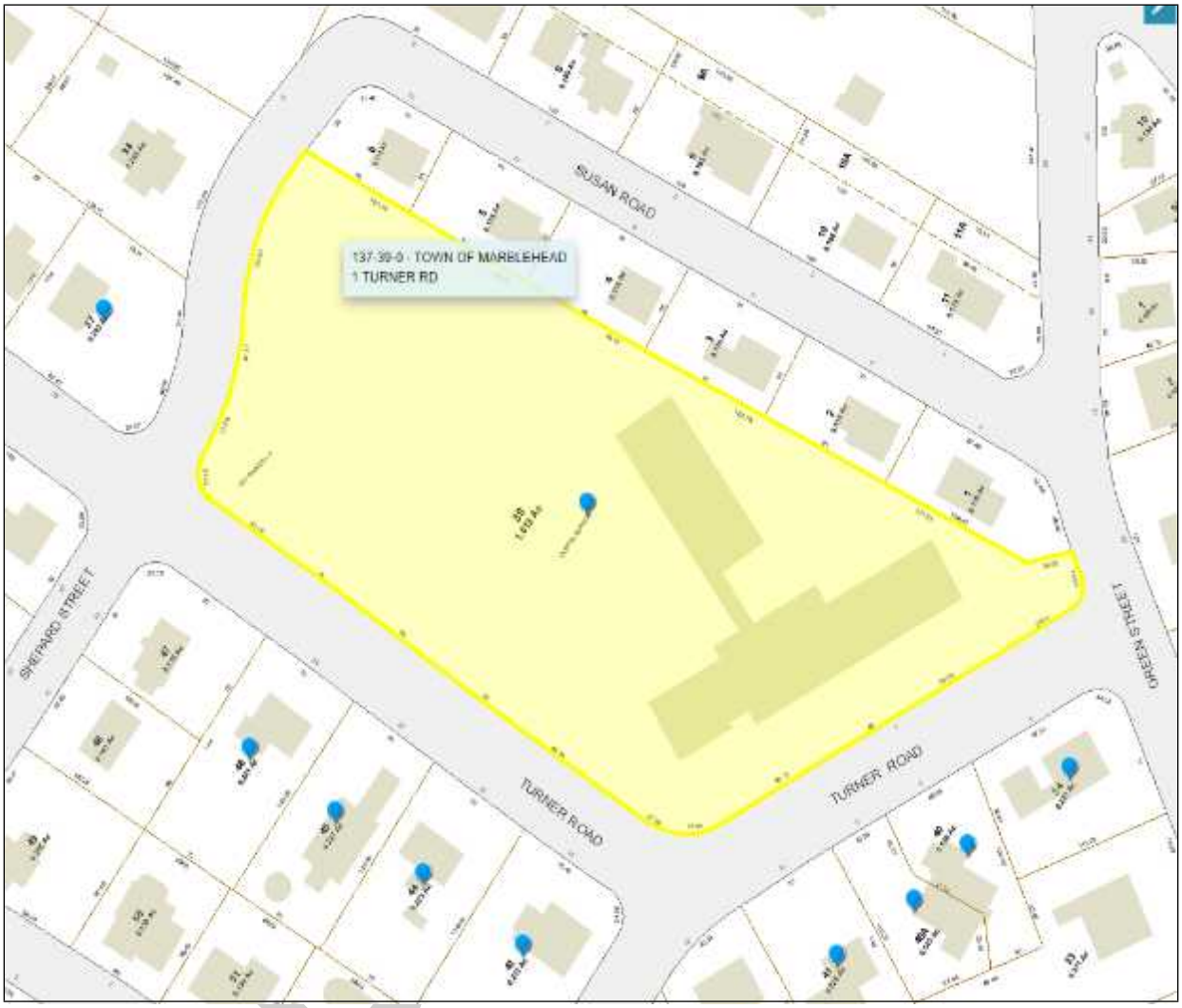
A single entry drive provides access to the Subject Property from the adjacent road frontage. The property is improved with asphalt-paved vehicle parking areas and drive lanes located along the front, sides, and rear side of the building, and with asphalt-paved service, and loading areas.

The primary parcel of land the school is located on includes 1.61 acres. The parcel is owned by the *Town of Marblehead School Department* per the Marblehead GIS website.

The site is gently rolling, with slopes to the south toward Turner Road. A wooded area is located along the northeastern property line. The southeast side of the site rises sharply to an elevation approximately 20’ above the majority of the site.

Property use in the vicinity of the Subject Property is primarily characterized by residential development.

According to the *Marblehead GIS*, the Subject Property is currently owned by the *Town of Marblehead School Department*. The Subject Property includes an irregular-shaped parcel totaling 1.613 acres of land. *Marblehead Assessor* records indicate that the Subject Property assessor parcel number is 137-39-0.



Tax Map

SITE OBSERVATION & OBSERVATION SUMMARY

Don Gerardi Jr. of *EBI* surveyed the property on February 9, 2021, and was accompanied by and interviewed Mr. Todd Bloodgood, Director of School Facilities, and Mr. Mike Ellconus, Electrician both with the *Town of Marblehead.* At the time of the survey, the weather was cloudy and approximately 25º Fahrenheit. During the survey, representative areas of the site, interior areas, common areas, educational spaces, mechanical spaces, mechanical equipment, and building components were observed.

Overall, the Subject Property appears to be in good to fair condition with a moderate level of deficiencies observed. This *Report* recommends certain actions, repairs, and replacements as Critical Repairs, Non-Critical Repairs, and Capital Needs, commensurate with our observations. Additional less notable issues may be present that require attention as part of routine maintenance. Please refer to each specific report section for details.

CAPITAL, MAINTENANCE & OWNER/TENANT RESPONSIBILITY

According to the facilities manager, a burner assembly was replaced for approximately 6,000 dollars. No other major costs have been accrued in the last 10 years.

Maintenance, repair, and replacement of the roof, facades, landscaping, pavement and parking, tenant space interior finishes, plumbing, mechanical, electrical, HVAC, elevator and conveying, life safety systems and components at the property is reportedly the responsibility of the Subject Property owner.

General day-to-day maintenance is reportedly handled by the school facilities department. The maintenance technicians are reportedly qualified to handle general repairs. Repair and maintenance of specialty and large-scale equipment, i.e., major HVAC equipment, roofing, fire and smoke detection, and alarm systems, etc., are subcontracted to outside vendors. The level and quality of on-site maintenance repairs reviewed while at the site were of good workmanship and materials. In general, the Subject Property appears to have been constructed within industry standards and has been well maintained.

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CRITICAL REPAIRS AND CAPITAL NEEDS

Itemized Critical and Non-Critical Repairs, as well as Capital Needs are provided as part of this *Report*. The cost estimates shown on the tables are based on data obtained from the Owner for items already planned, quotes from contractors, *EBI's* in-house Equity database costs and our experience with costs and estimates for similar issues, property and building types, city cost indexes, and assumptions regarding future economic conditions. These projected costs are augmented by cost estimate resource documents such as the *National Construction Estimator*, *Means Building Construction Cost Data*, or *Means Facilities Maintenance and Repair Cost Data Publications*.

CRITICAL REPAIRS & NON-CRITICAL REPAIRS - TABLE 1

Each of the Critical Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at a Subject Property.

Each of the Non-Critical Repairsitems noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Non-Critical Repairs, and/or that cannot be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

CAPITAL NEEDS - TABLE 2

Each of the Critical Need items noted during the survey are listed on the following pages on Table 2 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by *Report* section. Routine or customary annual maintenance items are not reported or included in this *Report* unless otherwise noted.

DEFICIENCY PRIORITIES #1 TO #4

Each of the deficiencies and costs noted during the survey are prioritized in the following manner:

Priority 1: Current Critical, Conditions in this category require immediate action to:

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility to operation
- Correct an environmental hazard

Priority 2: Potentially Critical, Conditions in this category, if not corrected expeditiously will become critical within a year. Situations within this category include:

- Intermittent operations

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- Rapid deterioration
- Potential life safety hazards
- Environmental non-compliance

Priority 3: Recommended, conditions in this category require appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further. These are not required for the most basic function of the facility; however, Priority 3 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 4: Does not meet current codes/standards, "Grandfathered" conditions in this category include items that do not conform to existing codes, but are "grandfathered" in their condition. No action is required at this time, but should be considered as an upgrade or if substantial work is to be undertaken in contiguous areas, certain existing conditions may require correction

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Table 1 - Critical and Non-Critical Repairs

Coffin School
1 Turner Rd
Marblehead, Massachusetts
EBI Project # **1320000045**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 30,000
Number of Units: 1
Property Age: 73
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	*PRIORITY*	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
2.0	**SITE CONDITIONS**											
2.1	Site Features		None			20.0%						
2.2	Landscaping / Improvements	**#1**	Repair trip hazards - asphalt sidewalks	6	$370.18	20.0%	$444.21	each	$2,665.26			Repair 6 areas where trip hazard can occur
2.3	Pavement/ Parking	**#2**	Patching, crack sealing, sealing and striping of asphalt pavement	21,300	$0.36	20.0%	$0.44	per square foot		✔	$9,316.11	Patching, crack sealing, sealing and striping of asphalt pavement
2.4	Amenities		None			20.0%						
2.5	Utilities		None			20.0%						
3.0	**STRUCTURE**											
3.1	Substructure	**#1**	Inspection and report by structural engineer	1	$5,500.00	20.0%	$6,600.00	allowance	$6,600.00			Structural engineer inspection of cracks and erosion
3.2	Superstructure		None			20.0%						
4.0	**BUILDING ENVELOPE**											
4.1	Roof		None			20.0%						
4.2	Facades		None			20.0%						
4.3	Windows and Doors	**#2**	Replace exterior solid wood common doors	5	$450.00	20.0%	$540.00	each	$2,700.00			Replace five damaged wooden doors
4.3	Windows and Doors	**#2**	Replace common area interior wood fire doors	4	$472.50	20.0%	$567.00	each	$2,268.00			
4.3	Windows and Doors	**#2**	Replace operable aluminum-framed insulated windows (large)	1	$166,666.67	20.0%	$200,000.00	allowance	$200,000.00			Replace windows.
4.3	Windows and Doors	**#2**	Commercial window replacement	8	$854.25	20.0%	$1,025.10	each	$8,200.80			Replace rusted and damaged windows
4.3	Windows and Doors	**#2**	Window glazing	1,760	$6.26	20.0%	$7.52	per linear foot	$13,230.62			Glazing metal framed windows

Table 1 - Critical and Non-Critical Repairs

Coffin School
1 Turner Rd
Marblehead, Massachusetts
EBI Project # **1320000045**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 30,000
Number of Units: 1
Property Age: 73
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	QUANTITY	UNIT COST	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (Including Markup)	UNIT DESCRIPTION	ESTIMATED CRITICAL REPAIR COST	Non-Critical Repair?	ESTIMATED NON-CRITICAL REPAIR COST	COMMENTS OR ADDITIONAL DESCRIPTION
5.0	**BUILDING INTERIORS**											
5.1	Bsmt/Attic		None			20.0%						
5.2	Interior F & C		None			20.0%						
6.0	**ACCESSIBILITY**											
6.1	Accessibility	**#4**	Complete accessibility compliance upgrades	1	$10,000.00	20.0%	$12,000.00	allowance	$12,000.00			Complete accessibilty compliance upgrades
7.0	**BUILDING SYSTEMS**											
7.1	Plumbing	**#1**	Evaluation of piping	1	$2,500.00	20.0%	$3,000.00	allowance	$3,000.00			Facilities noted that the domestic water supply piping was contaminated due to lead soldering. The school has been using
7.2	HVAC	**#3**	Steam piping partial replacement	1	$20,000.00	20.0%	$24,000.00	allowance		✔	$24,000.00	Steam pipes and fittings are intermittently failing which requires boilers to be shut down for the piping to be replaced.
7.3	Electric	**#2**	Perform IR survey low-rise	1	$3,986.50	20.0%	$4,783.80	allowance	$4,783.80			Perform IR Survey
7.4	F/L Safety	**#1**	Sprinkler system 5 year test	1	$4,500.00	20.0%	$5,400.00	Allowance	$5,400.00			Complete NFPA 5-year sprinkler test
7.4	F/L Safety	**#1**	Annual Fire Alarm Inspection	1	$0.00	20.0%	$0.00	action item	$0			Panel Inspection tag
7.4	F/L Safety	**#1**	Annual Fire Sprinkler Inspection	1	$0.00	20.0%	$0.00	action item	$0			Inspection not provided
7.5	Elevators		None			20.0%						
8.0	**MUNICIPAL RESEARCH**											
8.1	Municipal Information & Zoning		None			20.0%						
8.2	Building & Planning		None			20.0%						
8.3	Fire Department		None			20.0%						
9.0	**NATURAL HAZARDS**											
9.1.1	Seismic		None			20.0%						
9.1.2	Flood Zone		None			20.0%						
9.1.3	Wind Zone		None			20.0%						
9.2	Suspect Mold & Moisture		None			20.0%						
								DEFERRED MAINTENANCE:	**CRITICAL**		**NON-CRITICAL**	Note:
									$260,848		**$33,316**	Priority 1: Current Critical
												Priority 2: Potential Critical
								TOTAL:	**$294,165**			Priority 3: Recommended
												Priority 4: Non-Compliant with current standards

TABLE 2 - CAPITAL NEEDS OVER TERM

Coffin School
1 Turner Rd
Marblehead, Massachusetts
EBI Project # **1320000045**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 30,000
Number of Units: 1
Property Age: 73
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	AVERAGE EFFECTIVE USEFUL LIFE	EFFECTIVE AGE	REMAINING USEFUL LIFE	TOTAL QUANTITY OVER TERM	APPROXIMATE QUANTITY PER YEAR	UNIT COST (adjusted by location factor)	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (including Markup)	UNIT DESCRIPTION	ESTIMATED COST PER YEAR	Annual Costs 2021 YEAR 1	2022 YEAR 2	2023 YEAR 3	2024 YEAR 4	2025 YEAR 5	2026 YEAR 6	2027 YEAR 7	2028 YEAR 8	2029 YEAR 9	2030 YEAR 10	2031 YEAR 11	2032 YEAR 12	2033 YEAR 13	2034 YEAR 14	2035 YEAR 15	2036 YEAR 16	2037 YEAR 17	2038 YEAR 18	2039 YEAR 19	2040 YEAR 20	RECOMMENDED TOTAL OVER THE TERM
2.0	**SITE CONDITIONS**																																	
2.1	Site Features		None	-						20.0%																								
2.2	Landscaping / Improvements		None	-						20.0%																								
2.3	Pavement/ Parking	#3	Patching, crack sealing, sealing and striping of asphalt pavement	5		5	85,200	21,300	$0.36	20.0%	$0.44	per square foot	$9,316					9,316					9,316					9,316					9,316	$37,264
2.3	Pavement/ Parking	#3	Asphalt overlay	30	27	3	21,300	21,300	$1.25	20.0%	$1.50	per square foot	$31,950			31,950																		$31,950
2.4	Amenities	#3	Replace wood storage shed	30	28	2	1	1	$1,252.90	20.0%	$1,503.48	each	$1,503		1,503																			$1,503
2.4	Amenities	#3	Replace metal storage shed	20	10	10	1	1	$1,252.90	20.0%	$1,503.48	each	$1,503										1,503											$1,503
2.4	Amenities	#3	Playground loose surfacing replacen	6	4	2	10,000	2,500	$2.39	20.0%	$2.87	per square foot	$7,170		7,170						7,170							7,170					7,170	$28,680
2.4	Amenities	#3	Playground equipment	20	10	10	1	1	$18,000.00	20.0%	$21,600.00	each	$21,600										21,600											$21,600
2.4	Amenities	#3	Replace metal tables/Benches	15	10	5	8	4	$1,800.00	20.0%	$2,160.00	each	$8,640					8,640															8,640	$17,280
2.5	Utilities		None	-						20.0%																								
3.0	**STRUCTURE**																																	
3.1	Substructure		None	-						20.0%																								
3.2	Superstructure		None	-						20.0%																								
4.0	**BUILDING ENVELOPE**																																	
4.1	Roof	#3	Gutter and downspout replacement	20	18	2	273	273	$8.42	20.0%	$10.10	linear foot	$2,757		2,757																			$2,757
4.1	Roof	#3	Proactive Maintenance Program (PMP)-General	-	-	-	129,780	6,489	$0.15	20.0%	$0.18	per square foot	$1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	1,168	$23,360
4.1	Roof	#3	Built-up roof replacement	59	57	2	6,489	6,489	$6.39	20.0%	$7.67	square foot	$49,756		49,756																			$49,756
4.1	Roof	#3	Slate shingled roof repairs (minor)	59	57	2	629	629	$22.55	20.0%	$27.06	shingle	$17,033		17,033																			$17,033
4.2	Facades	#3	Renew/recaulk expansion & control joints	15	13	2	1,680	840	$1.17	20.0%	$1.41	linear foot	$1,183		1,183																1,183			$2,365
4.2	Facades	#3	Refinish concrete steps	59	57	2	96	96	2.00000000	20.0%	$14.40	per square foot	$1,382		1,382																			$1,382
4.2	Facades	#3	Replace concrete/steel stair tread	59	57	2	4	4	0.00000000	20.0%	$420.00	each	$1,680		1,680																			$1,680
4.3	Windows and Doors	#3	Replace exterior solid wood common doors	59	57	2	2	2	$450.00	20.0%	$540.00	each	$1,080		1,080																			$1,080
4.3	Windows and Doors	#3	Commercial window replacement	59	57	2	65	65	$854.25	20.0%	$1,025.10	each	$66,632		66,632																			$66,632
5.0	**BUILDING INTERIORS**																																	
5.1	Bsmt/Attic		None	-						20.0%																								
5.2	Interior F & C	#3	Common area refurbishment - psf	8	6	2	18,768	6,256	$10.00	20.0%	$12.00	per square foot	$75,072		75,072								75,072								75,072			$225,216
5.2	Interior F & C	#3	Acoustical ceiling tile	20	18	2	295	295	$1.63	20.0%	$1.95	square foot	$577		577																			$577
6.0	**ACCESSIBILITY**																																	
6.1	Accessibility		None	-						20.0%																								
7.0	**BUILDING SYSTEMS**																																	
7.1	Plumbing	#3	Plumbing fixture replacement	25	var		4	2	$4,800.00	20.0%	$5,760.00	allowance	$11,520		11,520	11,520																		$23,040
7.1	Plumbing	#3	Water heater replacement	15	3	12	3	3	$2,200.00	20.0%	$2,640.00	each	$7,920												7,920									$7,920
7.2	HVAC	#3	Steam piping partial replacement	59	var			1	$10,000.00	20.0%	$12,000.00	allowance	$10,000		10,000	10,000	10,000	10,000	10,000	10,000														$60,000
7.2	HVAC	#3	Replace gas/oil-fired steam boiler (1600 MBH)	59	57	2	2	2	$145,499.28	20.0%	$174,599.13	each	$349,198		349,198																			$349,198
7.3	Electric	#3	Replace Main Circuit Breaker, single phase (400 Amp)	59	57	2	1	1	$4,271.25	20.0%	$5,125.50	each	$5,126		5,126																			$5,126
7.3	Electric	#3	Replace Circuit Breaker (100 Amp)	59	57	2	4	4	$1,224.43	20.0%	$1,469.31	each	$5,877		5,877																			$5,877
7.4	F/L Safety	#3	Replace fire alarm control panel with addressable w/o voice, up to 200 points type (medium size)	20	3	17	1	1	$6,930.82	20.0%	$8,316.98	each	$8,317																		8,317			$8,317
7.5	Elevators		None	-						20.0%																								
8.0	**MUNICIPAL RESEARCH**																																	
8.1	Municipal Information & Zoning		None	-						20.0%																								
8.2	Building & Planning		None	-						20.0%																								
8.3	Fire Department		None	-						20.0%																								
9.0	**NATURAL HAZARDS**																																	
9.1.1	Seismic		None	-						20.0%																								
9.1.2	Flood Zone		None	-						20.0%																								
9.1.3	Wind Zone		None	-						20.0%																								
9.2	Suspect Mold & Moisture		None	-						20.0%																								
												ANNUAL RECOMMENDATIONS, UNINFLATED		1,168	608,714	54,638	11,168	29,124	11,168	11,168	8,338	1,168	108,660	1,168	9,088	1,168	8,338	10,484	1,168	10,668	76,240	1,168	26,294	**$991,098**
												INFLATION FACTOR, IN PERCENTAGE 1.030		100.00%	103.00%	106.09%	109.27%	112.55%	115.93%	119.41%	122.99%	126.68%	130.48%	134.39%	138.42%	142.58%	146.85%	151.26%	155.80%	160.47%	165.28%	170.24%	175.35%	
												ANNUAL RECOMMENDATIONS, INFLATED @ 3.00% AFTER YEAR ONE		**$1,168**	**$626,976**	**$57,965**	**$11,848**	**$30,898**	**$11,848**	**$11,848**	**$8,846**	**$1,239**	**$115,277**	**$1,239**	**$9,641**	**$1,239**	**$12,245**	**$15,858**	**$1,820**	**$17,118**	**$126,013**	**$1,988**	**$46,107**	**$1,111,183**

Note:
Priority 1: Current Critical
Priority 2: Potential Critical
Priority 3: Recommended
Priority 4: Non-Compliant with current standards

PRESENT VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR **$1.65**

INFLATED VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR ***$1.85***

1.0 PURPOSE & LIMITATIONS

The exclusive purpose of this *Capital Needs Assessment* (the *Report*) is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools*, in its Due Diligence effort in evaluating the Property. Amendments to EBI's limitations as stated herein that may occur after issuance of the Re*port* are considered to be included in this *Report. EBI's* liability to the client wishing to use this *Report* is limited to the cost of the *Report*. By accepting draft and final Reports, *Marblehead Public Schools* agrees to these terms and limitations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, easily accessible or made accessible by the property contact and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property. Municipal information was obtained through file reviews of reasonably ascertainable standard government record sources, and interviews with the authorities having jurisdiction over the property. Findings, conclusions and recommendations included in the *Report* are based on our visual observations in the field, the municipal information reasonably obtained, information provided by the Client, and/or a review of readily available and supplied drawings and documents. No disassembly of systems or building components or physical or invasive testing was performed. EBI renders no opinion as to the property condition at un-surveyed and/or inaccessible portions of the Subject Property. EBI relies completely on the information provided during the site survey or provided or obtained during the writing of the draft *Report*, whether written, graphic or verbal, provided by the property contact, owner or agent, or municipal source, or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. EBI assumes no responsibility for property information or prior reports withheld or not provided during preparation of the *Report* for any reason whatsoever. The observations in this *Report* are valid on the date of the survey. EBI uses the date of first occupancy to establish the Subject Property age.

The contents of the *Report* may not represent a detailed analysis by individual consultants of the Subject Property façades, roof, paving, mechanical, electric, plumbing, elevator, sprinkler, or fire and life safety systems depending on the scope of work selected by *Marblehead Public Schools.* The extent of the physical survey for the production of this Report has been limited, by contract and agreed upon Scope of Work, (consistent with the guidelines of the ASTM E 2018 – 15 Scope of Work, as referenced below) to visual observations and a walk through of the property. Assumptions regarding the overall condition of the property have been developed based upon a survey of representative areas of the Subject Property. As such, no representation of *all* aspects of *all* areas or components is made.

Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at the Subject Property. Routine, normal or customary annual maintenance or preventative maintenance items are not reported or included in this *Report*.

Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Non-Critical Repair, and/or that can't be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

This assessment is based on the evaluator's opinion of the physical condition of the improvements and the estimated expected remaining useful life of those improvements, based on his observations in the field at the time of the survey, and the written or verbal information received. The conclusions presented are based on the evaluator's professional judgment. The actual performance of individual components or systems may vary from a reasonably expected standard and may be affected by circumstances that are not readily ascertainable or viewable, or that occur after the date of the survey.

Where quantities cannot be determined from information provided or physical takeoffs, lump sum estimates or allowances are used. The costs shown are based on professional judgment and the apparent or actual extent of the observed defect, including the cost to design, procure, construct and manage the repair or replacement. Where property-unique or specialty equipment is present, EBI relies solely on data regarding maintenance and/or replacement costs provided by the designated site contact or on-site individuals with first-hand knowledge of the specific equipment.

EBI provides Pre-Survey Questionnaires for completion by the designated site or property contact, as provided by *Marblehead Public Schools* or their agent. The information requested in the questionnaire assists in our research of the Subject Property to obtain pertinent property data, discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs, and pending repairs and improvements. If the completed Pre-Survey Questionnaire is not returned as of this *Report*, this is a limiting factor in our analysis. If the questionnaire is returned at a later date showing a material difference from information provided in the Report, we will forward the questionnaire to you under separate cover. If no response is received, or no material difference is noted in the questionnaire, our Report will not be modified.

EBI may not have been provided with roof design or installation details and may not have been provided with warranty information (see Section 3.4). EBI has relied on general industry performance of similar type roofs and general observations of the surface covering of the roof to determine if roof replacement is warranted during the analysis term. EBI is not responsible for roof failure that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

EBI may not have been provided with façade reports and cannot opine on costs to repair façades of buildings five stories or more without receipt of current façade reports (see *Section 3.3*). EBI has relied on general industry performance of similar façade systems and general observations of the surfaces of the façades to determine if repair or replacement is warranted during the analysis term. EBI is not responsible for façade failures that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

If the municipality in which the Subject Property is located has governing ordinances requiring façade studies, and a copy is not provided to EBI, this is a limiting factor in our assessment and analysis. Prudent property management will have had façade reports completed on their high-rise property, and if a copy of the report is not provided to EBI, this too, is a limiting factor in our assessment and analysis.

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The gathering of data and information for this *Report* was completed in general conformance with ASTM E 2018 – 15 Standard Guide for Property Condition Assessment: Property Condition Assessment Process, and with the scope of services approved by the client.

The survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. The level of care and skill exercised is also commensurate with the fees charged for EBI's services. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The *Report* speaks only as of its date, in the absence of a specific written update of the *Report*, signed and delivered by EBI.

Limiting factors

Any additional information that becomes available after *EBI's* survey and draft submission concerning the Subject Property should be provided to *EBI* so that *EBI's* conclusions may be revised and modified, if necessary, at additional cost. This *Report* has been prepared in accordance with *EBI's Standard Conditions for Engagement*, which is an integral part of this *Report.*

DEVIATIONS FROM THE GUIDE

EBI includes an analysis of estimated Capital Needs in this *Report*. *EBI* uses an approximate threshold of $1,000 in aggregate for reporting Critical & Non-Critical Repair or Critical Need items. Material life, safety, health, fire or building code violation or building or property stabilization issues observed at the Subject Property will be reported regardless of cost.

CONDITION

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

Excellent	The component or system is in new or like new condition and no deferred maintenance is recommended.
Good	The component or system is sound and performing its function, and/or scheduled maintenance can be accomplished through routine maintenance. 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 at a capacity that is considered to be acceptably sufficient but may be obsolete or is approaching the end of its expected useful life. The component or system may exhibit evidence of deferred maintenance, previous repairs, or workmanship not in compliance with commonly accepted standards. Repair or replacement may be recommended in the near-term of the loan to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its expected useful life.
Poor	The component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its typical expected useful life, excessive deferred maintenance or state of disrepair. Present condition could contribute to, or cause, the deterioration of other adjoining elements or systems. Repair or replacement is recommended.

ABBREVIATIONS

EBI may use various abbreviations to describe various site, building or system components or legal descriptions. Not all abbreviations may be applicable to all *Reports.* The abbreviations most often utilized are defined below.

ACT	Acoustic Ceiling Tile
ABS	Acrylonitrile-Butadiene-Styrene
ADA	Americans with Disabilities Act
AHU	Air Handling Unit
APA	American Plywood Association
BTU	British Thermal Unit (a measurement of heat)
BTUH	British Thermal Units per Hour
BUR	Built Up Roof
CFM	Cubic Feet per Minute
CMU	Concrete Masonry Unit
CPVC	Chlorinated Poly Vinyl Chloride
DWH	Domestic Water Heater
EIFS	Exterior Insulating Finishing System
EPDM	Ethylene Propylene Diene Monomer
EUL	Expected Useful Life, Effective Useful Life
FF&E	Furniture, Fixtures & Equipment
FCU	Fan Coil Unit
HCP	Handicapped Person
FEMA	Federal Emergency Management Agency
FHA	Forced Hot Air
FHW	Forced Hot Water
FIRM	Flood Insurance Rate Map
FOIA	Freedom Of Information Act
FOIA	Freedom Of Information Act
FRT	Fire retardant treated plywood
GFI	Ground Fault Interrupt (circuit)
GWB	Gypsum Wall Board
HCP	Handicapped Person
HID	High Intensity Discharge (lighting)
HVAC	Heating, Ventilating and Air Conditioning
KW	Kilowatt
KVA	Kilovolt Ampere
MBH	Thousand BTUs per Hour
MDP	Main Distribution Panel
OSB	Oriented Strand Board
PEX	Polyethylene Cross-Linked Tubing
PTAC	Packaged Terminal Air Conditioning (Unit)
PVC	Poly Vinyl Chloride
RTU	Roof Top Unit
RUL	Remaining Useful Life
TPO	Thermoplastic polyolefin
SEER	Seasonal Energy Efficiency Rating
UBC	Uniform Building Code
VAV	Variable Air Volume box
VCT	Vinyl Composition Tile
VWC	Vinyl Wall Covering

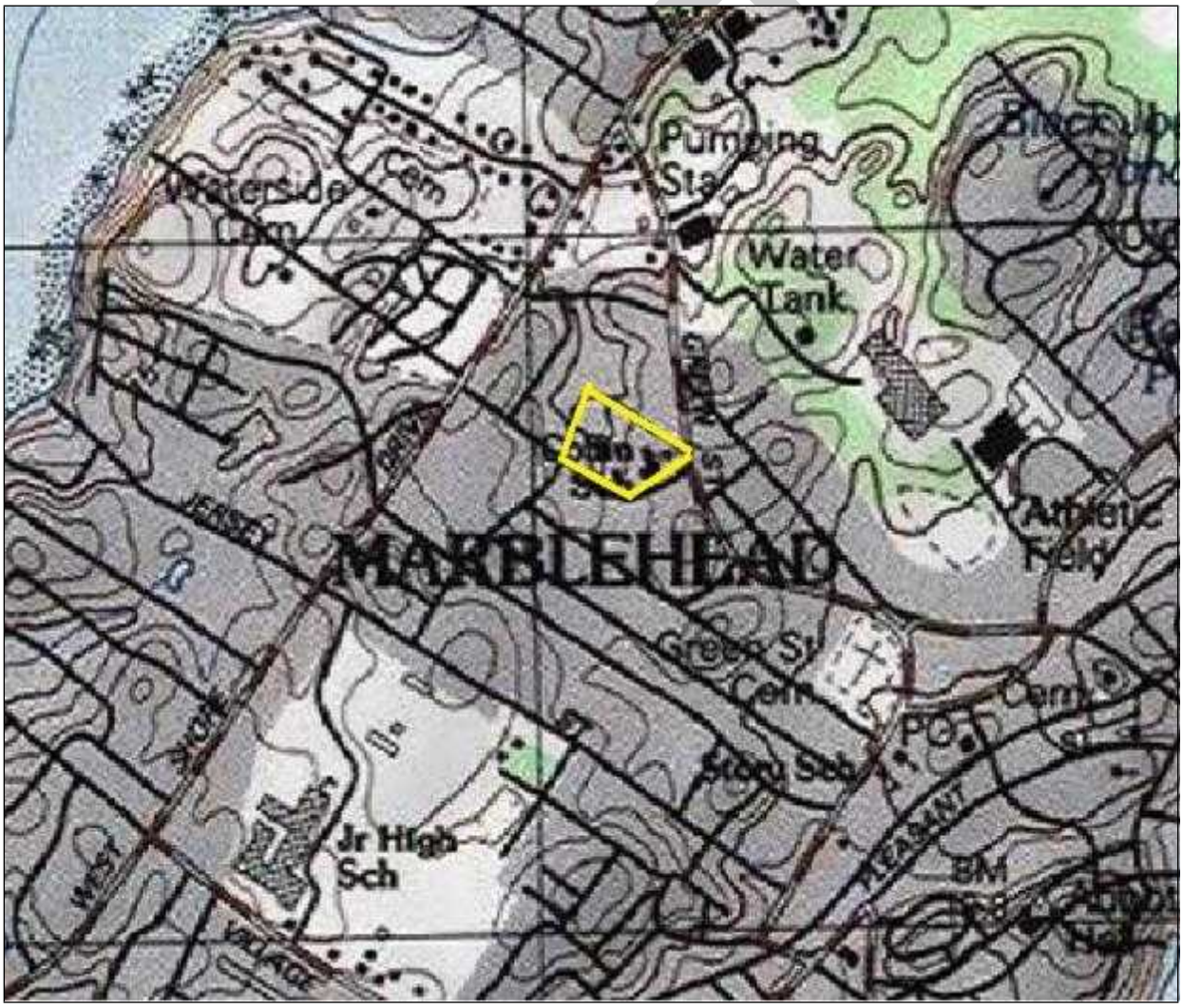
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2.0 SITE

2.1 TOPOGRAPHY & DRAINAGE

DESCRIPTION

The Subject Property is located at an elevation of approximately 70 feet above mean sea level (msl). The topography of the Subject Property slopes moderately approximately 20 feet from the southeast corner of the perimeter to the west and center of the property and then levels out from the center of the property to the northern perimeter where it raises slightly. (see Topo Map below).



Topographic Map

	
Topography along the center of the property looking north, looking northeast	Topography along the northern property looking north.
	
Topography along the south property line looking towards the center showing a 20-foot difference in mean sea level	South topography, looking east

OBSERVATIONS

No topography problems were reported or observed. Slopes pitching drainage away from the building appear to be adequate. Detriments or problems such as ground fractures, settlement areas, or evidence of erosion or chronically standing water were not observed. Slopes within parking areas appeared to be adequate for stormwater control.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.2 LANDSCAPING & SITE IMPROVEMENTS

DESCRIPTION

The property has municipally-owned, extensive, mature landscaping at the front of the site, the entrances to the property, around the buildings, along the west perimeter of the Subject Property. Landscaping includes deciduous and evergreen trees, shrubs, ground cover, and lawns.

An automatic irrigation system is present in the landscaped areas. Irrigation controllers are located in sub-surface utility boxes.

Pylon signage is located at the main entrance and smaller signage is located at the secondary entrances. The pylon signs are supported by wood posts.

Cast-in-place concrete and asphalt sidewalks are provided for pedestrian traffic. The concrete sidewalks are assumed to be approximately 4-inches in thickness and with steel reinforcement.

Lighting is provided by building-mounted lights providing exterior building lighting around the building and along pedestrian walkways, and recessed lighting is located under the skyway connecting the main part of the building with the annex.

The Subject Property has chain link fencing along the property perimeters.

The Subject Property has retaining walls constructed with poured-in-place concrete to make height changes around the site and allow for tiered construction.



Landscaping and asphalt sidewalk at the front entrance



Landscaping at the south side of the building

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Exterior building-mounted lighting example



Water damage



Chain link



Low retaining

OBSERVATIONS

The property landscaping appears to be in good condition, although some areas show signs of distress due to typical winter conditions.

The irrigation system appears to be in good condition. Landscape maintenance is handled by the municipality as part of routine maintenance.

The pylon sign at the main entrance is in fair overall condition. The wood sign was observed with some areas of worn staining. The wooden posts show signs of degradation. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for refurbishment during the analysis term.

The concrete sidewalks appear to be in good condition with no observed areas of deterioration or trip hazards. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for routine concrete sidewalk repairs during the analysis term.

The asphalt sidewalks and walkways appear to be in fair to poor condition with observed areas of deterioration and trip hazards noted in several areas around the site. Based on observed and reported conditions, Critical Repairs are recommended for trip hazard repairs.

Based on observed and reported conditions Non-Critical Repairs are recommended for sidewalk repairs.

The parking area lighting and exterior light fixtures appear to be in good to fair condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for exterior light fixture replacement during the analysis term.

The fencing along the Subject Property perimeters is in good condition. Based on its reported age, current condition, and expected useful life, Capital Needs is recommended for property line replacement during the analysis term.

The retaining walls appear to be in good overall condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for retaining wall repair allowance during the analysis term.



Worn and staining on the front entrance sign



Worn exterior lighting cover example

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Repair asphalt sidewalk trip hazards**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Repair concrete sidewalks**
- **Replace fencing**
- **Repairs to parking area lighting**
- **Refurbishment of pylon sign**

2.3 PAVEMENT AND PARKING

DESCRIPTION

According to a count in the field, the property is improved with parking areas for 20 cars, including one accessible space. See *Section 3.6 Americans with Disabilities Act Accessibility Guidelines (ADAAG)* for additional accessible parking information for people with physical disabilities.

The property has approximately 91 feet of drive lane, and the parking is laid out along this drive lane. The parking is configured in a lot on the east side of the building.

The parking areas have asphalt pavement, and the loading areas also have asphalt pavement.

The parking area has precast concrete curbing.



Representative accessible parking



Parking looking west

OBSERVATIONS

No problems were reported regarding the adequacy of the parking area.

The asphalt-paved areas are in fair condition. Minor cracking, settlement, and alligator cracking were noted at a number of locations. Based on observed and reported conditions, Non-Critical Repairs are recommended for full-depth repairs and asphalt overlay. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended asphalt overlay, during the analysis term.

The parking area sealant and striping are in fair condition, with indications of average wear. The facilities representatives noted that striping was completed within the past two years. Based on the observed condition of the parking area and the average effective useful life of pavement and pavement sealants and striping, the application of sealants and striping of the parking markings are recommended as Capital Needs during the analysis term.

The curbs are in good condition. The curbs will be maintained at the property as part of operational expenses during the analysis term.

	
Damaged asphalt	Cracked asphalt

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Patching, crack sealing, sealing, and striping of asphalt pavement**

Please see Table 2 for the recommended Capital Needs listed below:

- **Patching, crack sealing, sealing, and striping of asphalt pavement**
- **New asphalt overlay**

2.4 SITE AMENITIES

DESCRIPTION

There are two storage sheds, a painted, wooden storage shed, and an aluminum storage shed are located on the west side of the property and contains gardening and maintenance tools.

Located on the Subject Property are a playground area, a gardening area, metal picnic tables, and metal benches.

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Aluminum storage shed	Wooden storage shed
	
Metal picnic tables	Playground

OBSERVATIONS

The wood storage shed located on the west side of the Subject Property appears to be in good condition. Based on the reported age, current condition, and expected useful life, replacement of the wooden storage shed is recommended as a Capital Need during the reserve term.

The aluminum storage shed located on the west side of the Subject Property appears to be in good condition. Based on the reported age, current condition, and expected useful life, replacement of the aluminum storage shed is recommended as a Capital Need during the reserve term.

The playground equipment appears to be in good condition. Based on the reported age, current condition, and expected useful life, playground equipment, and loose surfacing replacement is recommended as a Capital Need during the reserve term.

The metal picnic tables, located on the west side of the Subject Property appears to be in good condition. Based on the reported age, current condition, and expected useful life, replacement of the metal picnic tables is recommended as a Capital Need during the reserve term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace wood storage shed**
- **Replace metal storage shed**
- **Playground loose surfacing replacement**
- **Playground equipment replacement**
- **Replace metal tables**

2.5 UTILITIES

2.5.1 Water & Sewer

DESCRIPTION

Town of Marblehead water and sewer department provides water and sewer service to the Subject Property site. The sewer is discharged into the municipal lines beneath the abutting street.

2.5.2 Gas/Oil

DESCRIPTION

National Grid provides natural gas service to the Subject Property. No oil service is provided to the Subject Property.

2.5.3 Electrical

DESCRIPTION

Marblehead Municipal Light Department (MMLD) provides electric service to the site. The service enters the property overhead from a pole at the front of the site, then runs underground to a pad-mounted transformer feeding secondary runs to the main switchgear. The utility reportedly owns and maintains the lines up to the transformers. The secondary feeds to the switchgear are the responsibility of the Subject Property owner.

2.5.4 Storm Drainage

DESCRIPTION

The stormwater flows from the site are controlled via on-site structures discharging onto the site topography, resulting in sheet flow dispersal to curbs extending along the perimeter of the parking area and the adjacent road frontages.

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Incoming water service	Incoming gas service
	
Main distribution panel	Glass and brass fusible link fuse box

OBSERVATIONS

There were no other reported or observed problems with the Subject Property water, sewer, gas, oil, electric, or stormwater drainage systems. The utilities appeared to be configured and operating in a manner consistent with their intended use and reportedly adequate to meet the needs of the Subject Property.

There is one pad-mounted electrical transformer located on the west side of the Subject Property perimeter. The on-site contact stated that it is reportedly owned and maintained by the utility company.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.0 STRUCTURE

3.1 GENERAL INFORMATION

Design information was not obtained or provided to *EBI* for review.

3.2 SUBSTRUCTURE

DESCRIPTION

The majority of the Subject Property substructure was not visible due to the surrounding grade. Construction documents were not available for our review. Based on our visual survey the property appears to have cast-in-place, reinforced concrete foundations supporting the exterior walls and load-bearing interior walls and/or columns.

Concrete slabs-on-grade of underdetermined thickness are provided throughout the building. The design and construction of the foundation footings is intended to properly spread out the building's vertical loads without exceeding the bearing capacity of the underlying soil.

In cold climates, the footings are constructed below the prescribed frost level to minimize movement due to freeze-thaw conditions. Varying sizes of steel reinforcing bars typically exist in the foundation walls and footings for tensile and bending strength.

In cold climates the slabs and/or foundation walls are often insulated around the perimeter of the building. Foundation walls servings as retaining walls for basement areas of the building generally are constructed with waterproofing and drainage systems to prevent moisture infiltration.



Representative slab on grade



Foundation view from the east side of the building

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OBSERVATIONS

The majority of the Subject Property substructures were not visible due to the surrounding grade. The substructures appear to be sound and in good condition. The condition of substructure hidden construction elements, or defects not readily observable, cannot be opined on and is beyond the standard scope of work for this project.

Isolated locations of damaged and deteriorated stem wall footing were observed during the assessment.

Based on limited observations, other than the stem wall footing examples, the substructures appear to be in good overall condition and are performing as designed. No obvious indications of irregularities, including differential settlement, sloped floors, out-of-plumb building elevations, or other perceived movements, were reported or observed.



Structural crack in the stem wall footing



Deteriorated stem wall exposing rebar.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Inspection and report by a structural engineer**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.3 SUPERSTRUCTURE

DESCRIPTION

Based on *EBI's* visual survey and experience with similar structures, and review of available construction drawings the Subject Property's primary load-bearing members consist of reinforced concrete masonry unit and brick exterior and interior walls. The roof structure likely consists of rigid insulation on concrete decking. Lateral resistance is provided by a combination of floor and roof diaphragms, and interior and exterior braced walls.

OBSERVATIONS

The superstructures are partially obscured from view by interior and exterior finishes. Unless visible, EBI's assessment of superstructure condition is predominantly based on obvious irregularities with exterior and interior construction and finishes. Concealed and/or obscured structural systems or connections were not viewed. The condition of the hidden structural defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the superstructures appear to be in good overall condition and appear to be performing as designed. No obvious indications of irregularities, including significant floor and/or roof deflections, significant cracks, noticeably out-of-plumb building elevations, or other perceived structural defects, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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4.0 BUILDING ENVELOPE

4.1 ROOFING

DESCRIPTION

During the site survey, the roofs were accessed with a portable ladder from grade, and representative areas of the roofs were observed. Pitched roofs were visually assessed and are not walked on due to safety concerns. *EBI* was not provided with roof design or installation details and was not provided with warranty information. Reportedly, no warranty is in place on the Subject Property roofs.

The Subject Property building has four roofs with low slope, ballasted modified, built-up roof (BUR) with gravel surfacing.

The Subject Property building also has a pitch slate roof above the library section.

Low-slope roof membrane terminates at modified roof flashing. Roof penetrations are flashed with modified bitumen-membrane boots. Roof penetrations are also sealed with asphalt.

SUBJECT PROPERTY ROOFING

ADDRESS / NAME	ROOFING TYPE	APPROX. AREA	APPROX. AGE	PERIMETER
Right side roof	Modified built-up	3048	59	Metal counterflashing
Middle roof	Modified built-up	3809	59	Metal counterflashing
Skywalk	Modified built-up	432	59	Metal counterflashing
Annex	Modified built-up	4995	59	Metal counterflashing
Library section	Apshalt and pitch slate roof	2098	59	Aluminum gutters

Rooftop features include natural gas pipe and exhaust penetrations.

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Representative roof looking west



Right side modified built-up roof ponding and blistering examples



Annex and skywalk modified built-up roof with counter flashing example



Skywalk modified built-up roof



Center and annex modified built-up roof example



Apshalt and pitch slate roof over the library showing ventilation cupola

	
Modified built-up roof blistering	Damage to the roof fascia example

OBSERVATIONS

In estimating the condition and effective useful life of roofs, *EBI* has relied on general industry performance of similar type roofs and general observations of the surface covering to determine if a replacement is warranted during the analysis term.

The built-up roofs appear to be in fair to poor condition. The roofs are replacement and approximately 59 years old. Roofs of this type typically have an average effective useful life of approximately 30 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. Areas were noted where the roofing membrane has started to blister. Blistering does not constitute an immediate problem; however, precautions should be followed so that the blisters do not break. Blisters should not be directly walked upon and should be monitored on a routine basis to assure that they are not punctured. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for roof replacement during the analysis term.

Evidence of presumably active roof leaks in the form of stained ceiling tiles was observed during the survey in multiple second-floor classrooms. The tenants also reported on-going roof leaks. Based on observed and reported conditions Critical Repairs are recommended for further investigation by a roof consultant and Completion of the roofing inspection by a roofing consultant.

The pitch slate roof appears to be in good condition. The roof is approximately 59 years old. Roofs of this type typically have an average effective useful life of approximately 60 to 120 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. Several slate shingles have been replaced with asphalt shingles. The facilities team noted several shingles need replacement. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for slate shingled roof repairs during the analysis term.

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The slope and drainage design of each roof appeared to be generally adequate with evidence of ponding noted at multiple built-up roofs. These areas of ponding should be modified to provide positive drainage when each roof is replaced.

Gutters and downspouts observed are in fair to poor condition. Based on observed and reported conditions Critical Repairs are recommended for damaged gutter replacement.

Damage to the roof's wooden soffit and fascia was observed in multiple locations. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for wooden soffit and fascia replacement during the analysis term.

The roof was accessed from an external ladder.



Ponding examples on one of the built-up roofs



Evidence of active roof leaks



Deteriorating downspout example



Damaged gutter and downspout example

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 – Capital Needs for the recommended items listed below:

- **Built-up roof replacement (low-rise)**
- **Slate shingled roof repairs**
- **Gutter and downspout replacement**
- **Ongoing roof repairs & maintenance, before roof replacement**

4.2 FAÇADES

DESCRIPTION

Primary exterior materials consist of red brick veneer. The façades are enhanced with painted, brick trim and stone sills around metal-framed windows. The skywalk and annex of the Subject Property building have red brick veneer with decorative spandrel panel curtain walls. The main entrance of the building has a double wythe course of brick.

DESCRIPTION – MISCELLANEOUS ITEMS

The building has an exterior stone stairway at multiple entrances of the building. The main entrance was observed to have slate treads over red-brick risers.



Representative southwestern façade at the two-story main building



Typical brick-veneer façade

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Red-brick veneer with decorative spandrel panel curtain wall



Typical entrance stone stairway



Stone window sill example



Annex brick-veneer façade with brick trim exterior door, north side of the building

OBSERVATIONS

The estimate of the façade condition is based on limited observation of representative observed areas of the exterior walls and the age of the improvements. Façade observations for a multi-story building are limited to exterior finishes of the ground-level façades and those portions of the façades observable. The observed areas of the brick and concrete veneer appear to be in good overall condition. Based on the age and the condition of the brick masonry exterior walls, it is recommended that a dedicated repair program be instituted for anticipated degradation of the mortar joints and overall exterior wall performance. Walls should be routinely checked for fractured, spalling, or missing mortar joints, and cleaning or tuckpointing of the brick and joints should be performed where necessary as part of routine maintenance.

The observed sealants along the control and panel joints appear to be in good condition overall. Based on the reported age, current condition, and expected useful life, sealant, and control joint renewal is recommended as a Capital Need during the analysis term.

OBSERVATIONS – MISCELLANEOUS ITEMS

The exterior stairs appear to be in good condition overall. Isolated areas of loose stone were observed at the main entrance of the school. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for concrete stairway repairs during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Control joint sealant renewal**
- **Replacement of precast stair treads**
- **Repair damaged stairways**

4.3 WINDOWS AND DOORS

DESCRIPTION

Steel-framed single-hung, fixed and hopper windows with single-pane glass are located along all elevations of the building and on each floor level. Block glass windows are located on each floor of the stairwell.

The main front door of the original building is an arched metal door. Secondary entrances and service doors are wood in wooden frames and metal units set in metal frames. The doors are furnished with standard hardware, and panic hardware was observed at some emergency exit doors.



Metal framed fixed window example



Fixed and hopper windows example

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Typical metal framed hopper windows



Typical fixed metal framed windows



Typical wooden service door



Main entrance custom steel door



Typical wooden secondary entrance door



Aluminum and glass secondary door

OBSERVATIONS

Aside from normal wear, the observed main entrance door appears to be in good condition. Door replacement is not anticipated during the analysis term. However, several wooden secondary doors and frames are damaged with gaps around and in between the doors and recommended for replacement as a Critical Repair work item. Based on their observed condition, reported age, and average effective useful life, Capital Needs are recommended for their replacement during the analysis term.

Several observed interior wooden doors observed in the main building corridors are damaged and recommended for replacement as an Critical Repair work item. Based on their observed condition, reported age, and average effective useful life, Capital Needs are recommended for their replacement of the interior doors during the analysis term.

The observed windows appeared to be in fair to poor overall condition. Several of the windows exhibit failure of the seals between panes and may require painting and renewal of the sealants. The window gaskets are reported to be 59 years old, and the gaskets were cracked, brittle, shrunken, and loose in several locations around the building. Examples of water leaking through the windows were observed in multiple areas. Based on observed and reported conditions Critical Repairs are recommended for the repair of damaged components.

The curtain wall window systems appeared to be in fair to poor overall condition. Based on observed and reported conditions Critical Repairs are recommended for the replacement of the damaged components.



Secondary wooden door with missing hardware



Secondary door replacement example

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Curtain wall window corrision	Window putty missing
	
Hopper windows that don't fully close	Rust and corrosion in a stationary window

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Replace damaged doors**
- **Replace interior wood fire doors**
- **Window glazing**
- **Window replacement**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Window replacement**
- **Door replacement**

5.0 BUILDING INTERIORS

5.1 BASEMENTS/ATTICS/PENTHOUSES

DESCRIPTION

The Subject Property has a partial, unfinished basement. The basement is located in the south portion of the building and is used for storage and mechanical purposes. The basement is accessed by six metal stairs.

No attic spaces are present at the property.



Basement access



Mechanical equipment in the basement

OBSERVATIONS

There were no reported or observed problems with the Subject Property basement.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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5.2 INTERIOR FINISHES & COMPONENTS

DESCRIPTION

The interior areas into which entry was made possible by the site contact are finished with average quality materials consistent with similar property use types. The finishes generally consist of the materials listed in the table below.

TYPICAL INTERIOR FINISHES

AREA OR ROOM	FLOOR	WALLS	CEILING
Lobby	Vinyl tile	Glazed brick	Glued acoustic tile
Administrative offices	Carpet / Vinyl tile	Painted GWB	Glued acoustic tile
Corridors	Vinyl tile	Painted GWB, Glazed brick	Glued acoustic tile
Gymnasium/ Cafeteria	Vinyl tile/wood stage	Painted GWB	Exposed beams
Classrooms	Vinyl tile	Painted GWB, glazed brick	Glued acoustic tile
Library	Vinyl tile	Painted GWB	Glued acoustic tile
Restrooms	Ceramic mosaic tile	Marble, Glazed brick	Glued acoustic tile
Annex	Vinyl tile	Painted GWB	Suspended acoustic tile
Stairs	Rubber floor tile	Painted GWB, Glazed brick	Exposed stair structure

The lobby area of the building has vinyl tile, painted GWB walls, and suspended acoustic tile ceilings. Classrooms and cafeteria spaces typically include vinyl tile floors, painted GWB walls, and acoustic tile ceilings. Corridor walls include exposed brick walls.

Stairways are included in the main building and in the two-story annex in the rear (north). Stairs are constructed with steel stringers and steel pipe railings. The treads and risers are rubber tile.



Representative corridor



Representative office

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Representative classroom



Representative nurses station



Representative bathroom



Representative stairway

OBSERVATIONS

A representative sampling of the elementary school areas was surveyed. The interior spaces are in good overall condition. Stained ceiling tiles were observed in the east entrance vestibule. See Section 4.1 for further details. Based on the observed conditions, Capital Needs are recommended for the replacement of all stained ceiling tiles.

The corridors were generally in good condition. Based on their reported age and estimated remaining useful life and current condition, corridor refurbishment, including painting the walls and trim, and flooring replacement is recommended as a Critical Need item.

The administrative offices, auditorium, and classrooms were all found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The interior stairs and stair finishes appear to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The observed restroom finishes were found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The interior stairs and stair finishes appear to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

	
Stained ceiling tile in a second-floor classroom	Stained ceiling tile

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Corridor refurbishment**
- **Replace stained acoustical ceiling tiles**

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6.0 ACCESSIBILITY

DESCRIPTION

The *Americans with Disabilities Act (ADA)*, *Title III*, *28 CFR Part 36*, enacted July 26, 1990 and effective January 26, 1992, governs public accommodation and commercial properties. *Title III* of the *ADA* divides facilities into two basic categories: places of *public accommodation* and *commercial facilities*, with different obligations for each facility type. The provisions of *Title III* provide that persons with disabilities should have accommodations and access to public facilities that are equal, or similar, to those available to the general public. Assessment of any other *Titles*, or their provisions of the *ADA*, including those that govern employer and/or tenant responsibilities, is specifically excluded from this Scope of Work and *Report*. Since tenants and employers at properties are usually responsible for making their leased areas *ADAAG*-compliant, assessment for *ADAAG* compliance in these areas was not completed.

Regardless of a property's age, these areas and facilities must be maintained and operated to comply with the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)*. Facilities initially occupied after the effective date are required to fully comply with the *ADAAG*. Existing facilities constructed prior to this date are held to the lesser standard of compliance as *Title III* calls for owners of buildings occupied prior to the effective date to expend "reasonable" sums, and make "reasonable efforts", to make "practicable" or "readily achievable" modifications to remove barriers, unless said modification would create an undue financial burden on the property or is structurally infeasible. When renovating buildings occupied prior to the effective date, the area renovated, and the path of travel accessing the renovated area, must comply with the *ADAAG*. As an alternative, a *reasonable accommodation* pertaining to the deficiency must be made. The definitions of "reasonable," "reasonable efforts," "practicable." and "readily achievable," are site dependent and vary based on the owner's financial status.

Due to the unique nature of each property, the extent of analysis required, and the many variables of compliance with the *ADAAG* guidelines, the evaluation of costs for full *ADAAG* compliance is beyond the scope of this *Report*. A separate *ADAAG Compliance Audit* may be ordered and may reveal aspects of the property that are not in compliance.

For the purposes of this *Report* the survey is limited to visual observations of only a representative sample of areas readily observable or easily accessible, and to those areas set forth in *EBI's Modified Accessibility Compliance Checklist and Costs* included in Appendix C of this *Report*. The survey is limited to identifying potential routine maintenance or renovation actions that can increase accessibility over time and may or may not, achieve full *ADAAG* compliance. Places of *public accommodation* at the Subject Property were visually observed for general compliance with the major requirements of the ADA, taking into consideration the current use of the property, its age and renovation history. No actual measurements were taken to verify compliance.

Questions concerning the *ADA* and the *ADAAG* may be addressed to the *United States Department of Justice (USDOJ) ADA Hotline* at (800) 514-0301 followed by touching "7" on the touch tone keypad. Additional information is available online at the ADA.gov website.

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OBSERVATIONS

The Subject Property falls into the *public accommodation* category. Therefore, the Americans with Disabilities Act (ADA), Title III, 28 CFR Part 36, is applicable.

A visual review of the property completed in conformance with *EBI's Modified Accessibility Compliance Checklist and Costs*, identified issues of non-compliance with the *ADAAG.* Modifications to correct observed *ADAAG* deficiencies for the Subject Property and their associated estimated costs are detailed in *EBI's Modified Accessibility Compliance Checklist and Costs* immediately following.

Modifications to correct observed *ADA* deficiencies for the Subject Property and their associated estimated cost are beyond the scope of this assessment. The client should engage an accessibility specialist to determine what modifications, if necessary, are required to bring the property into compliance with *ADA* guidelines.

Except for one accessible car space, no ADA accessibility compliance was observed or reported in the Subject Property building.

RECOMMENDATIONS

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Complete ADA compliance upgrades**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Coffin School
Facility Address: 1 Turner Rd
Marblehead, Massachusetts
Property Age: 73 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

A. SCOPE OF THE ASSESSMENT

1.0 ADA - Parking and Exterior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
1.1	Does there appear to be sufficient handicapped-accessible parking spaces with respect to the total number of reported spaces?			✔	ADA 208.2	The building is not ADA accessible					
1.2	At least on in every six accessible spaces is required requred to be van-accessible.			✔	ADA 208.2.4						
1.3	Are accessible car parking spaces 96 inches wide minimum? (Measure from the centerline of the markings.) (NOTE: In Florida accessible spaces must be 144 inches wide minimum)			✔	ADA 502.2						
1.4	Are accessible van parking spaces 132 inches wide minimum? (Exception: Van parking spaces can be 96 inches wide minimum when the access aisle is 96 inches wide minimum.) (Measure from the centerline of the markings.)			✔	ADA 502.2						
1.5	Are there access aisles adjacent to each accessible space, and if present, are they at least 60 inches wide? (Two spaces may share an access aisle that is between them. Exception: Angled van accessible parking spaces must have the access aisle on the passenger side of the accessible space.)			✔	ADA 502.3						
1.6	Do the access aisles adjoin an accessible route? (NOTE: Compliant curb ramps present at head of access aisle, or access aisles flush with sidwalks.)			✔	ADA 502.3						
1.7	Do the **existing** ADA spaces appear to be marked with the International Symbol of Accessibility on a vertically-mounted sign?			✔	ADA 502.6						
1.8	Do the **existing** van-accessible spaces appear to be marked with a sign reading "Van-Accessible"?			✔	ADA 502.6						
1.9	Is the bottom edge of the ISA sign at least 60 inches above the finish grade of the parking space? (NOTE: "VAN ACCESSIBLE" sign can be lower than 60 inches.)			✔	ADA 502.6						
1.10	Are the clear widths of the walking surface of the accessible routes 36 inches minimum?			✔	ADA 403.5.1						
1.11	Are accessible routes free from barriers, such as stairs, steps, or vertical changes greater than 1/4"? (NOTE: a vertical change up to 1/2" is allowable if beveled with a slope no steeper than 1:2. This does not include ramps.)			✔	ADA 303.2, 303.3						
1.12	Do all protruding objects located between 27 inches above the floor and 80 inches above the floor protrude no greater than 4 inches into the circulation path if they do not have protection via a guardrail or other barrier with a bottom edge 27 inches above			✔	ADA 307.2						
1.113	Is the clear opening width of the accessible entrance door at least 32", between the face of the door and the stop, when door is open 90 degrees?			✔	ADA 404.2.3						
1.14	Is the door hardware on exterior access doors to *areas of public accommodation* operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?			✔	ADA 402.7						
1.15	At accessible entrances, is the door threshold height less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?			✔	ADA 404.2, 303.2						
1.16	Does the accessible route feature a stable, firm, and slip-resistant walking surface?			✔	ADA 502.4						
1.17	If not all entrances are accessible, is there a sign at the accessible entrance with the International Symbol of Accessibility?			✔	ADA 216.6						
1.18	Do all ramps on accessible pathways serving *areas of public accommodation* (including curb ramps) appear to have a slope not exceeding 1:12?			✔	ADA 405.2						
1.19	Do depressed curb ramps on accessible pathways serving *areas of public accommodation* have flared sides with a slope not exceeding 1:10?			✔	ADA 406.3						
1.20	If a ramp has a rise higher than 6", are there handrails on both sides?			✔	ADA 405.8						
1.21	Does the width between railings for ramps on accessible pathways serving *areas of public accommodation* appear to be at least 36 inches?			✔	ADA 405.5						
1.22	Is there a level landing at least 60" x 60" at the top and bottom of each ramp run?			✔	ADA 405.7						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Coffin School
Facility Address: 1 Turner Rd
Marblehead, Massachusetts
Property Age: 73 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

2.0 ADA - Interior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
2.1	Are all accessible routes at least 36" wide (32" wide through doorways)?			✔	ADA 403.5.1						
2.2	Do floor surfaces appear to be firm, stable, and slip resistant ?			✔	ADA 40.2, 302.1						
2.3	If carpeting is present, is it securely fastened, with a maximum pile height of 1/2 inch?			✔	ADA 302.2						
2.4	Do all objects on circulation paths through public areas, e.g. fire extinguishers, drinking fountains, signs, etc, protrude no more than 4" into the path, **or** if object protrudes more than 4", is the bottom leading edge at 27 inches or lower above the floor, or 80 inches or higher above the floor?			✔	ADA 307.4						
2.5	Is the door hardware on interior doors serving areas of public accommodation operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?			✔	ADA 404.2.7						
2.6	Are the door threshold heights less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?			✔	ADA 404.2, 303.2						
2.7	**For elevators in areas of public accommodation only:** Is the interior at least 54" deep by at least 36" wide?			✔	ADA 407.4.1						
2.8	**For elevators in areas of public accommodation only:** Are in-car controls no less than 15" and no greater than 48" above the floor, **or** up to 54 inches above the floor for a parallel approach?			✔	ADA 408.4.6, 407.6.1						
2.9	**For elevators in areas of public accommodation only:** Do elevator control buttons appear to be designated by both Braille and by raised standard alphabet characters (mounted to the left of the			✔	ADA 407.4.1.1, 703.2						
2.10	**For elevators in areas of public accommodation only:** Are there audible signals which sound as the car passes or is about to stop at a floor?			✔	ADA 407.4.8						
2.11	**For elevators in areas of public accommodation only:** Is there a two-way emergency communication system within the elevator cab that is push-button activated, and does it providevisual indication that a rescue is on the way?			✔	ADA 407.4.9, 308						
3.0 ADA - Public Restrooms		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
							Total Estimated Cost of Handicapped-Accessibility Compliance Recommendations:				**$0**

7.0 BUILDING SYSTEMS

7.1 PLUMBING

DESCRIPTION

Domestic water service to the building consists of a 2 inch diameter water line which enters from under the slab into the boiler room. Domestic water pressure at the Subject Property is provided by the incoming municipal service.

The observed supply of domestic water piping is copper. Sanitary sewer drain and vent lines were observed as hub and spigot cast iron.

Backflow devices are furnished for the potable water and fire sprinkler systems at the site. The backflow preventers are located in the boiler room adjacent to the water service entrance.

The main gas meter and 4 inch service is located on the south side of the building. Welded and threaded black iron pipe is used for main gas piping throughout the Subject Property. Service lines from the main line are stainless steel to the heating equipment.

Domestic hot water is provided by one 40,000-BTUH, 40-gallon, *Bradford White* gas-fired water heater. The water heaters are approximately three years old. The Subject Property domestic hot water systems are reported as follows:

SUBJECT PROPERTY DOMESTIC WATER HEATERS

MANUFACTURER	FUEL TYPE	CAPACITY	APPROX. AGE	LOCATION
Bradford White	gas	40-gallon	3	Boiler room

The plumbing fixtures are vitreous china with chrome fittings. The building restrooms contain vitreous china water closets with manual flush valves. The building contains vitreous china urinals with manual flush valves. The janitor closets contain a wall-mounted cast iron mop sink located on each floor of the main building. The main building contains two vitreous china drinking fountains, one on each floor located in the corridor. Student bathrooms are located in the front (main) part of the building

The student's restroom on each floor of the main building typically is furnished with three sinks and either three urinals and two toilets in the boys' restrooms or two toilets in the girls' restrooms. Each adult restroom contains one sink and one toilet.

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Backflow device overview



Typical water meter



Main gas line and meter overview



Typical *Bradford White* 40-gallon water heater



Children's restroom example



Adult restroom example

OBSERVATIONS

Facilities noted that the domestic water supply piping was contaminated due to lead soldering. The school has been using bottled water for months. Based on its reported age, current condition, and expected useful life, Critical Repairs are recommended for the evaluation of copper piping during the analysis term.

The bathroom fixtures observed appeared to be in good condition and in working order. The water closets and urinals were reportedly installed as part of the original construction in 1949. The manual flush valves for the water closets appear to be in good working order. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for fixture replacement including the uinals and water closets during the analysis term.

The water heater is approximately three years old and in working order. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for replacement during the analysis term.

Sanitary sewer lines were not observable during the site visit. No issues with the sanitary sewer lines were reported.



Restroom fixtures example



Restroom fixtures example

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Evaluation of copper piping**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Water heater replacement**
- **Plumbing fixture replacement**

7.2 HVAC

DESCRIPTION

A summary of the HVAC equipment at the Subject Property is presented in the table below, followed by a detailed system description.

HVAC COMPONENTS

AREA SERVED	NO. OF UNITS	MFR., MODEL #	TONS OR BTUS	TYPE OF EQUIPMENT	AGE (YEARS)
Throughout	2	*H.B. Smith, No. 44 Mills*	1740.7 MBH	Retrofitted gas-fired boiler	59

The school is provided with two steam boilers. The burners have been retrofitted to burn gas. Steam is distributed by risers to each floor of the original building. Steam is provided to the Annex via piping through the skywalk connecting the two buildings. Heat distribution is provided in classrooms via unit ventilators original to each building section and steam radiation in common spaces.

Fresh air ventilation is achieved through the unit ventilators located in the main building section. Ventilation is achieved with a chain in a small closet that opens and closes the dampers. The annex is provided with rooftop mechanical exhaust units.

The heating and ventilation for the HVAC system utilize *Metasys* (*Johnson*) pneumatic control systems.

Miscellaneous materials are currently being stored in the Subject Property mechanical room making access to the equipment for service and maintenance difficult.



Steam boiler retrofitted to burn gas



Typical boiler gas-burner

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Second H.B. Steam Smith steam boiler with miscellaneous materials stored in the boiler room



Metasys (*Johnson*) control panel example

OBSERVATIONS

The burners have been retrofitted to gas-fired. Steam is distributed by risers to each floor of the original building. Steam is provided to the Annex via piping through the skywalk connecting the two buildings. Facilities noted that because the piping travels through an unheated space, this causes the pipes to sweat ultimately leading to constant pipe deterioration. Despite having the four zones, two original to the buildings and two added recently, no balance in thermal comfort exists. Pipes and fittings are intermittently failing which requires boilers to be shut down and piping to be replaced. Facilities noted damage to walls and flooring has resulted.

Based on the reported age, current condition, and expected useful life, replacement of the heated water loop piping is recommended as Non-Critical Repairs during the analysis term.

Based on the reported age, current condition, and expected useful life, replacement of the heated water loop piping is recommended as Capital Needs during the analysis term

Facilities noted problems in the past with the burner on each boiler cause them to shut down periodically. No major repair has been done to the HVAC system in the last 3 years. The average useful life of boilers of this size and type is approximately 25 to 30 years, depending upon their location, maintenance, and use type, but can be extended with proper maintenance and/or refurbishment to 35 to 40 years. The boilers are reportedly serviced on a regular basis. An interview with facilities indicated the boilers have constant issues with replacement parts not available. Based on their average effective useful life, current condition, and reported maintenance program, replacement of the boilers (*H.B. Smith*) is recommended as a Capital Need during the analysis term.

Facilities noted and it was observed that the controls are largely failing and generally inoperable. The computer control system is antiquated and thus barely operates. Access to the control system has not worked for several years. The control systems are in need of a complete replacement. Based on their average effective useful life, current condition, and reported maintenance program, replacement of the computer control system is recommended during the analysis term.

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A ventilation system is non-existent in the main building, the installation of a proper exhaust fan system is recommended.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Piping replacement**

Please see Table 2 for the recommended Capital Needs listed below:

- **Boiler replacement – per BTUH**
- **Piping replacement**

7.3 ELECTRICAL

DESCRIPTION

The main electrical service entrance is rated as a 600-Amp, single-phase, three-wire 120/240-volt main, feeding the main distribution panelboard located within the mechanical room. The observed services are protected by a combination of glass and brass fuses and circuit breakers. Beyond standard ground rods or grounded connections to major piping systems, additional lightning protection was not observed.

The Subject Property reportedly has copper branch wiring copper feeder cables. Standard electrical devices, switches, and fixtures consistent with the Subject Property use type were also observed through the building. GFCI fixtures were not observed during the survey in the restrooms and kitchen areas.

SUBJECT PROPERTY ELECTRICAL SYSTEM

BUILDING	SERVICE	PHASE WIRE	VOLT	TYPE
Main Building	200-AMP	1-Phase, 3-Wire	120/208	Panelboard
Annex	200-AMP	1-Phase, 3-Wire	120/208	Panelboard

From a review of the electrical system and drawings, it appears that the Subject Property has a radial distribution system to the main electrical panelboard. The utility company distribution system powers one transformer located on the west side of the site. *EBI* requested information on ownership of the transformers from the site contact and was told the transformers are owned and maintained by the utility company.

The transformers fall into two basic categories, dry and liquid-filled, with the most widely used type being liquid-filled containing mineral oil. Prior to 1979, many liquid-filled transformers contained oils with Polychlorinated Biphenyls or PCBs. A conversation with *Marblehead Municipal Light Department* stated the municipality-owned transformer was installed in 2010 indicating the transformer containing

PCBs may not be a factor. The liquid-filled transformers are typically located outside due to the potential of fire hazards from oil leaks.

Lighting in the office areas is mixed with fluorescent and LED fixtures. The fixtures typically are 2'x4' with T-12 lamps. Mechanical and support area lighting includes fluorescent tube fixtures of varying lengths (typically 4' and 8').

GFCI receptacles were observed consistently in the restrooms and breakroom sink areas.

	
Insert description	Insert description
	
Insert description	Insert description

OBSERVATIONS

Facilities reported no problems with the electrical system under current use however, breakers are tripped when multiple pieces of equipment are plugged in at the same time. Based on their average effective useful life, current condition, and reported maintenance program, replace circuit breaker (100 amp) as a Capital Need during the analysis term.

The property's main electrical panelboard was installed in 1949. The panel is outdated and problematic. Repairs for the panel board complicated because parts are nearly impossible to find. Based on their average effective useful life, current condition, and reported maintenance program, replace the main circuit breaker (200 amp) as a Capital Need during the analysis term.

Facilities reported that an infrared (IR) survey of the building's electrical components has not been conducted in the last 5 years. Based on the age of the building and electrical components, Critical Repairs are recommended for an IR survey.

Infrared (IR) surveys are done by either electricians or testing firms specializing in this work using an infrared camera (thermal imaging) to detect relative "hot spots" in switchgear panels and breaker panels. The "hot spots" indicate higher resistance in wires, normally at connection points, and thus indicate areas that may not have proper connections between wires and termination points. The normal course of action if a "hot spot" is detected is to check the torque on the screws/bolts that hold the wire to the panel connection, as well as clean off any oxidation on the wire. Once a firm completes their survey, they typically affix inspection tags to the switchgear and breaker panels, noting the firm name and the date of testing, as well as supplying a written report to the property owner documenting their findings and the corrective action is taken.

GFCI receptacles were observed consistently in the restrooms and breakroom sink areas.

The property's main electrical disconnect switches were installed and manufactured either before or in the 1970s. The disconnect equipment is therefore 35 years of age or older, and procurement of spare parts is difficult for most of the equipment. Based on the observed condition of the disconnect switches, and the average effective useful life of main power disconnects; replacement of the main electrical switches are recommended as a Critical Need over the analysis period.

There were no other reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type.



1949 Electrical panelboard example



1949 electrical equipment example

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1962 glass fuses example	Typical glass fuse panel

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Perform IR survey**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace Main Circuit Breaker, single phase (200 Amp)**
- **Replace Circuit Breaker (100 Amp)**

7.4 BUILDING & SITE FIRE & LIFE SAFETY

DESCRIPTION

The fire sprinkler water service is supplied to the building underground via Schedule 40 steel four (4)-inch line where it is fed through a backflow preventer; both are located in the mechanical room. Sprinkler water distribution is via a steel fire-rated piping system throughout the building.

Observed fire and life safety systems serving the building include an *Edwards* multiple-zone, fire alarm control panel that has an auto-dialer reportedly tying the system to the fire department, an addressable master fire control panel with an interface from remote panels. The fire panel has a fireman command center with a network display unit located at the main entrance.

The Subject Property also has hardwired with battery-backup smoke detectors, pull stations at entrances to building entrances, illuminated exit lights with battery-backup along exit paths, horn/light annunciators in common area restrooms and corridors, and fire extinguishers spread throughout the building.

The Subject Property is equipped with an automated emergency defibrillator (AED) near the front desk and an eyewash station in the boiler room.

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Fire alarm control panel overview



Pull station example



Fire extinguisher with valid inspection tag



Firefinder control panel



Sprinkler system with backflow preventer



Illuminated exit sign example

OBSERVATIONS

The fire sprinkler water service lines were noted and reported to be in good condition. The site contact was not aware of the last date of inspection of the devices and based on the current condition and the expected useful life, Critical Repair is recommended for backflow device inspection.

There were no reported or observed problems with the life safety system or configuration. There were no inspection tags observed on the control panel, alarm system and, sprinkler system. Critical Repairs are recommended for updating the expired inspection tags.

The fire alarm control panel is three years old and appears to be in serviceable condition. Based on its reported age, current condition, and expected useful life of approximately 20 to 25 years, Capital Needs are anticipated during the analysis term.

The fire extinguishers are reportedly inspected annually, were last inspected in August 2020, and appear to be in serviceable condition.

The site contact, Mr. Bloodgood, was unaware of the last system test. Based on observed and reported conditions, Critical Repairs are recommended to perform the 5-year sprinkler system test.

The *U.S. Consumer Product Safety Commission* has recalled approximately 35 million sprinkler heads manufactured by *Central Sprinkler Co*. A complete list of the recalled sprinklers can be found at http://www.sprinklerreplacement.com or by calling (866) 505-8553. The recall involves mostly "wet" sprinkler heads manufactured from 1989-2000, and "dry" sprinkler heads manufactured from the mid-1970s to 2001. No recalled heads were reported or observed to be at the property.

The emergency exit doors and panic hardware appear to be in serviceable condition. The doors are to swing-open into the direction of emergency egress.

Illuminated exit signs are located at the entry doors to the emergency exits and appear to be in serviceable condition. The exit signs are recommended for an annual inspection, and inoperative lamps replaced as required as part of routine maintenance operations.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Complete NFPA 5-year sprinkler test**
- **Provide current inspection tags for fire sprinkler and alarm systems (Action Item)**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace fire alarm control panel**

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7.5 ELEVATORS AND CONVEYING SYSTEMS

DESCRIPTION

The Subject Property has no elevators.

OBSERVATIONS

Not applicable.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

DRAFT

8.0 Municipal Research

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed, and state, county, or local municipal departments consulted. Documentation applicable to the Subject Property in those departments was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

MUNICIPAL REFERENCES				
Resource	**Contact**	**Information Provided**	**Phone or Web**	**Date**
Town of Marblehead Assessor	online	Property ownership & size information	https://www.marblehead.org/assessors-office	1.17.2021
Town of Marblehead Building/Inspections Department	online	Code compliance & violations	https://www.marblehead.org/building-inspection-department	1.24.2021
Town of Marblehead Planning & Zoning	online	Zoning information	https://www.marblehead.org/zoning-board-appeals/pages/zoning-laws-regulations	1.24.2021
Town of Marblehead Fire Department	online	Fire history & code violations	https://www.marblehead.org/fire-department	1.24.2021

8.1 Municipal Information & Zoning

Municipal Information

Readily available, reasonably ascertainable, and publicly viewable municipal records at the *Town of Marblehead* were reviewed on-line.

Zoning

The municipal zoning office personnel were consulted, the zoning office files were reviewed, and/or the zoning ordinance was reviewed to determine the zoning of the Subject Property. According to the information provided, the Subject Property is currently located within a *SR, Single Residence* district and appears to be a conforming use.

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Zoning Map

8.2 BUILDING & PLANNING DEPARTMENT

DESCRIPTION

The Municipal Building and Planning Departments were consulted for open material violations, and to obtain, readily available, reasonably ascertainable, and publicly viewable documents regarding the Subject Property.

CONCLUSION

The department interviews and/or file reviews do not show open material violations on the Subject Property.

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material

violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, our *Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

8.3 FIRE DEPARTMENT

DESCRIPTION

The local fire department was consulted for open material violations.

CONCLUSION

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, *EBI's Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

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9.0 HAZARDS

9.1 NATURAL HAZARDS

DESCRIPTIONS

9.1.1 Seismic

Chapter 16 of the 1997 edition of the Uniform Building Code (UBC) was reviewed to determine the Seismic Zone of the Subject Property. Chapter 16 includes calculations for and mapping of earthquake (seismic) loads on structures. Figure 16-2, Seismic Zone Map of the United States delineates differing ratings of seismic load and shows the United States having seismic Zones ranging from 0 to 4. These ratings indicate the severity of how horizontal ground motion and sub-surface soil types affect a structure.

9.1.2 Flood Zone

The Federal Emergency Management Agency (FEMA) maps and rates flood hazard zones throughout the United States. These zones are depicted on a Flood Insurance Rate Map (FIRM), designated by Community Map and Panel numbers. The flood hazard zones range from Zone A or AE (A1 – A130), with Base Flood Elevations (BFE) determined, to Zone X, unshaded areas outside the 500-year floodplain. EBI utilizes *CoreLogic's* FloodInsights mapping system, which searches the FEMA FIRM map and panel, to obtain the Flood Zone Determination of the Subject Property.

9.1.3 Wind Zone

FEMA maps and rates wind hazard zones, Special Wind Regions and Hurricane-Susceptible Regions throughout the United States. These zones are depicted on a Map of Wind Zones in the United States on FEMA's website – www.fema.gov/fima/tsfs13.shtm and http://www.fema.gov/graphics/library/wmap.gif.

CONCLUSIONS

9.1.1 Seismic

According to Figure 16-2 in the *UBC*, the Subject Property appears to be located in Zone 2A, with a low to moderate probability of damaging ground motion.

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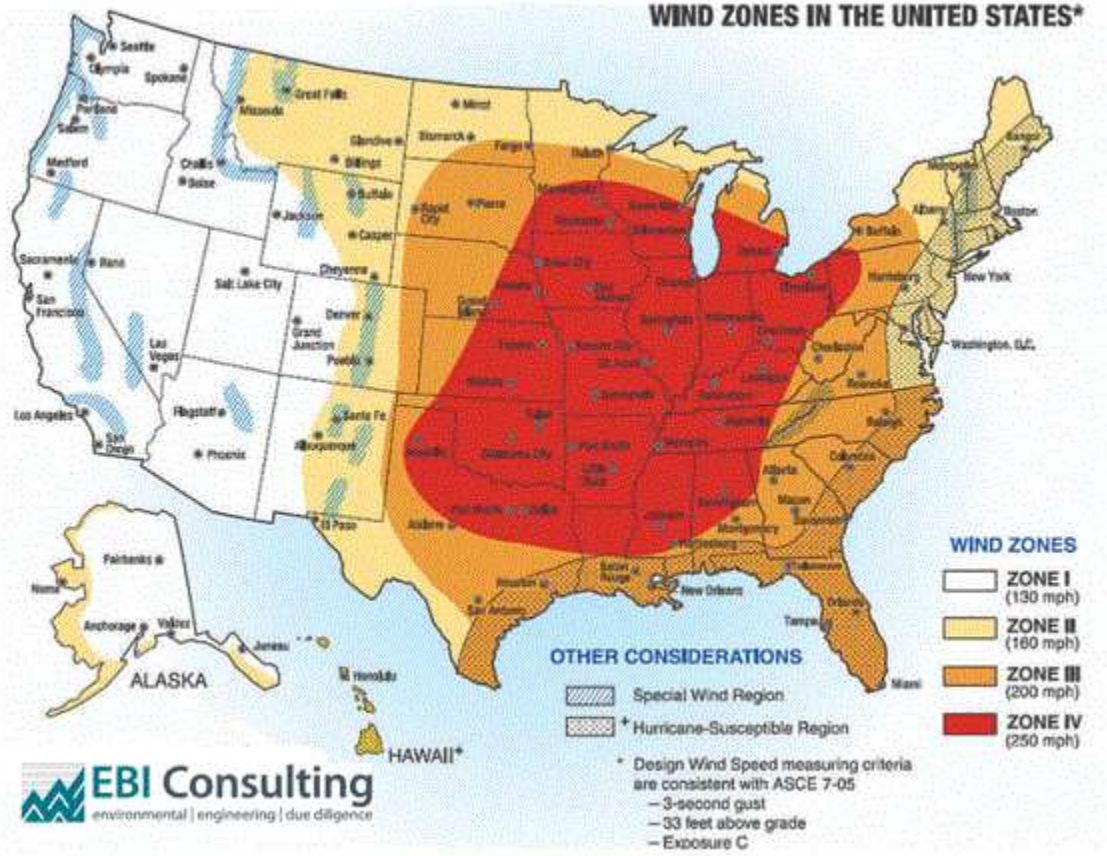


9.1.2 Flood Zone

The Subject Property Flood Zone Determination appears to be Zone X, defined as an area outside the 100- and 500-year floodplains, as shown on First American Flood Data Services' Flood Hazard Certification, Community Map #250091, Panel #0438G, dated July 16, 2014.

9.1.3 Wind Zone

Based on FEMA's Map of Wind Zones in the United States, the Subject Property appears to be located in Zone II, up to 160 mph winds. The Subject Property appears to be located in a Hurricane Susceptible or a Special Wind Region. However, the Subject Property is not located in a Special Wind Region.



9.2 SUSPECT MOLD AND MOISTURE

Interior areas of the Subject Property buildings to which access was provided, and in which building elements were readily observable, were reviewed for the presence of moisture and visible or olfactory evidence of microbial development (suspect mold). No observations were conducted within concealed locations (construction elements behind wall and ceiling finishes, and other building components, etc.). No sampling or testing was performed to confirm the presence of invisible airborne microbial elements. In addition to *EBI's* observation efforts, property personnel did not indicate the presence of moisture or suspect mold during the survey, or in *EBI*'s Pre-Survey Questionnaire.

Representative Subject Property observations and interviews revealed no obvious visual or olfactory indications of the presence of suspect mold activity. However, indications of active moisture infiltration were noted in the areas of stained ceiling tiles. Repairs to this area to address moisture infiltration are discussed under other sections of this *Report*, which are directly related to the apparent causes of the infiltration. No additional recommendations concerning moisture are made at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

10.0 REFERENCES

10.1 CONTACTS

DESCRIPTION

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed for information concerning the Subject Property. Documentation applicable to the Subject Property was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Director of School Facilities, *Town of Marblehead*	Todd Bloodgood	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021
Electrician - Facilities, *Town of Marblehead*	Mike Ellconus	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021

10.2 PERTINENT INFORMATION PROVIDED OR OBTAINED

EBI's Pre-Survey Questionnaire was forwarded to the designated property contact. The information requested in the questionnaire assists in *EBI's* research of the property to obtain pertinent property data; discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs; and pending repairs and improvements. The Pre-Survey Questionnaire was completed on site with escorts.

The following information was provided and reviewed on a cursory basis as background information of this report:

EXHIBITS RECEIVED AND REVIEWED	YES	NO	DESCRIPTION/COMMENTS
1. A.L.T.A. Survey		X	Not provided
2. Legal Description of the Property	X		Obtained by EBI.
3. Location Maps	X		Obtained by EBI.
4. Project Specifications		X	Not provided
5. Soils Report		X	Not provided
6. Local Building Code Compliance		X	Request submitted by EBI
7. Date of Permits and Cert. of Occupancy for Each Building		X	Request submitted by EBI
8. Building Plans:			
a. Architectural		X	Not provided
b. Structural		X	Not provided

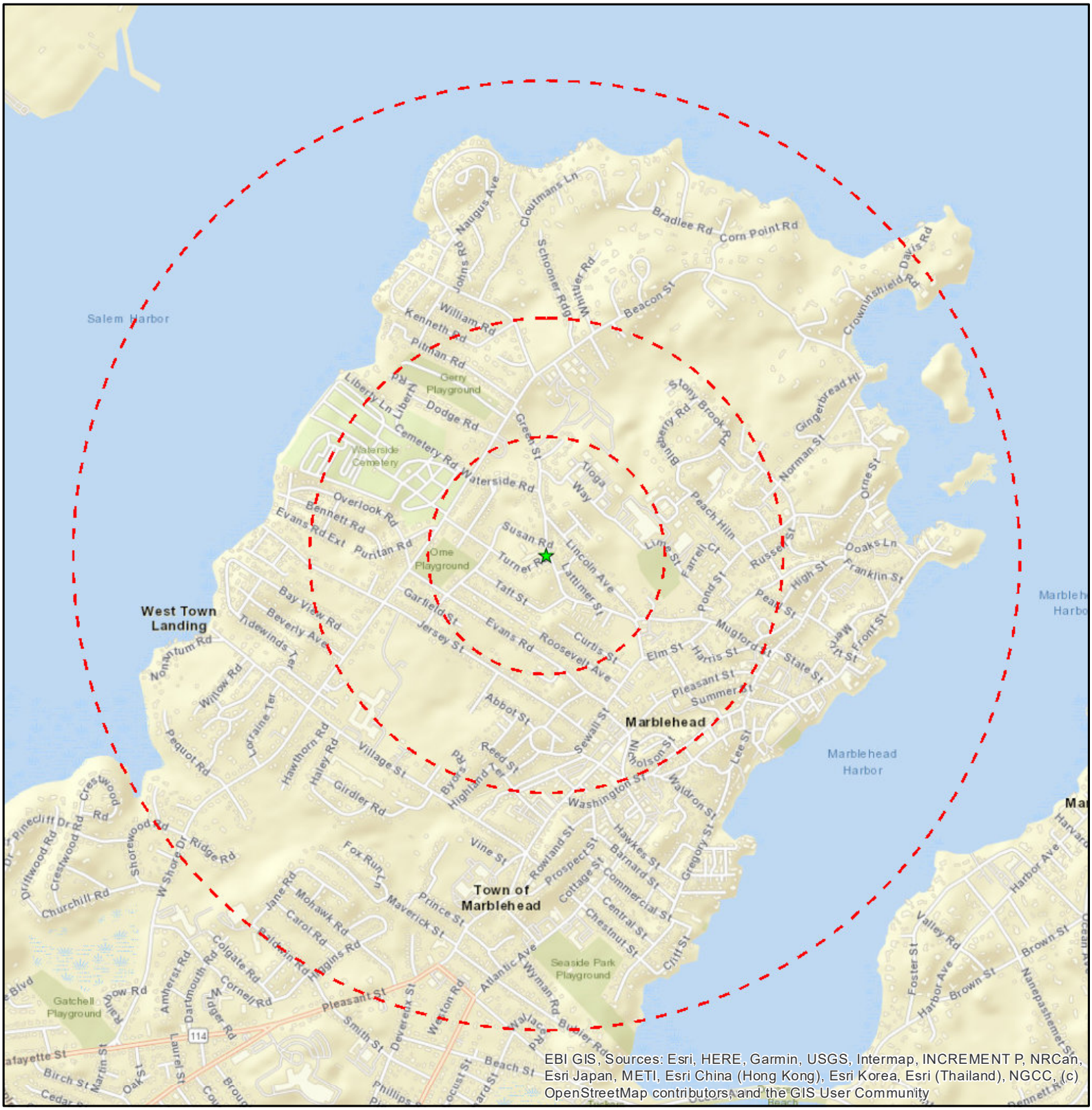
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c. Mechanical		X	Not provided
d. Electrical		X	Not provided
e. Plumbing		X	Not provided
9. Owner's Repair List and Cost Breakdown		X	Not provided
10. Other			

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APPENDIX A - FIGURES, DRAWINGS AND PLANS

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Legend

- ★ Project Site
- Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

Date: 2/8/2021

Figure 1: Site Location Map

NULL COFFIN SCHOOL
1 TURNER RD
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000045

EBI Consulting
environmental | engineering | design



Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

USGS 24K Quad: Marblehead North, MA 1986

Date: 2/8/2021

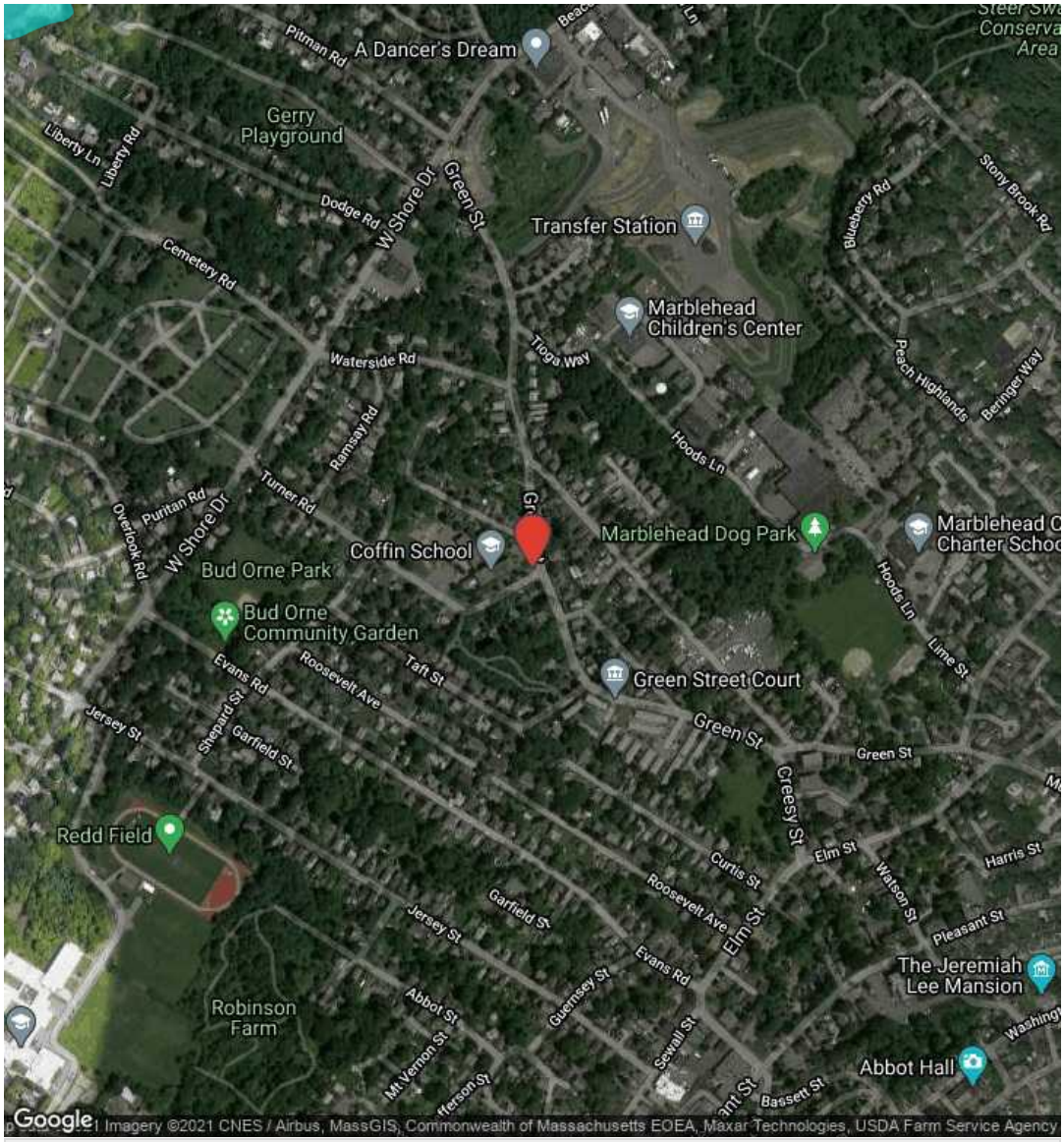
Figure 2 - Topographic Map

NULL COFFIN SCHOOL
1 TURNER RD
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000045

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Overview Map



Flood Zones: X500 or B Zone | A Zone | V Zone | D Zone | Floodway | CBRA

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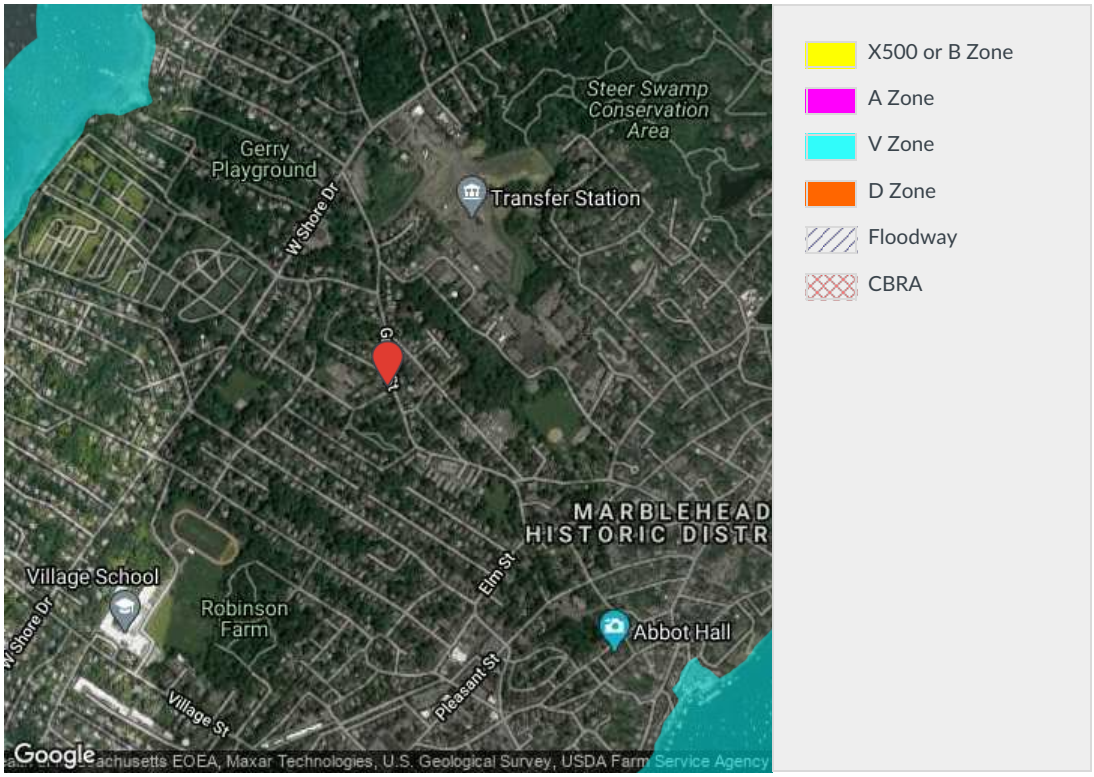
LATITUDE: 42.508281, LONGITUDE: -70.858806

LOCATION ACCURACY: *User-defined location* **LATITUDE:** 42.508281 **LONGITUDE:** -70.858806 **MATCH CODE:** **SOURCE:** **CENSUS BLOCK ID:** 250092033012004

Flood Zone Determinations Report

Flood Zone Determinations: OUT

SFHA (FLOOD ZONE)	OUT	**WITHIN 250 FEET OF FLOOD ZONE**	NO
FLOOD ZONE	X	**COMMUNITY**	250091
COMMUNITY NAME	MARBLEHEAD, TOWN OF	**PANEL**	0438G
PANEL DATE	July 16, 2014	**COBRA**	OUT
MAP NUMBER	25009C0438G	**FIPS CODE**	25009



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APPENDIX B - OTHER RELEVANT DOCUMENTS

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APPENDIX C - PROFESSIONAL QUALIFICATIONS

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Don Gerardi
Acquisitions Senior Project Manager
21 B Street
Burlington, MA 01803
Office: 508.713.3109

Summary of Experience

Mr. Gerardi has 24 years of experience in the field of facilities systems engineering. His facilities work includes project management for medical, multifamily, healthcare, assisted living, office, residential, universities, K-12, government facilities both in the United States and abroad. Mr. Gerardi performed Property Condition Assessments (PCA) and Physical Needs Assessments (PNA) for a diverse array of buildings and properties throughout the United States and abroad. Mr. Gerardi is knowledgeable with local and federal building codes, ADA requirements, and Fair Housing guidelines. Mr. Gerardi managed and performed Property Condition Assessments of numerous properties including retail, office, commercial, hospitality, industrial, residential, and assisted living facilities throughout the United States and abroad. Mr. Gerardi has experience in the equity-scope due diligence arena primarily in the engineering field and specializes in mechanical systems with mechanical engineering discipline and the construction industry. Mr. Gerardi remains active and up to date on the latest practices in his profession through continuing education seminars and training, including construction methods and practices. Mr. Gerardi is knowledgeable with ASTM Standard Guide for Property Condition Assessments, Fannie Mae and Freddie Mac protocols, accessibility standards including FHAA and ADA, and ASTM Standard Guide for Seismic Risk Assessment of Buildings.

Relevant Project Experience

STATE OF NEW MEXICO MANAGEMENT DIVISION, NM

Physical Needs Assessment, Capital Needs Assessment, Energy Audit & Section 504 Compliance
Facility Assessments including multi-story office buildings, medical facilities, correctional compounds, academic and administrative structures and support facilities. Properties ranging in age from 2 to more than 100 years old.

LAS VEGAS SCHOOL SYSTEM, CLARK COUNTY, NV

Facility Condition Assessment, Building Condition Assessment, Capital Improvement Plan Database
Assessing condition of buildings, maintenance facilities, parking and paving, and recreational facilities. Five-Year Capital Facilities plan. Prioritization of required repairs and cost estimates for each repair. Estimates for new program needs within existing structures and a projection for additional space needs due to anticipated increases in enrollment.

FIRSTENERGY CORP, MULTI STATE LOCATIONS, MD, NJ, OH, PA, WV

Capital Planning Database, Facility Condition Assessments
5-year Facility Condition Project (FCA) identifying future funding needs and assisting in development of First Energy's annual management budget.

Capital Planning Projects:

- University of Alabama
- University Texas A&M
- Baylor University
- New Mexico Corrections Department (Albuquerque, Santé Fe, Grant, Los Lunas, Las Cruces)
- Bureau of Indian Affairs
- State of Vermont
- Central California Women's Facilities (Sacramento, San Francisco, San Jose, Chowcilla, Corona)

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21 B Street
Burlington, MA 01803
Office: 508.713.3109

- Canadian Defense MOD, Eagle Plains, Yukon Territory, Canada
- United States Government Facilities
- Deutsche Bank (Kuala Lumpur, Vietnam, Milan, Madrid, Malaga, Valencia)

Facilities Condition Assessment:

- Columbus Plaza – Chicago, Il
- New Jersey Housing Authority
- Baltimore Housing Authority
- Clark County School District, Clark County, NV
- Mount Vernon Place, Atlanta, Ga (IBM)
- Union Station, Seattle, WA

Property Needs Assessment:

- Elizabeth Housing Authority, Elizabeth, NJ
- Eversource – Massachusetts Natural Gas

Other related experience:

- Construction Project Monitoring
- ADA Condition Assessments (Level 2)
- A&E Project Management
- Facility Condition Assessments
- Maintenance Management

Due Diligence Consulting Includes:

- Assessments in 44 states and 5 countries.
- Assessments of multiple hotel, residential, resort and cruise ship properties.

Education

Bachelor of Science, Mechanical Engineering, Worcester Polytechnic
Associate, Structural Engineering, Worcester Polytechnic
Associate, Business Administration, University of Tennessee, Martin TN

Professional Registrations

Professional Engineer, Massachusetts, 2009

Professional Affiliations

The American Society of Mechanical Engineers (ASME)
Institution of Mechanical Engineers (IME)
Structural Engineers Association of Massachusetts (SEAMASS)
Massachusetts Building Commissioners and Inspectors Association
Southern Massachusetts Building Officials Association

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

SUMMARY OF EXPERIENCE

Mr. Davis has in excess of 37 years experience in real estate development and due diligence. He has performed a wide range of inspections including Physical Needs Assessments per Fannie Mae, Freddie Mac & HUD protocols, Property Condition Assessments to ASTM and custom protocols and Property Condition Equity Evaluations for acquisition. In addition, he has performed and managed a variety of detailed engineering investigations including infra-red roof studies, façade investigations, structural studies, MEP and fire and life safety studies. In total over the past ten years, Mr. Davis has performed more than 500 site surveys and detailed investigations and directed more than 7,500 due diligence assessments for clients.

As senior technical lead on over 50 portfolios, both nationwide and international, he has worked closely with clients to provide timely analysis and critical insight as they make their business decisions on each project. With portfolios ranging in size from 20 locations to over 600 sites, and property types including hospitality, restaurant, retail, office, industrial, and skilled nursing, Mr. Davis has successfully provided progress information on issues and each portfolio was completed on or ahead of schedule.

Mr. Davis' background includes managing design, construction, and engineering projects in over twenty states and five provinces in Canada. His experience as a consultant, owner's representative, contractor and code official brings a unique perspective to each project.

RELEVANT PROJECT EXPERIENCE

Projects on which Mr. Davis has been involved include Assessments for:

- The World Trade Center, Long Beach, California
- Anaheim Garden Walk Mall, Anaheim, California
- Boca Raton Resort and Corporate Center, Boca Raton, Florida
- Inter-Continental Hotel, New Orleans, Louisiana
- Bethesda Hotel & Conference Center, Bethesda, Maryland
- Westin Resort Properties, Puerto Vallarta, Mexico
- The Cosmopolitan, Las Vegas, Nevada (2,900 room resort)
- University Mall, North Carolina (BOMA Lease Study)
- 900 North Michigan Avenue, Chicago, IL (Constrcution Monitoring)
- Numerous large-scale retail, office, multi-family residential, hospitality, healthcare and other commercial facilities

Several large property portfolios, including:

- 8 hospitality property portfolios (ea. 75 to 600 sites)
- 10 retail/office/industrial property portfolios (ea. 100 to 335 sites)
- 3 restaurant property portfolios (ea. 150 to 530 sites)
- 7 assisted living, skilled nursing, and full nursing home property portfolios (ea. 50 to 140 sites)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

- Miscellaneous portfolios including gas service station, self-storage, resort, manufactured home and other portfolios in the US and Canada (ea. 25 to 125 sites)

EDUCATION

Bachelor of Science in Building Sciences, Rensselaer Polytechnic Institute, Troy, NY (1976)
Graduate Coursework, Architectural Design – Drexel University, Philadelphia, PA (1980)

CAPITAL NEEDS ASSESSMENT



Prepared for:

Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945



Glover School

9 Maple St
Marblehead, Massachusetts

EBI Project No. 1320000046

March 29, 2020

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March 29, 2020

Ms. Michelle L. Cresta
Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945

Subject: Capital Needs Assessment, Glover School
9 Maple St, Marblehead, Massachusetts
EBI Project #1320000046

Dear Ms. Michelle L. Cresta:

Attached please find our *Capital Needs Assessment*, (the *Report*) for the above-mentioned asset (the Subject Property). During the property survey and research, our property surveyor met with agents representing the Subject Property, or agents of the owner, and reviewed the property and its history. The *Report* was completed according to the terms and conditions authorized by you. The gathering of data and information for this *Report* has been completed in general conformance with ASTM E 2018 – 15.

The exclusive purpose of the *Report* is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools* in its Due Diligence effort in evaluating the Property.

This *Report* was performed utilizing methods and procedures consistent with established commercial practices and in conformance with industry standards. The suggestions represent *EBI's* opinion based on written, graphic or verbal information, the property condition and data available to us at the time of the survey. Factual information regarding operations, conditions or data provided by the Client, occupants, owner or their representative has been assumed to be correct and complete.

The *Report* speaks only as of its date in the absence of a specific written update of the *Report* signed and delivered by *EBI Consulting*.

EBI Consulting is an independent contractor, not an employee of either party to this transaction, and its compensation was not based on the findings or recommendations made in the *Report* or on the closing of any business transaction.

Thank you for the opportunity to prepare this *Report* and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully submitted,

Jennifer Flanders, P.E., LEED AP BD+C
Author/Engineer

Dennis L. Davis 918.924.1642
Reviewer/Equity Services, National Program Director
ddavis@ebiconsulting.com

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EXECUTIVE SUMMARY TABLE

Property Name:	**Glover School**	*Property Type:*	**School**
Address:	**9 Maple St**	*Property Age:*	**8**
City and State:	**Marblehead, Massachusetts**	*No. of Units or Tenants:*	**1**
Site Survey Date:	**February 11, 2021**	*Square Feet:*	**79,000**
Report Date:	**March 29, 2021**	*Analysis Term (Yrs.):*	**20**
EBI Project #:	**1320000046**		

Section #	Section Name	Critical Repairs	Non-Critical Repairs	Capital Needs
2.0	**SITE CONDITIONS**			
2.1	Site Features			
2.2	Landscaping & Site Improvements			$18,283
2.3	Pavement and Parking			$97,590
2.4	Site Amenities			
2.5	Utilities			
3.0	**STRUCTURE**			
3.1	Substructure			
3.2	Superstructure			
4.0	**BUILDING ENVELOPE**			
4.1	Roofing		$6,600	$233,231
4.2	Facades			$20,027
4.3	Windows & Doors			$126,333
5.0	**BUILDING INTERIORS**			
5.1	Basements/Attics/Penthouses			
5.2	Interior Finishes & Components			$282,468
6.0	**ACCESSIBILITY**			
6.1	Accessibility Compliance			
7.0	**BUILDING SYSTEMS**			
7.1	Building Plumbing			$23,116
7.2	HVAC			$345,696
7.3	Building Electrical			$10,251
7.4	Building & Site Fire/Life Safety	$5,400		
7.5	Elevators & Conveying Systems	$0		$259,692
8.0	**MUNICIPAL RESEARCH**			
8.1	Municipal Information & Zoning			
8.2	Building & Planning Department			
8.3	Fire Department			
9.0	**HAZARDS**			
9.1.1	Seismic			
9.1.2	Flood Zone			
9.1.3	Wind Zone			
9.2	Suspect Mold and Moisture			
	TOTALS:	**$5,400**	**$6,600**	**$1,416,686**

	Dollars per sf/yr	Dollars per unit/yr	
Present Value of Capital Needs Cost Estimate	$0.90	$70,834.32	$1,416,686
Inflated Value of Capital Needs Cost Estimate	*$1.08*	*$85,521.98*	*$1,710,440*
Critical Repairs Cost Estimate	$5,400		
Non-Critical Repairs Cost Estimate		$6,600	
Total Deferred Maintenance Cost Estimate, After Multiplier	$12,000		

EXECUTIVE SUMMARY

PROPERTY DESCRIPTION

The Subject Property, known as Glover School, is located in Marblehead, Massachusetts at 9 Maple St in Essex County. The Subject Property was reportedly constructed in 2013 and opened in February 2014. The Subject Property consists of a two-story approximately 79,000-gross square foot[1] elementary school building located on a 4.33-acre lot.

The school building is irregular-shaped and has rough dimensions of 400 feet in length and 230 feet in depth and is two-stories tall throughout.

The interior of the property is laid out with the main lobby at the northwest entrance and common corridors providing access to classroom, gymnasium, and cafeteria spaces.

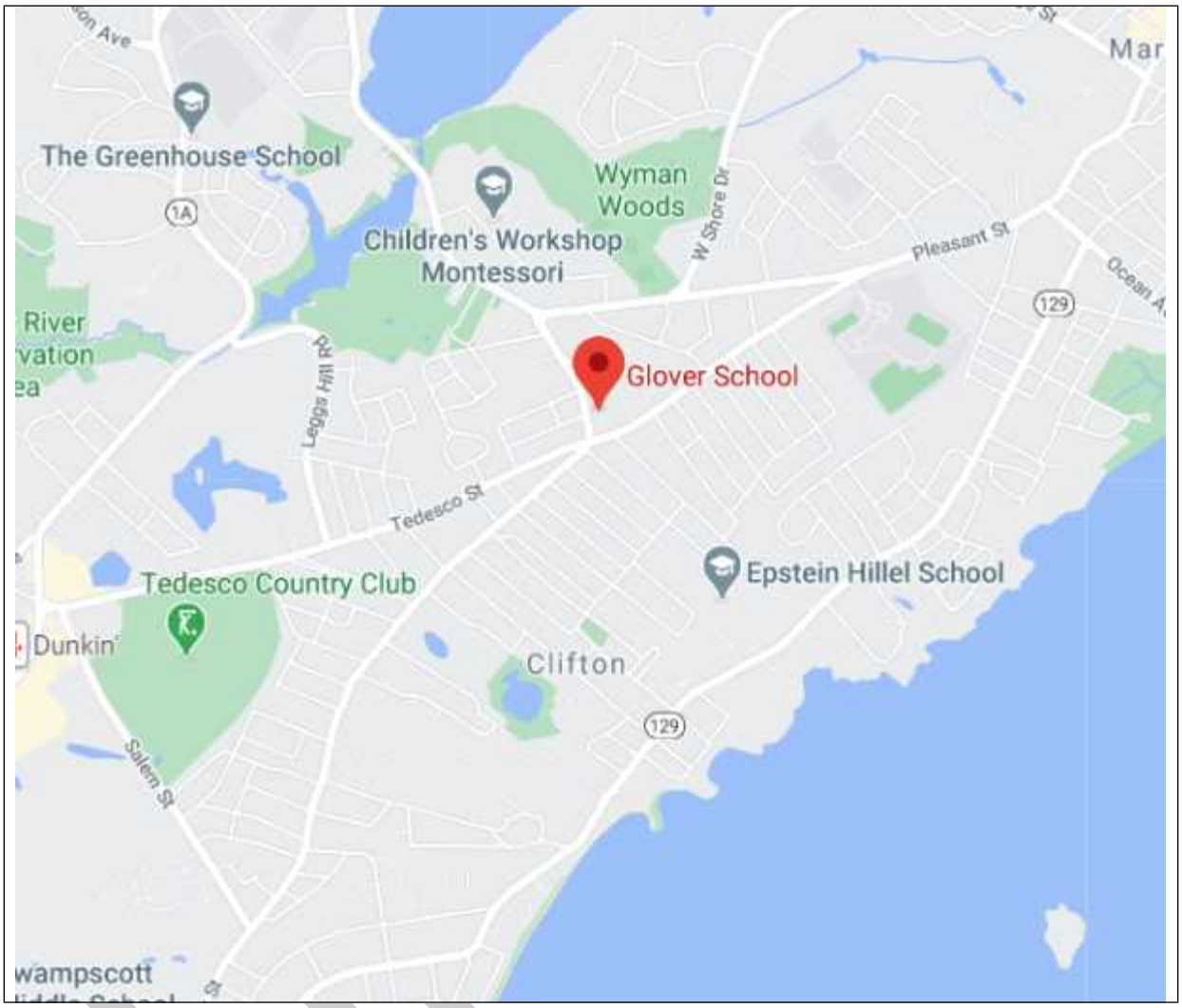
LOCATION

The Subject Property is located approximately 200 feet north of the intersection of Maple Street and Humphrey Street. The Subject Property has approximately 620 feet of frontage along Maple Street.

Local surface arteries, Interstate, and state highway systems provide access to the property. The Subject Property is located approximately just south of Route 114.

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1 **Gross square footage** obtained from the tax assessor's records.

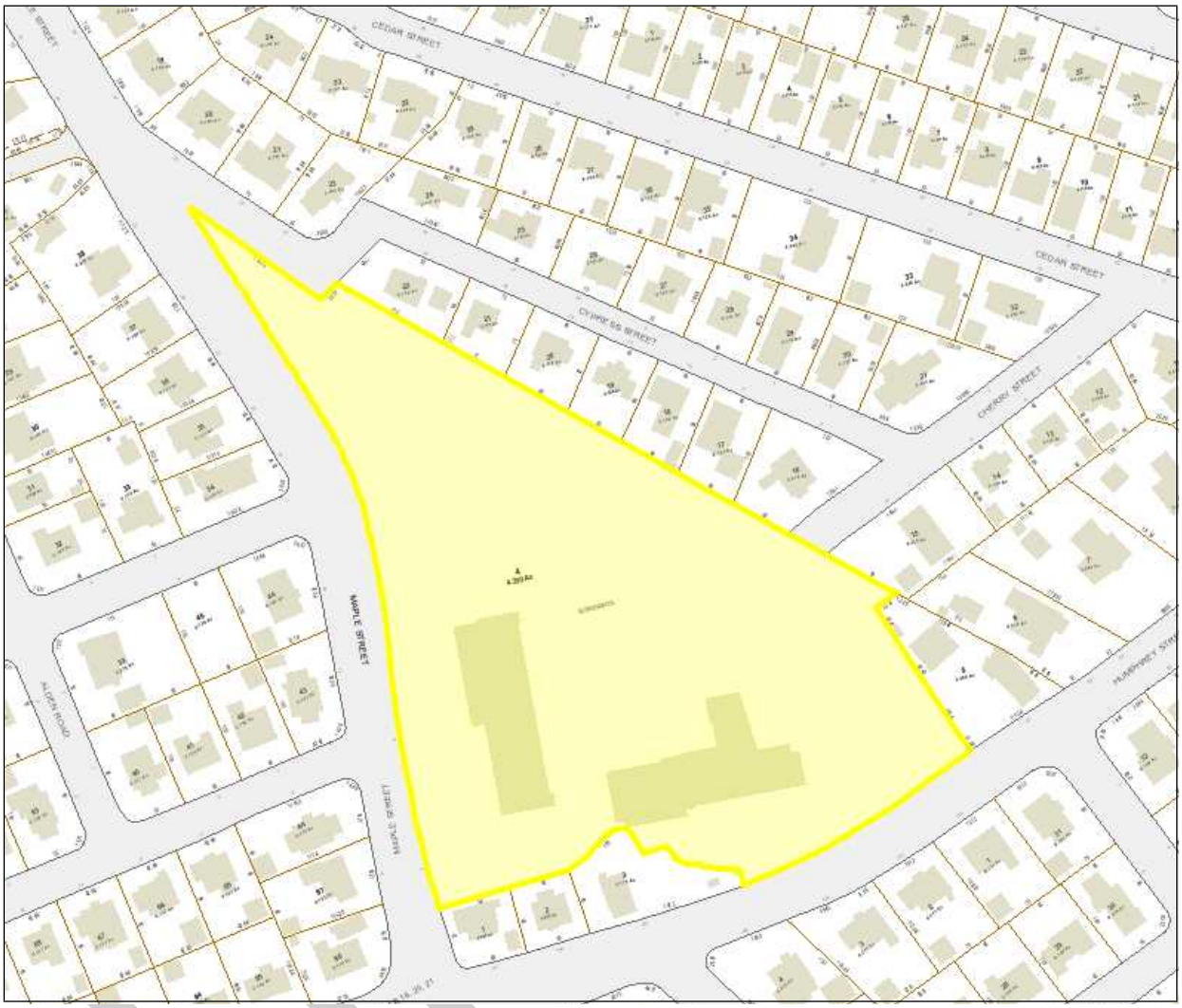


Location Map

Four drives provide access to the Subject Property from the adjacent road frontages. The property is improved with asphalt-paved vehicle parking areas and drive lanes located along the front and sides of the building, and with asphalt-paved drive lanes, service, and loading areas.

The site is gently rolling, with slight slopes to the west toward Maple Street. Property use in the vicinity of the Subject Property is primarily characterized by residential development.

According to the *Marblehead GIS*, the Subject Property is currently owned by the *Town of Marblehead School Department*. The Subject Property includes one irregular-shaped parcel totaling 4.33 acres of land. *Marblehead Assessor* records indicate that the Subject Property assessor parcel number is 40-4-0.



Tax Map

SITE OBSERVATION & OBSERVATION SUMMARY

Jennifer Flanders and Don Gerardi of *EBI* surveyed the property on February 11, 2021 and were accompanied by and interviewed Mr. Mike Ellconus, Electrician with the *Town of Marblehead.* At the time of the survey, the weather was cloudy and approximately 25º Fahrenheit. During the survey, representative areas of the site, interior areas, common areas, educational spaces, mechanical spaces, mechanical equipment and building components were observed.

Overall, the Subject Property appears to be in good condition with a limited level of deficiencies observed. This *Report* recommends certain actions, repairs, and replacements as Critical Repairs, Non-Critical Repairs and Capital Needs, commensurate with our observations. Additional less notable issues may be present that require attention as part of routine maintenance. Please refer to each specific report sections for details.

CAPITAL, MAINTENANCE & OWNER/TENANT RESPONSIBILITY

According to the site contact, the school is new construction, built in 2013. Since construction, 2 new hot water boilers were installed for approximately $20,000. Two compressors have been replaced. Additionally, some of the elevator door parts have been replaced.

Maintenance, repair, and replacement of the roof, facades, landscaping, pavement and parking, tenant space interior finishes, plumbing, mechanical, electrical, HVAC, elevator and conveying, life safety systems and components at the property is reportedly the responsibility of the Subject Property owner.

General day-to-day maintenance is reportedly handled by the school facilities department. The building has custodians on staff, working over two shifts. The maintenance technicians are reportedly qualified to handle general repairs. Repair and maintenance of specialty and large-scale equipment, i.e., central HVAC plant equipment, elevators, roofing, fire and smoke detection and alarm systems, etc., are subcontracted to outside vendors. The level and quality of on-site maintenance repairs reviewed while at the site were of good workmanship and materials. In general, the Subject Property appears to have been constructed within industry standards and has been well maintained.

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CRITICAL REPAIRS AND CAPITAL NEEDS

Itemized Critical and Non-Critical repairs, as well as Capital Needs are provided as part of this *Report*. The cost estimates shown on the tables are based on data obtained from the Owner for items already planned, quotes from contractors, *EBI's* in-house Equity database costs and our experience with costs and estimates for similar issues, property and building types, city cost indexes, and assumptions regarding future economic conditions. These projected costs are augmented by cost estimate resource documents such as the *National Construction Estimator*, *Means Building Construction Cost Data*, or *Means Facilities Maintenance and Repair Cost Data Publications*.

CRITICAL REPAIRS & NON-CRITICAL REPAIRS - TABLE 1

Each of the Critical Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at a Subject Property.

Each of the Non-Critical Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Non-Critical Repair, and/or that cannot be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

CAPITAL NEEDS - TABLE 2

Each of the Capital Needs items noted during the survey are listed on the following pages on Table 2 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by *Report* section. Routine or customary annual maintenance items are not reported or included in this *Report* unless otherwise noted.

DEFICIENCY PRIORITIES #1 TO #4

Each of the deficiencies and costs noted during the survey are prioritized in the following manner:

Priority 1: Current Critical, Conditions in this category require immediate action to:

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility to operation
- Correct an environmental hazard

Priority 2: Potentially Critical, Conditions in this category, if not corrected expeditiously will become critical within a year. Situations within this category include:

- Intermittent operations

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- Rapid deterioration
- Potential life safety hazards
- Environmental non-compliance

Priority 3: Recommended, conditions in this category require appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further. These are not required for the most basic function of the facility; however, Priority 3 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 4: Does not meet current codes/standards, "Grandfathered" conditions in this category include items that do not conform to existing codes, but are "grandfathered" in their condition. No action is required at this time, but should be considered as an upgrade or if substantial work is to be undertaken in contiguous areas, certain existing conditions may require correction

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Table 1 - Critical and Non-Critical Repairs

Glover School
9 Maple St
Marblehead, Massachusetts
EBI Project # **1320000046**

Site Survey Date: 2/11/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 79,000
Number of Units: 1
Property Age: 8
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	QUANTITY	UNIT COST	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (Including Markup)	UNIT DESCRIPTION	ESTIMATED CRITICAL REPAIR COST	Non-Critical Repair?	ESTIMATED NON-CRITICAL REPAIR COST	COMMENTS OR ADDITIONAL DESCRIPTION
2.0	**SITE CONDITIONS**											
2.1	Site Features		None			20.0%						
2.2	Landscaping / Improvements		None			20.0%						
2.3	Pavement/ Parking		None			20.0%						
2.4	Amenities		None			20.0%						
2.5	Utilities		None			20.0%						
3.0	**STRUCTURE**											
3.1	Substructure		None			20.0%						
3.2	Superstructure		None			20.0%						
4.0	**BUILDING ENVELOPE**											
4.1	Roof	**#2**	Extend gutter downspouts to drains	1	$500.00	20.0%	$600.00	Allowance		✔	$600.00	Gutter downspouts from slopped roof discharge directly onto TPO roof membrane
4.1	Roof	**#2**	Proactive Maintenance Program (PMP)- General	50,000	$0.10	20.0%	$0.12	per square foot		✔	$6,000.00	General maintenance of roof
4.2	Facades		None			20.0%						
4.3	Windows and Doors		None			20.0%						

Table 1 - Critical and Non-Critical Repairs

Glover School
9 Maple St
Marblehead, Massachusetts
EBI Project # **1320000046**

Site Survey Date: 2/11/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 79,000
Number of Units: 1
Property Age: 8
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	*PRIORITY*	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
5.0	**BUILDING INTERIORS**											
5.1	Bsmt/Attic		None			20.0%						
5.2	Interior F & C		None			20.0%						
6.0	**ACCESSIBILITY**											
6.1	Accessibility		None			20.0%						
7.0	**BUILDING SYSTEMS**											
7.1	Plumbing		None			20.0%						
7.2	HVAC		None			20.0%						
7.3	Electric		None			20.0%						
7.4	F/L Safety	**#2**	Sprinkler system 5 year test	1	$4,500.00	20.0%	$5,400.00	Allowance	$5,400.00			Complete NFPA 5-year sprinkler test
7.5	Elevators	**#2**	Provide elevator inspection certificate	1	$0.00	20.0%	$0.00	Action Item	$0			Inspection certificates are expired
8.0	**MUNICIPAL RESEARCH**											
8.1	Municipal Information & Zoning		None			20.0%						
8.2	Building & Planning		None			20.0%						
8.3	Fire Department		None			20.0%						
9.0	**NATURAL HAZARDS**											
9.1.1	Seismic		None			20.0%						
9.1.2	Flood Zone		None			20.0%						
9.1.3	Wind Zone		None			20.0%						
9.2	Suspect Mold & Moisture		None			20.0%						
								DEFERRED MAINTENANCE:	**CRITICAL**		**NON-CRITICAL**	Note:
									$5,400		**$6,600**	Priority 1: Current Critical
												Priority 2: Potential Critical
								TOTAL:	**$12,000**			Priority 3: Recommended

TABLE 2 - CAPITAL NEEDS OVER TERM

Glover School
9 Maple St
Marblehead, Massachusetts
EBI Project # **1320000046**

Site Survey Date: 2/11/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 79,000
Number of Units: 1
Property Age: 8
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	AVERAGE EFFECTIVE USEFUL LIFE	EFFECTIVE AGE	REMAINING USEFUL LIFE	TOTAL QUANTITY OVER TERM	APPROXIMATE QUANTITY PER YEAR	UNIT COST (adjusted by location factor)	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (including Markup)	UNIT DESCRIPTION	ESTIMATED COST PER YEAR	Annual Costs 2021 YEAR 1	2022 YEAR 2	2023 YEAR 3	2024 YEAR 4	2025 YEAR 5	2026 YEAR 6	2027 YEAR 7	2028 YEAR 8	2029 YEAR 9	2030 YEAR 10	2031 YEAR 11	2032 YEAR 12	2033 YEAR 13	2034 YEAR 14	2035 YEAR 15	2036 YEAR 16	2037 YEAR 17	2038 YEAR 18	2039 YEAR 19	2040 YEAR 20	RECOMMENDED TOTAL OVER THE TERM
2.0	**SITE CONDITIONS**																																	
2.1	Site Features		None	-						20.0%																								
2.2	Landscaping / Improvements	#3	Routine concrete sidewalk repairs (linear foot allowance)	5	3	2	400	100	$9.11	20.0%	$10.93	linear foot	$1,093		1,093					1,093					1,093					1,093				$4,374
2.2	Landscaping / Improvements	#3	Routine asphalt sidewalk repairs (LF)	5	3	2	600	150	$7.40	20.0%	$8.88	per linear foot	$1,333		1,333					1,333					1,333					1,333				$5,331
2.2	Landscaping / Improvements	#3	Signage, Entrance/Monument	25	8	17	1	1	$6,606.20	20.0%	$7,927.44	allowance	$7,927																		7,927				$7,927
2.2	Landscaping / Improvements	#3	Replace pole-mounted light fixture	20	8	12	7	7	$77.51	20.0%	$93.01	each	$651													651									$651
2.3	Pavement/ Parking	#3	Patching, crack sealing, sealing and striping of asphalt pavement	5	1	4	120,000	30,000	$0.36	20.0%	$0.44	per square foot	$13,121				13,121					13,121						13,121				13,121		$52,485
2.3	Pavement/ Parking	#3	Mill and overlay asphalt pavement	25	8	17	30,000	30,000	$1.25	20.0%	$1.50	per square foot	$45,104																		45,104				$45,104
2.4	Amenities		None	-						20.0%																								
2.5	Utilities		None	-						20.0%																								
3.0	**STRUCTURE**																																	
3.1	Substructure		None	-						20.0%																								
3.2	Superstructure		None	-						20.0%																								
4.0	**BUILDING ENVELOPE**																																	
4.1	Roof	#3	TPO 60 mil roof replacement - low rise	20	8	12	36,000	36,000	$5.40	20.0%	$6.48	square foot	$233,231												233,231									$233,231
4.2	Facades	#3	Renew/recaulk expansion & control joints	15	8	7	1,440	1,440	$1.17	20.0%	$1.41	linear foot	$2,027						2,027															$2,027
4.2	Facades	#3	Periodic masonry repair and maintenance	10	5	5	2	1	$7,500.00	20.0%	$9,000.00	allowance	$9,000					9,000											9,000					$18,000
4.3	Windows and Doors	#3	Renew/recaulk windows and doors	15	8	7	6,000	6,000	$1.17	20.0%	$1.41	linear foot	$8,447						8,447															$8,447
4.3	Windows and Doors	#3	Commercial window replacement	25	var		115	23	$854.25	20.0%	$1,025.10	each	$23,577																		23,577	23,577	23,577	23,577	23,577	$117,887
5.0	**BUILDING INTERIORS**																																	
5.1	Bsmt/Attic	#3	None	-						20.0%																								
5.2	Interior F & C	#3	Corridor Refurbishment	8	var		22,400	11,200	$10.00	20.0%	$12.00	per square foot	$134,400				134,400								134,400									$268,800
5.2	Interior F & C	#3	Kitchen refurbishment (commercial)	8	var		1,000	500	$11.39	20.0%	$13.67	per square foot	$6,834				6,834								6,834									$13,668
6.0	**ACCESSIBILITY**																																	
6.1	Accessibility		None	-						20.0%																								
7.0	**BUILDING SYSTEMS**																																	
7.1	Plumbing	#3	Replace commercial gas-fired water heater (<200 MBH)	15	8	7	1	1	$9,631.61	20.0%	$11,557.93	each	$11,558						11,558															$11,558
7.1	Plumbing	#3	Replace commercial gas-fired water heater (<200 MBH)	15	2	13	1	1	$9,631.61	20.0%	$11,557.93	each	$11,558													11,558								$11,558
7.2	HVAC	#3	Replace rooftop package unit (15-ton) - 100% OA, Single Zone	20	var		1	1	$35,116.00	20.0%	$42,139.20	each	$42,139			42,139																		$42,139
7.2	HVAC	#3	Replace rooftop package unit (15-ton) - 100% OA, Single Zone	20	var		4	1	$35,116.00	20.0%	$42,139.20	each	$42,139													42,139		42,139		42,139		42,139		$168,557
7.2	HVAC	#3	Boiler and HVAC component replacement and repair allowance	25	var		9	1	$12,500.00	20.0%	$15,000.00	allowance	$15,000			15,000		15,000		15,000		15,000		15,000		15,000		15,000		15,000		15,000		$135,000
7.3	Electric	#3	Perform IR survey	-			5	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050		2,050				2,050				2,050					2,050				2,050		$10,251
7.4	F/L Safety		None	-						20.0%																								
7.5	Elevators	#3	Elevator modernization - 2-story Hydraulic	20	var		2	1	$108,205.00	20.0%	$129,846.00	per elevator	$129,846												129,846	129,846								$259,692
8.0	**MUNICIPAL RESEARCH**																																	
8.1	Municipal Information & Zoning		None	-						20.0%																								
8.2	Building & Planning		None	-						20.0%																								
8.3	Fire Department		None	-						20.0%																								
9.0	**NATURAL HAZARDS**																																	
9.1.1	Seismic		None	-						20.0%																								
9.1.2	Flood Zone		None	-						20.0%																								
9.1.3	Wind Zone		None	-						20.0%																								
9.2	Suspect Mold & Moisture		None	-						20.0%																								
												ANNUAL RECOMMENDATIONS, UNINFLATED		4,476	57,139	154,355	24,000	2,050	39,458		28,121	2,050	15,000	549,527	156,404	57,311	24,000	65,717	94,035	67,767	51,699	23,577	**$1,416,686**
												INFLATION FACTOR, IN PERCENTAGE 1.030	100.00%	103.00%	106.09%	109.27%	112.55%	115.93%	119.41%	122.99%	126.68%	130.48%	134.39%	138.42%	142.58%	146.85%	151.26%	155.80%	160.47%	165.28%	170.24%	175.35%	
												ANNUAL RECOMMENDATIONS, INFLATED @ 3.00% AFTER YEAR ONE		**$4,611**	**$60,619**	**$163,756**	**$25,462**	**$2,175**	**$41,861**		**$29,834**	**$2,175**	**$15,914**	**$582,993**	**$165,929**	**$84,163**	**$36,302**	**$102,384**	**$150,899**	**$112,008**	**$88,013**	**$41,343**	**$1,710,440**

Note:
Priority 1: Current Critical
Priority 2: Potential Critical
Priority 3: Recommended
Priority 4: Non-Compliant with current standards

PRESENT VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR **$0.90**

INFLATED VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR ***$1.08***

1.0 PURPOSE & LIMITATIONS

The exclusive purpose of this *Capital Needs Assessment* (the *Report*) is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools*, in its Due Diligence effort in evaluating the Property. Amendments to EBI's limitations as stated herein that may occur after issuance of the Re*port* are considered to be included in this *Report. EBI's* liability to the client wishing to use this *Report* is limited to the cost of the *Report*. By accepting draft and final Reports, *Marblehead Public Schools* agrees to these terms and limitations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, easily accessible or made accessible by the property contact and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property. Municipal information was obtained through file reviews of reasonably ascertainable standard government record sources, and interviews with the authorities having jurisdiction over the property. Findings, conclusions and recommendations included in the *Report* are based on our visual observations in the field, the municipal information reasonably obtained, information provided by the Client, and/or a review of readily available and supplied drawings and documents. No disassembly of systems or building components or physical or invasive testing was performed. EBI renders no opinion as to the property condition at un-surveyed and/or inaccessible portions of the Subject Property. EBI relies completely on the information provided during the site survey or provided or obtained during the writing of the draft *Report*, whether written, graphic or verbal, provided by the property contact, owner or agent, or municipal source, or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. EBI assumes no responsibility for property information or prior reports withheld or not provided during preparation of the *Report* for any reason whatsoever. The observations in this *Report* are valid on the date of the survey. EBI uses the date of first occupancy to establish the Subject Property age.

The contents of the *Report* may not represent a detailed analysis by individual consultants of the Subject Property façades, roof, paving, mechanical, electric, plumbing, elevator, sprinkler, or fire and life safety systems depending on the scope of work selected by *Marblehead Public Schools.* The extent of the physical survey for the production of this Report has been limited, by contract and agreed upon Scope of Work, (consistent with the guidelines of the ASTM E 2018 – 15 Scope of Work, as referenced below) to visual observations and a walk through of the property. Assumptions regarding the overall condition of the property have been developed based upon a survey of representative areas of the Subject Property. As such, no representation of *all* aspects of *all* areas or components is made.

Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at the Subject Property. Routine, normal or customary annual maintenance or preventative maintenance items are not reported or included in this *Report*.

Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Non-Critical Repair, and/or that can't be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

This assessment is based on the evaluator's opinion of the physical condition of the improvements and the estimated expected remaining useful life of those improvements, based on his observations in the field at the time of the survey, and the written or verbal information received. The conclusions presented are based on the evaluator's professional judgment. The actual performance of individual components or systems may vary from a reasonably expected standard and may be affected by circumstances that are not readily ascertainable or viewable, or that occur after the date of the survey.

Where quantities cannot be determined from information provided or physical takeoffs, lump sum estimates or allowances are used. The costs shown are based on professional judgment and the apparent or actual extent of the observed defect, including the cost to design, procure, construct and manage the repair or replacement. Where property-unique or specialty equipment is present, EBI relies solely on data regarding maintenance and/or replacement costs provided by the designated site contact or on-site individuals with first-hand knowledge of the specific equipment.

EBI provides Pre-Survey Questionnaires for completion by the designated site or property contact, as provided by *Marblehead Public Schools* or their agent. The information requested in the questionnaire assists in our research of the Subject Property to obtain pertinent property data, discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs, and pending repairs and improvements. If the completed Pre-Survey Questionnaire is not returned as of this *Report*, this is a limiting factor in our analysis. If the questionnaire is returned at a later date showing a material difference from information provided in the Report, we will forward the questionnaire to you under separate cover. If no response is received, or no material difference is noted in the questionnaire, our Report will not be modified.

EBI may not have been provided with roof design or installation details and may not have been provided with warranty information (see Section 3.4). EBI has relied on general industry performance of similar type roofs and general observations of the surface covering of the roof to determine if roof replacement is warranted during the analysis term. EBI is not responsible for roof failure that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

EBI may not have been provided with façade reports and cannot opine on costs to repair façades of buildings five stories or more without receipt of current façade reports (see *Section 3.3*). EBI has relied on general industry performance of similar façade systems and general observations of the surfaces of the façades to determine if repair or replacement is warranted during the analysis term. EBI is not responsible for façade failures that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

If the municipality in which the Subject Property is located has governing ordinances requiring façade studies, and a copy is not provided to EBI, this is a limiting factor in our assessment and analysis. Prudent property management will have had façade reports completed on their high-rise property, and if a copy of the report is not provided to EBI, this too, is a limiting factor in our assessment and analysis.

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The gathering of data and information for this *Report* was completed in general conformance with ASTM E 2018 – 15 Standard Guide for Property Condition Assessment: Property Condition Assessment Process, and with the scope of services approved by the client.

The survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. The level of care and skill exercised is also commensurate with the fees charged for EBI's services. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The *Report* speaks only as of its date, in the absence of a specific written update of the *Report*, signed and delivered by EBI.

Limiting factors

Any additional information that becomes available after *EBI's* survey and draft submission concerning the Subject Property should be provided to *EBI* so that *EBI's* conclusions may be revised and modified, if necessary, at additional cost. This *Report* has been prepared in accordance with *EBI's Standard Conditions for Engagement*, which is an integral part of this *Report.*

DEVIATIONS FROM THE GUIDE

EBI includes an analysis of estimated Capital Needs in this *Report*. *EBI* uses an approximate threshold of $1,000 in aggregate for reporting Critical & Non-Critical Repair or Capital Need items. Material life, safety, health, fire or building code violation or building or property stabilization issues observed at the Subject Property will be reported regardless of cost.

CONDITION

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

Excellent	The component or system is in new or like new condition and no deferred maintenance is recommended.
Good	The component or system is sound and performing its function, and/or scheduled maintenance can be accomplished through routine maintenance. 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 at a capacity that is considered to be acceptably sufficient but may be obsolete or is approaching the end of its expected useful life. The component or system may exhibit evidence of deferred maintenance, previous repairs, or workmanship not in compliance with commonly accepted standards. Repair or replacement may be recommended in the near-term of the loan to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its expected useful life.
Poor	The component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its typical expected useful life, excessive deferred maintenance or state of disrepair. Present condition could contribute to, or cause, the deterioration of other adjoining elements or systems. Repair or replacement is recommended.

ABBREVIATIONS

EBI may use various abbreviations to describe various site, building or system components or legal descriptions. Not all abbreviations may be applicable to all *Reports.* The abbreviations most often utilized are defined below.

ACT	Acoustic Ceiling Tile
ABS	Acrylonitrile-Butadiene-Styrene
ADA	Americans with Disabilities Act
AHU	Air Handling Unit
APA	American Plywood Association
BTU	British Thermal Unit (a measurement of heat)
BTUH	British Thermal Units per Hour
BUR	Built Up Roof
CFM	Cubic Feet per Minute
CMU	Concrete Masonry Unit
CPVC	Chlorinated Poly Vinyl Chloride
DWH	Domestic Water Heater
EIFS	Exterior Insulating Finishing System
EPDM	Ethylene Propylene Diene Monomer
EUL	Expected Useful Life, Effective Useful Life
FF&E	Furniture, Fixtures & Equipment
FCU	Fan Coil Unit
HCP	Handicapped Person
FEMA	Federal Emergency Management Agency
FHA	Forced Hot Air
FHW	Forced Hot Water
FIRM	Flood Insurance Rate Map
FOIA	Freedom Of Information Act
FOIA	Freedom Of Information Act
FRT	Fire retardant treated plywood
GFI	Ground Fault Interrupt (circuit)
GWB	Gypsum Wall Board
HCP	Handicapped Person
HID	High Intensity Discharge (lighting)
HVAC	Heating, Ventilating and Air Conditioning
KW	Kilowatt
KVA	Kilovolt Ampere
MBH	Thousand BTUs per Hour
MDP	Main Distribution Panel
OSB	Oriented Strand Board
PEX	Polyethylene Cross-Linked Tubing
PTAC	Packaged Terminal Air Conditioning (Unit)
PVC	Poly Vinyl Chloride
RTU	Roof Top Unit
RUL	Remaining Useful Life
TPO	Thermoplastic polyolefin
SEER	Seasonal Energy Efficiency Rating
UBC	Uniform Building Code
VAV	Variable Air Volume box
VCT	Vinyl Composition Tile
VWC	Vinyl Wall Covering

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2.0 SITE

2.1 TOPOGRAPHY & DRAINAGE

DESCRIPTION

The Subject Property is located at an elevation of approximately 60 feet above mean sea level (msl). The topography of the Subject Property is a small hill with the school built at the high point. The surrounding area slopes downwards to the property line. The Subject Property is located on a small hill, and the general slope of the surrounding region is down to the south (see Topo Map below).



Topographic Map

	
Topography at the rear of the building, looking east	Topography at the front of the building, along Maple Street
	
Topography along the north side of the property	Topography in between building wings, looking west

OBSERVATIONS

No topography problems were reported or observed. Slopes pitching drainage away from the building appear to be adequate. Detriments or problems such as ground fractures, settlement areas, or evidence of erosion or chronically standing water were not observed. Slopes within parking areas appeared to be adequate for storm water control.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.2 LANDSCAPING & SITE IMPROVEMENTS

DESCRIPTION

The property has municipally-owned, extensive, mature landscaping at the front of the site, the entrances to the property, and around the buildings. Landscaping includes deciduous and evergreen trees, shrubs, ground cover, and lawns.

An automatic irrigation system is present in the landscaped areas. Irrigation controllers are located in sub-surface utility boxes.

Pylon signage is located at the main entrance. The pylon sign is supported by wood posts.

Cast-in-place concrete and asphalt sidewalks are provided for pedestrian traffic. The concrete sidewalks are assumed be approximately 4-inches in thickness and with steel reinforcement.

Lighting is provided by pole-mounted fixtures on aluminum poles, approximately 20 feet in height and spaced around the site, parking areas, and along the main entrance drive. Building-mounted lights provide exterior building lighting at the rear of the building and along pedestrian walkways, and soffit-mounted lights are located at the entrances.

The Subject Property has painted metal fencing along the playground areas.

The Subject Property has retaining walls constructed with stacked interlocking blocks to make height changes around the site and allow for tiered construction.



Representative landscaping with snow cover



Main entrance pylon sign

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Representative concrete sidewalk	Representative lightpole
	
Representative painted metal fence	Representative retaining wall at north side of site

OBSERVATIONS

The property landscaping appears to be in good condition, although some areas show signs of distress due to typical winter conditions.

The irrigation system appears to be in good condition. Landscape maintenance is handled by the municipality as part of routine maintenance.

The pylon sign at the main entrance are in good overall condition. The wood sign was observed with some areas of worn paint/staining. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for refurbishment during the analysis term.

The sidewalks appear to be in good condition with no observed areas of deterioration or trip hazards. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for routine sidewalk repairs during the analysis term.

The parking area lighting and exterior light fixtures appear to be in good condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for exterior light fixture replacement during the analysis term.

The fencing appears to be in good overall condition.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Repair concrete sidewalks**
- **Repair asphalt sidewalks**
- **Refurbishment of pylon sign**
- **Replacement of parking area poles and lighting**

2.3 PAVEMENT AND PARKING

DESCRIPTION

According to a count in the field, the property is improved with parking areas for 60 cars, including 3 accessible spaces. See *Section 3.6 Americans with Disabilities Act Accessibility Guidelines (ADAAG)* for additional accessible parking information for people with physical disabilities.

The property has approximately 750 feet of drive lanes and roadways running through the site, and the parking is laid out along these drive lanes. The parking is configured in lots toward the side (north end) of the building.

Four entry drives access to the Subject Property from the adjacent road frontages.

The parking areas have asphalt pavement, and the loading areas also have asphalt pavement.

The parking area has precast concrete curbing.

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Representative parking lot	Accessible parking
	
Representative curb	Access drive at south of building for maintenance

OBSERVATIONS

Inadequate parking capacity was observed. Vehicles were observed parked along the main street and adjacent neighborhoods. We understand the parking capacity is limited to the site size and no recommendations are provided at this time.

The asphalt paved areas are in good condition. No problems with the paved areas were observed. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended asphalt overlay, during the analysis term.

The parking area sealant and striping is in good condition, with indications of average wear. Based on the observed condition of the parking and drive areas and the average effective useful life of pavement and pavement sealants and striping, the application of sealants and striping of the parking and/or lane markings are recommended as a Capital Need during the analysis term.

The curbs are in good condition. The curbs will be maintained at the property as part of operational expenses during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Patching, crack sealing, sealing and striping of asphalt pavement**
- **New asphalt overlay**

2.4 SITE AMENITIES

DESCRIPTION

A maintenance shed is located to the south of the building and contains maintenance tools.

Playgrounds are located on the north and east side of the building.



Maintenance shed



East playground, between building wings

	
East playground equipment	North playground equipment

OBSERVATIONS

The maintenance shed appears to be in good condition.

The playground equipment appears to be in good condition. Ongoing maintenance as part of the property's maintenance program is recommended during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Term Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.5 UTILITIES

2.5.1 Water & Sewer

DESCRIPTION

Town of Marblehead water and sewer department provides water and sewer service to the Subject Property site. The sewer is discharged into the municipal lines beneath the abutting street.

2.5.2 Gas/Oil

DESCRIPTION

National Grid provides propane service to the Subject Property. No oil service is provided to the Subject Property.

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2.5.3 Electrical

DESCRIPTION

Marblehead Municipal Light Department (MMLD) provides electric service to the site. The service enters the property overhead from a pole at the front of the site, then runs underground to a pad-mounted transformer feeding secondary runs to the main switchgear. The utility reportedly owns and maintains the lines up to the transformers. The secondary feeds to the switchgear are the responsibility of the Subject Property owner.

2.5.4 Storm Drainage

DESCRIPTION

The storm water flow from the site is controlled via on-site structures discharging into the municipal system. The building's internal roof drains are tied to catch basins in the Subject Property parking areas. The parking lots are configured with slopes toward curbs and catch basins controlling storm water flow. The drainage system is the responsibility of the Subject Property owner.



Incoming water service



Incoming gas service

	
Main distribution panel	Transformer at southwest corner of site

OBSERVATIONS

There were no reported or observed problems with the Subject Property water, sewer, gas, electric, or storm water drainage systems. The utilities appeared to be configured and operating in a manner consistent with their intended use and reportedly adequate to meet the needs of the Subject Property.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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3.0 STRUCTURE

3.1 GENERAL INFORMATION

Design information was not obtained or provided to *EBI* for review.

3.2 SUBSTRUCTURE

DESCRIPTION

The majority of the Subject Property substructure was not visible due to the surrounding grade. Construction documents were not available for our review. Based on our visual survey the property appears to have cast-in-place, reinforced concrete foundations supporting the exterior walls and load bearing interior walls and/or columns.

Concrete slabs-on-grade of underdetermined thickness are provided throughout the building. The design and construction of the foundation footings is intended to properly spread out the building's vertical loads without exceeding the bearing capacity of the underlying soil.

The concrete floor slabs are typically reinforced with welded wire mesh or steel reinforcement bars or fiber mesh for added flexural strength and to minimize cracking. The concrete slabs are generally constructed over a compacted gravel or sand base and vapor barrier to aid in preventing water migration from the bearing soil to the slab.

In cold climates the footings are constructed below the prescribed frost level to minimize movement due to freeze-thaw conditions. Varying sizes of steel reinforcing bars typically exist in the foundation walls and footings for tensile and bending strength.

In cold climates the slabs and/or foundation walls are often insulated around the perimeter of the building. Foundation walls servings as retaining walls for basement areas of the building generally are constructed with waterproofing and drainage systems to prevent moisture infiltration.

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Representative concrete slab on grade at column	Representative concrete slab on grade at column

OBSERVATIONS

The majority of the Subject Property substructure was not visible due to the surrounding grade. The substructure appears to be sound and in good condition. No indications of problems with the substructure were reported or observed. Unless visible, EBI's assessment of substructure condition is primarily based on obvious irregularities with the superstructures (including limited observations of exterior and interior construction and finishes) and the condition of the slab-on-grade when present. The condition of substructure hidden construction elements, or defects not readily observable, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the substructures appear to be in good overall condition and are performing as designed. No obvious indications of irregularities, including differential settlement, sloped floors, significant cracks, out-of-plumb building elevations, or other perceived movement, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.3 SUPERSTRUCTURE

DESCRIPTION

Based on *EBI's* visual survey and experience with similar structures, and review of available construction drawings the Subject Property's superstructure consists of steel framing.

Primary load-bearing members consist of steel columns and steel girders supporting steel floor and roof beams. Upper floor structures consist of concrete on steel decking supported by the steel beams. The

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roof structure likely consists of rigid insulation and concrete on steel decking, supported by steel beams. Lateral resistance is provided by a combination of floor and roof diaphragms, and likely interior and exterior braced walls or masonry/concrete shear walls.

	
Exposed steel structure at the main entrance stairway	Exposed steel structure at the main entrance stairway

OBSERVATIONS

The superstructures are partially obscured from view by interior and exterior finishes. Unless visible, EBI's assessment of superstructure condition is predominantly based on obvious irregularities with exterior and interior construction and finishes. Concealed and/or obscured structural systems or connections were not viewed. The condition of the hidden structural defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the superstructures appear to be in good overall condition and appear to be performing as designed. No obvious indications of irregularities, including significant floor and/or roof deflections, significant cracks, noticeably out-of-plumb building elevations, or other perceived structural defects, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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4.0 BUILDING ENVELOPE

4.1 ROOFING

DESCRIPTION

During the site survey, the roof was accessed through a roof hatch and surface-mounted ladder located in a utility room and representative areas of the roof was observed. *EBI* was not provided with roof design or installation details and was not provided with warranty information. Reportedly, no warranty is in place is in place on the Subject Property roof.

Primarily, the Subject Property has a low-slope, fully-adhered, TPO-membrane roof. Low-slope roof membranes terminate at vertical interfaces (equipment platforms, parapets and/or facades) with metal or membrane flashings. Roof penetrations are typically flashed with TPO-membrane. Roof slope and crickets direct rainwater to internal perimeter roof drains and leaders.

The Subject Property additionally has a several hipped roofs at the front of the building with architectural-grade asphalt shingles. The roof is flashed with metal flashing. The roof pitches toward perimeter gutters and downspouts.

SUBJECT PROPERTY ROOFING

ROOF SECTION	ROOFING TYPE	APPROX. AREA	APPROX. AGE	PERIMETER
Pitched Roof	Asphalt shingles	14,000	8	Gutters
Low Slope Roof	TPO-membrane	36,000	8	Metal Flashing

Rooftop features include dedicated roof hatches, mechanical penthouses, curb-mounted HVAC units and equipment, electrical conduit, traction pads, natural gas pipe and exhaust penetrations.



Representative snow covered roof, looking east



Representative drain and mounted equipment

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Representative penetration	Representative asphalt, pitched roof

OBSERVATIONS

In estimating the condition and effective useful life of roofs, *EBI* has relied on general industry performance of similar type roofs and general observations of the surface covering to determine if replacement is warranted during the analysis term. Discussions with facilities regarding the roof's condition revealed no negative comments.

During our site visit the majority of the roof was covered with snow, making observations limited. From what we were able to see, the TPO roof appears to be in good condition. The roof is a replacement and approximately 8 years old. Roofs of this type typically have an average effective useful life of approximately 20 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. The roof maintenance consists of mastic touchup and re-coating of seams and roof penetrations every two to three years. Based on the reported age, current condition, and expected useful life, roof replacement is recommended as a Capital Need during the analysis term.

The asphalt-shingle roofs appear to be in good condition. The roofs are approximately 8 years old. Roofs of this type typically have an average effective useful life of approximately 30 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions.

The slope and drainage design of each building roof appeared to be generally adequate except for the sloped roofs. The gutter downspouts at the sloped asphalt roof perimeters discharge directly onto the low-slope roof membrane. This condition can lead to advanced degradation of the roof surface at these locations. Based on the observed conditions, Non Critical Repairs are recommended to extend the downspouts to a roof drain.

Based on observed and reported conditions Non-Critical Repairs are recommended for implementation of a roof preventative maintenance practice program (PMP). The PMP should include routine roof walks, seasonal gutter cleanouts, roof drain cleaning, routine tree trimming around the roof and other best management practices.

The roof hatch is accessed from an internal ladder in a utility space and appears to be in good condition.

	
Gutter downspout direct discharge onto low-slope roof	Gutter downspout direct discharge onto low-slope roof

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Extend gutter downspouts to drains**
- **Ongoing roof repairs & maintenance, before roof replacement**

Please see Table 2 – Capital Needs for the recommended items listed below:

- **TPO roof replacement**

4.2 FAÇADES

DESCRIPTION

Primary exterior materials consist of red brick veneer or concrete masonry units. The façades have stone bands oriented horizontally throughout the front façade as an architectural feature. There are areas of curtainwall located throughout the building exterior. Punched windows are located throughout each façade at each elevation. The main entrance at the northeast corner is accentuated by a stone façade archway, leading to the recessed entrance.

The building has an exterior stairway at the south side. The stairway is constructed with cast in place concrete steps and steel pipe railings.

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West (front) façade	Main entrance, north facade
	
North facade	East façade, between wings
	
South side of the north wing	South exterior stairway

OBSERVATIONS

The estimate of the façade condition is based on limited observation of representative observed areas of the exterior walls and the age of the improvements. Façade observations for a multi-story building are limited to exterior finishes of the ground level façades and those portions of the façades observable from adjacent roof areas. This does not represent a comprehensive or in-depth façade survey. Therefore, observations in this *Report* cannot be the sole source of façade analysis. Concealed and/or obscured façade material attachment systems were not viewed. hidden defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this assessment.

The observed areas of the brick veneer or concrete masonry units appear to be in good overall condition. Based on the age and the condition of the brick masonry, it is recommended that a dedicated repair program be instituted for anticipated degradation of the mortar joints and overall exterior wall performance. Walls should be routinely checked for fractured, spalling or missing mortar joints, and cleaning or tuck pointing of the brick and joints should be performed where necessary as part of routine maintenance.

The observed sealants along the control joints appear to be in good condition overall. Based on the reported age, current condition, and expected useful life, sealant and control joint renewal is recommended as a Capital Need during the analysis term.

The exterior stairs and guardrails appear to be in good condition overall.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Control Joint Renewal**

4.3 WINDOWS AND DOORS

DESCRIPTION

Aluminum-framed fixed and hopper windows with insulated glazing are located along all elevations of the building and on each floor level. Glass curtain wall systems are located on the sides and rear of the building.

The exterior doors consist of average-quality, commercial-grade, dual-leaf, aluminum and glass doors accessing the lobby areas. Secondary entrances and service doors are dual-leaf aluminum and glass units. Service and access doors are metal. The doors are furnished with standard hardware, and panic hardware was observed at emergency exit doors. The loading dock has electrically-operated, sectional doors.

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Curtainwall system in the rear wing	Representative fixed and hopper windows
	
Main entrance doorway	Representative secondary entrance

OBSERVATIONS

The observed windows appeared to be weather-tight and in good overall condition. At two locations along the north façade, the paint is peeling on the window lintels. Painting will be maintained at the property as part of operational expenses during the analysis term.

Sealants are in good condition. Based on the reported age, current condition, and expected useful life, sealant renewal around the windows is recommended as a Capital Need during the analysis term. Additionally, based on the reported age, current condition, and expected useful life, window replacement is recommended as a Capital Need during the analysis term.

The observed storefront entry and curtainwall systems appeared to be weather-tight and in good overall condition.

Aside from normal wear, the observed doors appear to be in good condition. Based on the reported age, current condition, and expected useful life, sealant renewal around doors is recommended as a Capital Need during the analysis term.

	
Paint peeling at window on north façade	Paint peeling at window on north façade

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Renewal of the sealants around the windows and doors**
- **Window replacement**

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5.0 BUILDING INTERIORS

5.1 BASEMENTS/ATTICS/PENTHOUSES

DESCRIPTION

The Subject Property has no basement, attic or penthouse spaces.

OBSERVATIONS

Not applicable.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

5.2 INTERIOR FINISHES & COMPONENTS

DESCRIPTION

The interior areas into which entry was made possible by the site contact are finished with average quality materials consistent with similar property use types. The finishes generally consist of the materials listed in the table below.

TYPICAL INTERIOR FINISHES

AREA OR ROOM	FLOOR	WALLS	CEILING
Lobby	Vinyl tile	Painted GWB	Suspended acoustic tile
Administrative offices	Carpet / Vinyl tile	Painted GWB	Suspended acoustic tile
Corridors	Vinyl tile	Painted GWB, Brick	Suspended acoustic tile
Gym	Hardwood	Painted GWB	Exposed Structure
Classrooms	Vinyl tile	Painted GWB	Suspended acoustic tile
Media Center/Library	Carpet	Painted GWB	Suspended acoustic tile
Cafeteria	Vinyl tile	Painted GWB	Exposed Structure / Suspended acoustic tile
Kitchen	Vinyl tile	Painted GWB, Ceramic tile	Suspended acoustic tile
Restrooms	Ceramic mosaic tile	Ceramic tile, painted GWB	Suspended acoustic tile
Stairs	Rubber floor tile	Painted GWB	Exposed stair structure

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The lobby area of the building has vinyl tile, painted GWB walls, and suspended acoustic tile ceilings. Classrooms and cafeteria spaces typically include vinyl tile floors, painted GWB walls, and acoustic tile ceilings. Corridor walls are painted.

The cafeteria and kitchen are located at the southwest corner of the building. They are both provided with vinyl tile floors. Kitchen equipment includes gas ranges, warming ovens, food preparation tables and mixing centers, refrigerators, walk-in coolers, commercial dishwasher and associated equipment.

Stairways are included in each wing as well as at the main entrance. Stairs are constructed with steel stringers and steel pipe railings. The treads and risers are rubber tile.



Classroom



Media Center



Cafeteria



Kitchen

	
Representative bathroom entrance	Main staircase

OBSERVATIONS

A representative sampling of the elementary school areas were surveyed. The interior spaces are in good overall condition.

The corridors are generally in good condition. Based on their reported age and estimated remaining useful life and current condition, corridor refurbishment, including painting the walls and trim, and flooring replacement is recommended as a Capital Need item.

The administrative offices, cafeteria, gymnasium, and classrooms were all found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The kitchen finishes were found to be in good condition. Based on their reported age and estimated remaining useful life and current condition, kitchen refurbishment is recommended as a Capital Need during the analysis term.

The observed restroom finishes were found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The interior stairs and stair finishes appear to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Term Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Corridor refurbishment**
- **Kitchen refurbishment**

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6.0 ACCESSIBILITY

DESCRIPTION

The *Americans with Disabilities Act (ADA)*, *Title III*, *28 CFR Part 36*, enacted July 26, 1990 and effective January 26, 1992, governs public accommodation and commercial properties. *Title III* of the *ADA* divides facilities into two basic categories: places of *public accommodation* and *commercial facilities*, with different obligations for each facility type. The provisions of *Title III* provide that persons with disabilities should have accommodations and access to public facilities that are equal, or similar, to those available to the general public. Assessment of any other *Titles*, or their provisions of the *ADA*, including those that govern employer and/or tenant responsibilities, is specifically excluded from this Scope of Work and *Report*. Since tenants and employers at properties are usually responsible for making their leased areas *ADAAG*-compliant, assessment for *ADAAG* compliance in these areas was not completed.

Regardless of a property's age, these areas and facilities must be maintained and operated to comply with the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)*. Facilities initially occupied after the effective date are required to fully comply with the *ADAAG*. Existing facilities constructed prior to this date are held to the lesser standard of compliance as *Title III* calls for owners of buildings occupied prior to the effective date to expend "reasonable" sums, and make "reasonable efforts", to make "practicable" or "readily achievable" modifications to remove barriers, unless said modification would create an undue financial burden on the property or is structurally infeasible. When renovating buildings occupied prior to the effective date, the area renovated, and the path of travel accessing the renovated area, must comply with the *ADAAG*. As an alternative, a *reasonable accommodation* pertaining to the deficiency must be made. The definitions of "reasonable," "reasonable efforts," "practicable." and "readily achievable," are site dependent and vary based on the owner's financial status.

Due to the unique nature of each property, the extent of analysis required, and the many variables of compliance with the *ADAAG* guidelines, the evaluation of costs for full *ADAAG* compliance is beyond the scope of this *Report*. A separate *ADAAG Compliance Audit* may be ordered and may reveal aspects of the property that are not in compliance.

For the purposes of this *Report* the survey is limited to visual observations of only a representative sample of areas readily observable or easily accessible, and to those areas set forth in *EBI's Modified Accessibility Compliance Checklist and Costs* included in Appendix C of this *Report*. The survey is limited to identifying potential routine maintenance or renovation actions that can increase accessibility over time and may or may not, achieve full *ADAAG* compliance. Places of *public accommodation* at the Subject Property were visually observed for general compliance with the major requirements of the ADA, taking into consideration the current use of the property, its age and renovation history. No actual measurements were taken to verify compliance.

Questions concerning the *ADA* and the *ADAAG* may be addressed to the *United States Department of Justice (USDOJ) ADA Hotline* at (800) 514-0301 followed by touching "7" on the touch tone keypad. Additional information is available online at the ADA.gov website.

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Accessible restroom	Representative curb cut
	
Accessible parking	Accessible parking

OBSERVATIONS

The Subject Property falls into the *public accommodation* category. Therefore, the Americans with Disabilities Act (ADA), Title III, 28 CFR Part 36, is applicable.

A visual review of the property, in conformance with *EBI's Modified Accessibility Compliance Checklist and Costs*, concluded that the Subject Property is in general conformance with the *ADAAG*. No modifications or recommendations are made at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Glover School
Facility Address: 9 Maple St
Marblehead, Massachusetts
Property Age: 8 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

A. SCOPE OF THE ASSESSMENT

1.0 ADA - Parking and Exterior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
1.1	Does there appear to be sufficient handicapped-accessible parking spaces with respect to the total number of reported spaces?	✔			ADA 208.2						
1.2	At least on in every six accessible spaces is required required to be van-accessible.	✔			ADA 208.2.4						
1.3	Are accessible car parking spaces 96 inches wide minimum? (Measure from the centerline of the markings.) (NOTE: In Florida accessible spaces must be 144 inches wide minimum)	✔			ADA 502.2						
1.4	Are accessible van parking spaces 132 inches wide minimum? (Exception: Van parking spaces can be 96 inches wide minimum when the access aisle is 96 inches wide minimum.) (Measure from the centerline of the markings.)	✔			ADA 502.2						
1.5	Are there access aisles adjacent to each accessible space, and if present, are they at least 60 inches wide? (Two spaces may share an access aisle that is between them. Exception: Angled van accessible parking spaces must have the access aisle on the passenger side of the accessible space.)	✔			ADA 502.3						
1.6	Do the access aisles adjoin an accessible route? (NOTE: Compliant curb ramps present at head of access aisle, or access aisles flush with sidewalks.)	✔			ADA 502.3						
1.7	Do the **existing** ADA spaces appear to be marked with the International Symbol of Accessibility on a vertically-mounted sign?	✔			ADA 502.6						
1.8	Do the **existing** van-accessible spaces appear to be marked with a sign reading "Van-Accessible"?	✔			ADA 502.6						
1.9	Is the bottom edge of the ISA sign at least 60 inches above the finish grade of the parking space? (NOTE: "VAN ACCESSIBLE" sign can be lower than 60 inches.)	✔			ADA 502.6						
1.10	Are the clear widths of the walking surface of the accessible routes 36 inches minimum?	✔			ADA 403.5.1						
1.11	Are accessible routes free from barriers, such as stairs, steps, or vertical changes greater than 1/4"? (NOTE: a vertical change up to 1/2" is allowable if beveled with a slope no steeper than 1:2. This does not include ramps.)	✔			ADA 303.2, 303.3						
1.12	Do all protruding objects located between 27 inches above the floor and 80 inches above the floor protrude no greater than 4 inches into the circulation path if they do not have protection via a guardrail or other barrier with a bottom edge 27 inches above finish grade?	✔			ADA 307.2						
1.113	Is the clear opening width of the accessible entrance door at least 32", between the face of the door and the stop, when door is open 90 degrees?	✔			ADA 404.2.3						
1.14	Is the door hardware on exterior access doors to *areas of public accommodation* operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 402.7						
1.15	At accessible entrances, is the door threshold height less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
1.16	Does the accessible route feature a stable, firm, and slip-resistant walking surface?	✔			ADA 502.4						
1.17	If not all entrances are accessible, is there a sign at the accessible entrance with the International Symbol of Accessibility?			✔	ADA 216.6						
1.18	Do all ramps on accessible pathways serving *areas of public accommodation* (including curb ramps) appear to have a slope not exceeding 1:12?	✔			ADA 405.2						
1.19	Do depressed curb ramps on accessible pathways serving *areas of public accommodation* have flared sides with a slope not exceeding 1:10?	✔			ADA 406.3						
1.20	If a ramp has a rise higher than 6", are there handrails on both sides?			✔	ADA 405.8						
1.21	Does the width between railings for ramps on accessible pathways serving *areas of public accommodation* appear to be at least 36 inches?			✔	ADA 405.5						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Glover School
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1.22	Is there a level landing at least 60" x 60" at the top and bottom of each ramp run?	✔			ADA 405.7						
2.0 ADA - Interior Accessible Routes		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
2.1	Are all accessible routes at least 36" wide (32" wide through doorways)?	✔			ADA 403.5.1						
2.2	Do floor surfaces appear to be firm, stable, and slip resistant ?	✔			ADA 40.2, 302.1						
2.3	If carpeting is present, is it securely fastened, with a maximum pile height of 1/2 inch?	✔			ADA 302.2						
2.4	Do all objects on circulation paths through public areas, e.g. fire extinguishers, drinking fountains, signs, etc., protrude no more than 4" into the path, **or** if object protrudes more than 4", is the bottom leading edge at 27 inches or lower above the floor, or 80 inches or higher above the floor?	✔			ADA 307.4						
2.5	Is the door hardware on interior doors serving areas of public accommodation operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
2.6	Are the door threshold heights less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
2.7	**For elevators in areas of public accommodation only:** Is the interior at least 54" deep by at least 36" wide?	✔			ADA 407.4.1						
2.8	**For elevators in areas of public accommodation only:** Are in-car controls no less than 15" and no greater than 48" above the floor, **or** up to 54 inches above the floor for a parallel approach?	✔			ADA 408.4.6, 407.6.1						
2.9	**For elevators in areas of public accommodation only:** Do elevator control buttons appear to be designated by both Braille and by raised standard alphabet characters (mounted to the left of the button)?	✔			ADA 407.4.1.1, 703.2						
2.10	**For elevators in areas of public accommodation only:** Are there audible signals which sound as the car passes or is about to stop at a floor?	✔			ADA 407.4.8						
2.11	**For elevators in areas of public accommodation only: I**s there a two-way emergency communication system within the elevator cab that is push-button activated, and does it provide visual indication that a rescue is on the way?	✔			ADA 407.4.9, 308						
3.0 ADA - Public Restrooms		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
3.1	Is the door hardware on accessible restroom doors operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
3.2	Do accessible restroom entry doors have a 32" minimum clear width when the door is opened 90 degrees?	✔			ADA 404.2.3						
3.3	Do public restrooms feature an unobstructed wheelchair turnaround (60" turning diameter)?	✔			ADA 306.2.1						
3.4	**Floor-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 59"-deep?			✔	ADA 604.8						
3.5	**Wall-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 56"-deep?	✔			ADA 604.8						
3.6	Is the centerline of the toilet 16 inches minimum to 18 inches maximum from the side wall or partition?	✔			ADA 604.2						
3.7	Is the height of the toilet seat 17 inches minimum to 19 inches maximum above finish floor?	✔			ADA 604.4						
3.8	Do sink/toilet handles appear to be operable with one hand without grasping, pinching or twisting?	✔			ADA 606.4						
3.9	Do the sinks appear to be provided with clearance for a wheelchair to roll under (minimum 27" clearance)?	✔			ADA 606.2, 606.3						
3.10	Is the height of the lavatory rim or counter 34 high maximum above the finished floor?	✔			ADA 606.3						
3.11	Are water supply, drain, and primer pipes, as well as sharp or abrasive surfaces under lavatories insulated or otherwise shielded to protect against contact?	✔			ADEA 606.5						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

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Property Age: **8 Years**

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3.12	Do soap dispensers, towel dispensers and other accessories that are not over an obstruction (i.e., a sink) mounted no higher than 48" above the floor?	✔			ADA 308.2							
3.13	Are mirrors that are located above lavatories or countertops installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor?	✔			ADA 603.3							
3.14	Are compliant toilet grab bars provided in toilet **rooms** (minimum 36" rear and 42" side)?	✔			ADA 604.5							
							Total Estimated Cost of Handicapped-Accessibility Compliance Recommendations:					**$0**

7.0 BUILDING SYSTEMS

7.1 PLUMBING

DESCRIPTION

Domestic water service to the building consists of a 2 inch diameter water line which enters at the southwest side in the mechanical room, room 106. Domestic water pressure at the Subject Property is provided by the incoming municipal service.

The observed supply of domestic water piping is copper. Sanitary sewer drain and vent lines were reported as copper piping.

Backflow devices are furnished for the potable water and fire sprinkler systems at the site. The backflow preventers are located in the mechanical room, room 106, adjacent to the water service entrance.

The main gas meter and 3 inch service is located on the south side of the building. Welded and threaded black iron pipe is used for main gas piping throughout the Subject Property.

Domestic hot water is provided by two, 199 MBH, *A.O. Smith* gas-fired water heaters, located in the mechanical room. The water heaters vary in age. Model BTH 199 300 being two years old and model BTH 199 100 being eight years old.

The Subject Property domestic hot water systems are reported as follows:

SUBJECT PROPERTY DOMESTIC WATER HEATERS

MANUFACTURER	FUEL TYPE	CAPACITY	APPROX. AGE	LOCATION
AO Smith	gas	199 MBH	2	Mechanical room
AO Smith	gas	199 MBH	8	Mechanical room

The domestic hot water service has a circulating system to provide the hot water fixtures with readily available hot water. The circulating pump system consists of two, 10-hp pumps manufactured by *Bell & Gossett* with capacities of 300 GPM each.

The plumbing fixtures are vitreous china with chrome fittings. The building restrooms contain *American Standard* 1.2 gallons-per-flush (GPF) vitreous china water closets with manual flush valves. The building contains vitreous china urinals with manual flush valves. Janitor closets containing cultured stone floor-mounted mop sinks.

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The restrooms for the building are comprised of the following:

1) 9 restrooms within classrooms
    - First Floor 7: Pre-K (3); SAILS K-3 (1); Kindergarten (3)
    - Second floor 2: TIDES (1); Music room 138 (1)
2) 4 Group restrooms with girls and boys room
    - First-grade restroom (girls-3 stalls; boys-2 stalls and one urinal) with water fountain
    - Second-grade restroom (girls-3 stalls; boys-2 stalls and one urinal) with water fountain
    - Third- grade restroom (girls-3 stalls; boys-1 stall and two urinals) with water fountain
    - Restroom near the gymnasium (girls-7 stalls; boys-2 stalls and 5 urinals)
3) 5 Individual Restrooms
    - First Floor (4): Office area; Nurses Office, Custodial; Teacher's Workroom Rm 122
    - Second floor (1) Teacher's Workroom Rm 222



Typical backflow device



A.O. Smith 100-gallon water heater



Hot water centrifugal circulation pumps



Gas supply line and meter, south side of building

	
Typical restroom fixtures	Typical sprinkler system backflow preventer

OBSERVATIONS

The water closets and urinals were reportedly installed as part of the original construction in 2013. The manual flush valves for the water closets appear to be in good working order. Based on the reported age, current condition, and expected useful life, water closet and urinal replacement are not anticipated during the analysis term.

The bathroom fixtures observed appeared to be in good overall condition and working order. Ongoing maintenance as part of the property's maintenance program is recommended during the analysis term.

The water heaters vary in age from 1 to 8 years old. The representative noted that the premature replacements were due to the location of the intake and its position close to the building's chimney. The water heaters draw in the chimney exhaust gas destroying the heaters. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended during the analysis term.

The hot water circulating pumps are approximately eight years old and appear to be in good condition and operating. Based on their low cost, replacement, when necessary, can be accomplished as part of Routine Maintenance operations.

The Subject Property domestic water piping where observable appears to be in good condition, with no reported problems noted. All of the observed potable and process piping systems at the property appear to be in good condition. Based on the reported age, current condition, and expected useful life, piping replacement is not anticipated during the analysis term. No Capital Needs are anticipated for the piping systems at this time.

Sanitary sewer lines were not observable during the site visit. No issues with the sanitary sewer lines were reported.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

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Please see Table 2 for the recommended Capital Needs listed below:

- **Replacement gas-fired water heater**

7.2 HVAC

DESCRIPTION

A summary of the HVAC equipment at the Subject Property is presented in the table below, followed by a detailed system description.

HVAC COMPONENTS

AREA SERVED	NO. OF UNITS	MFR., MODEL #	TONS OR BTUS	TYPE OF EQUIPMENT	AGE (YEARS)
Cafetorium	1	*Carrier,* CSAA014	14-ton	Rooftop packaged unit	8
Gymnasium	1	*Carrier,* CSAA014	14-ton	Rooftop packaged unit	8
Area 3	1	*Carrier,* CSAA014	14-ton	Rooftop packaged unit	8
Classrooms	2	*Carrier,* CSAA014	14-ton	Indoor packaged unit	8
Throughout	5	*Greenheck,* N/A	2000, CFM	Utility exhaust blower	8
Throughout	12	*Greenheck, CUBE-360XP*	1260 CFM	Mechanical exhaust Fan	8
Building radiators	2	*Raypak, H7-2005*	1,999 MBH	Hot water boiler	8
Teledata	2	*LG,* LSU091	2.5-ton	Split-system air conditioner	8
MDF	1	*Mitsubishi,* MUZ-D36NA,	3.0-ton	Split-system air conditioner	8
Kitchen	1	*Bally*	1-ton	Condensing unit	8
Entrances	12	*Rittling*	18 MBH	Hanging unit heater	8

Heating and cooling for the Cafetorium, Gymnasium, and classrooms are provided by five packaged hydronic units. Each AHU unit has a variable frequency drive (VFD) to control supply and exhaust fans.

Heating and cooling for the MDF room and Teledata room are provided by split-systems comprised of condenser units and air handlers. Condenser units are rooftop-mounted and use R410a refrigerant.

Hot water for the heating system is provided by two *Raypak* central boilers that are fueled by natural gas. The hot water loop is treated with glycol.

Supplemental heating is provided by Variable air volume (VAV) boxes with hydronic reheat installed in some areas, while hydronic duct heaters are installed in others to fine-tune space temperature in areas served by AHU's. Variable Frequency Drive (VFD) controllers, 10 HP in size, are furnished for all the air handling units.

Hydronic hanging unit heaters are installed at building entrances, corridors, and stairwells.

Supply and return air is provided through ductwork above the suspended ceilings. The Subject Property building is furnished with gravity and electric-powered ventilation and exhaust fans of various sizes

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ranging in capacity from 200 to 1,250 CFM. Outside air intake louvers are located at the medical waiting room and Nurse's office.

Temperature control for each space is provided by wall-mounted digital thermostats**.**

Also, part of the complete heating and cooling system are various pumps, valves, piping, sensors, etc.; all of which are controlled by an *Allerton* computer-operated building automation system.

Cooling for the kitchen's walk-in freezer is typically provided by rooftop-mounted condensing units.

MISCELLANEOUS MECHANICAL EQUIPMENT

The building is monitored and controlled by a building management system (BMS). The system is capable of reading and controlling all available HVAC equipment, including exhaust fans.



Rooftop package unit example



Indoor air handling unit



Split system condenser example



Typical variable frequency drive

	
Raypak hot water boiler	Hydronic unit heaters

OBSERVATIONS

Heating and cooling for area 2, area 3, the cafetorium, and the auditorium spaces are provided by rooftop-mounted and indoor packaged hydronic units. Heating for the classroom areas is provided by two gas-fired boilers located in the boiler room. Heating is also provided by hydronic reheat coils located in the ductwork of the VAV boxes.

The building representative indicated air handler unit number one is problematic and has been overhauled multiple times. Based on their average effective useful life, current condition, and reported maintenance program, Capital Needs for replacement of rooftop-mounted HVAC units are recommended during the analysis term.

The chilled and heated water loop piping appears to be serviceable. The insulation, where observed, appears to be serviceable and is intended to deter condensation on the chilled water piping and heat loss from the hot water lines. Condenser water piping is reportedly Schedule 40 steel. Based on the reported age, current condition, and expected useful life, replacement of the chilled and heated water loop piping is not anticipated after the analysis term.

The gas service lines were noted and reported to be in good condition. The gas service piping will be maintained at the subject property as part of operational maintenance during the analysis term.

The boilers appear to be in good to fair overall condition. The average useful life of boilers of this size and type is approximately 25 to 30 years, depending upon their location, maintenance, and use type, but can be extended with proper maintenance and/or refurbishment to 35 to 40 years. The boilers are reportedly serviced on a regular basis. The building representative indicated boiler number one is problematic and has been overhauled multiple times. Due to the capacity and size of the large HVAC units and equipment, and the ability to replace their internal components, the units have a long effective useful life. The primary components on the HVAC equipment vary in age and based on their current condition and average expected useful lives, a Capital Needs allowance is recommended for as-needed replacement of boiler and HVAC components and/or repair of compressors, valves, coils, etc. during the analysis term.

The VAV boxes distribute conditioned air from the air handlers throughout the building and vary in overall condition. The average effective useful life of VAV boxes of this type is approximately 20 to 30 years, depending upon their maintenance and quantity of use. Based on their average useful effective life, reported condition, and maintenance program, replacements of the VAV boxes are not anticipated during the analysis term.

The ductwork appears to be in good condition and no further recommendations are made. The ductwork was concealed in the floor truss spaces and ceiling fur-downs at the time of the survey.

The HVAC equipment observed utilizes variable frequency drives (VFDs) to reduce energy consumption.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **HVAC unit replacement**
- **HVAC and boiler component replacement**

7.3 ELECTRICAL

DESCRIPTION

The main electrical service entrance is rated as a 2,500-Amp, three-phase, four-wire 120/208-volt main, feeding the main distribution panels (MDPs) within an electrical room. The MDP is located in an electric room, room number 105. The observed services are protected by circuit breakers. Beyond standard ground rods or grounded connections to major piping systems, additional lightning protection was not observed.

The electrical equipment is made by *Eaton*. The equipment was installed in 2013 as part of the original construction. There are separate switches for the main buss risers. The buss risers feed power to the electrical room on each floor. Each electrical room has a minimum of two, 120/208-volt panels. A copy of the one-line diagram was not provided to *EBI*.

The Subject Property reportedly was observed with copper branch wiring and copper feeder cables. Standard electrical devices, switches, and fixtures consistent with the Subject Property use type were also observed through the building. GFCI fixtures were observed during the survey in the restrooms and kitchen areas. From a review of the electrical system, it appears that the Subject Property has a network distribution system to the main electrical switchboard. The utility company distribution system powers one liquid-filled transformer located near the southeast corner of the site. *EBI* requested information on ownership of the transformers from the site contact and was told the transformers are owned and maintained by the utility company, *Marblehead Municipal Light Department*.

The transformers fall into two basic categories, dry and liquid-filled, with the most widely used type being liquid-filled containing mineral oil. Prior to 1979, many liquid-filled transformers contained oils

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with Polychlorinated Biphenyls or PCBs. The property was constructed in 2013 and the possibility of the transformer containing PCBs may not be a factor. The liquid-filled transformers are typically located outside due to the potential of fire hazards from oil leaks.

A 150-kVA, natural gas-fueled emergency generator serves the Subject Property.

SUBJECT PROPERTY EMERGENCY GENERATORS

MANUFACTURER	APPROXIMATE KVA	FUEL	HOURS	AGE
Kohler	150 KVA	Natural gas	173.7	8

Lighting in the Subject Property building is primarily LED fixtures. The LED lumen sizes vary. The classroom and office LED lighting fixtures typically are two feet by four feet.



2500-amp switchboard



Typical circuit breaker panels

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Exterior pad-mounted transformer	Natural gas emergency generator overview

OBSERVATIONS

There were no reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type.

Management reported that an infrared (IR) survey of the building's electrical components was conducted two years ago and is conducted on a regular basis by an electrician and all identified issues are repaired at the time of the survey. Based on the reported age an infrared (IR) survey is recommended periodically as a Capital Needs item during the analysis term.

Infrared (IR) surveys are done by either electricians or testing firms specializing in this work using an infrared camera (thermal imaging) to detect relative "hot spots" in switchgear panels and breaker panels. The "hot spots" indicate higher resistance in wires, normally at connection points, and thus indicate areas that may not have proper connections between wires and termination points. The normal course of action if a "hot spot" is detected is to check the torque on the screws/bolts that hold the wire to the panel connection, as well as clean off any oxidation on the wire. Once a firm completes their survey, they typically affix inspection tags to the switchgear and breaker panels, noting the firm name and the date of testing, as well as supplying a written report to the property owner documenting their findings and the corrective action taken.

GFCI receptacles were observed consistently adjacent to the water sources in the restrooms and breakroom sinks.

The emergency generator is approximately 8 years old. Generators of this size and type have an average expected useful life of approximately 25 to 30 years, depending on their maintenance and amount of regular testing and usage, but can be extended with refurbishment/overhaul of the unit. The emergency generator was not operated during our on-site assessment. According to maintenance personnel, the generator is exercised at regular intervals during the year and was last tested in January 2021. The generator has a resettable hour meter and indicates approximately 173.7 hours run on the unit. Management provided information concerning the maintenance and fuel records, and from this

information, it appears the emergency generator system is compliant and in good overall condition. Based on its reported age, current condition, and expected useful life, Capital Needs are not anticipated for the emergency generator during the analysis term.

There were no other reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **IR Survey**

7.4 BUILDING & SITE FIRE & LIFE SAFETY

DESCRIPTION

The fire sprinkler water service is supplied to the building underground via Schedule 40 steel four (4)-inch line where it is fed through a backflow preventer; both are located in a mechanical room on the 1st floor. Sprinkler water distribution is via a steel fire rated piping system throughout the building

Observed fire and life safety systems serving the building include a *Honeywell* multiple-zone, fire alarm control panel that has an auto-dialer reportedly tying the system to the fire department, an addressable master fire control panel with an interface from remote panels. The fire panel has a fireman command center with a network display unit is located on the outside wall near the main entrance.

The Subject Property also has hardwired with battery-backup smoke detectors, pull stations at entrances to building entrances, illuminated exit lights with battery-backup along exit paths, horn/light annunciators in common area restrooms and corridors, and fire extinguishers spread throughout the building and security system with closed circuit TV cameras.

The Subject Property is equipped with an eyewash station in the boiler room. An Ansul dry chemical fire protection system protects the commercial kitchen hoods.

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Fire alarm control panel



Pull station example



Fire extinguisher with valid inspection tag



Backflow with shut off valves



Sprinkler head inspection



Lifepak defibrillater

	
Luminated emergency exit lighting	Honeywell notifier located outside the main entrance

OBSERVATIONS

The fire sprinkler water service lines were noted and reported to be in good condition. The backflow preventers appear to be serviceable and were last tested on August 20, 2020. Based on the current condition and the expected useful life, Critical Repair is recommended for backflow device inspection.

The fire alarm control panel, alarm system, and sprinkler system are reportedly tested annually, were last tested in August 2020, and appear to be in serviceable condition.

The fire alarm control panel is eight years old and appears to be in serviceable condition. Based on its reported age, current condition, and expected useful life of approximately 20 to 25 years, Capital Needs are not anticipated for fire alarm control panel replacement during the analysis term.

The fire extinguishers are reportedly inspected annually, were last inspected in August 2020, and appear to be in serviceable condition.
The kitchen automatic chemical fire suppression system is reportedly inspected annually and appears to be in serviceable condition. There was no inspection tag seen on the dry chemical vent hood protection systems and based on observed and reported conditions, Critical Repairs are recommended for updating the expired inspection tags.

NFPA 25, the standard that sets the inspection, testing, and maintenance requirements for sprinkler systems, is used fairly universally across the U.S. Some municipalities also add their own requirements. As part of the standard, sprinkler systems are to be service tested every five years.

The 5-year system test certification was not observed on the fire riser, and the site contact was unaware of the last system test. Based on observed and reported conditions, Critical Repairs are recommended for the 5-year sprinkler system test to be performed if relevant documentation cannot be provided identifying the most recent test.

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Design data for the fire sprinkler system was not available at the time of the assessment and a design data tag was not observed. Accordingly, it is recommended that the owner affix this design data permanently on or near the sprinkler risers and to provide this information to *EBI* for review.

The *U.S. Consumer Product Safety Commission* has recalled approximately 35 million sprinkler heads manufactured by *Central Sprinkler Co*. A complete list of the recalled sprinklers can be found at http://www.sprinklerreplacement.com or by calling (866) 505-8553. The recall involves mostly "wet" sprinkler heads manufactured from 1989-2000, and "dry" sprinkler heads manufactured from the mid-1970s to 2001. *Central* brand sprinkler heads are located at the Subject Property but are not of the model types subject to recall. No recalled heads were reported or observed to be at the property. Management reported the sprinkler service company has surveyed and removed the affected sprinkler heads at the Subject Property during the active recall program. *Tyco* brand pendant and wall-mounted type sprinkler heads were observed at the buildings and are not subject to recall.

The stairwell pressurization system is reportedly tested and inspected every five years and appears to be in serviceable condition. Stairwell entry doors were observed to have weather-strip seals installed and fitted properly.

The emergency exit doors and panic hardware appear to be in serviceable condition. The doors are to swing-open into the direction of emergency egress.

Illuminated exit signs are located at the entry doors to the emergency exits and appear to be in serviceable condition. The exit signs are recommended for an annual inspection, and inoperative lamps replaced as required as part of routine maintenance operations.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Complete NFPA 5-year sprinkler test**

Please see Table 1 for the recommended Non-Critical Term Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

7.5 ELEVATORS AND CONVEYING SYSTEMS

DESCRIPTION

The Subject Property is provided with two, 3,500-pound capacity, hydraulic elevators. The elevators have a rated speed of 325 feet-per-minute (FPM). The elevator machinery and controls are located in an equipment room adjacent to the lower level landing. Elevators are original to the building which is approximately 8 years old.

The elevator cabs are finished with vinyl tile flooring, laminate-paneled walls, and stainless steel panel ceilings. The elevator cab interiors include single car operating panels. The front returns and car doors have a stainless steel finish. There is a flat stainless steel handrail on rear and side walls.

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Elevator equipment room



Elevator exterior door



Elevator flooring



Elevator buttons

OBSERVATIONS

The elevator machinery and controls were reported, and appear to be in good condition. The site contact noted parts of the doors are replaced as they needed repairs recently. The elevator is covered under an annual maintenance and service agreement that includes regular inspections, repairs, and limited parts replacement. Based on its reported age, current condition, and expected useful life, modernization is recommended as a Capital Need during the analysis term.

The inspection certificates were posted and are not current and expired in January 2020. Based on observed and reported conditions, Critical Repairs as an action item are recommended to obtain current elevator inspection certificates.

The elevator equipment room was clean and well maintained. The equipment room is recommended to be cleaned as part of Routine Maintenance operations.

The passenger elevator cab and interiors appear to be in good condition.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Provide current elevator inspection certificates – Action Item**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Elevator modernization program**

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8.0 Municipal Research

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed, and state, county or local municipal departments consulted. Documentation applicable to the Subject Property in those departments was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

MUNICIPAL REFERENCES				
Resource	**Contact**	**Information Provided**	**Phone or Web**	**Date**
Town of Marblehead Assessor	online	Property ownership & size information	https://www.marblehead.org/assessors-office	1.17.2021
Town of Marblehead Building/Inspections Department	online	Code compliance & violations	https://www.marblehead.org/building-inspection-department	1.24.2021
Town of Marblehead Planning & Zoning	online	Zoning information	https://www.marblehead.org/zoning-board-appeals/pages/zoning-laws-regulations	1.24.2021
Town of Marblehead Fire Department	online	Fire history & code violations	https://www.marblehead.org/fire-department	1.24.2021

8.1 Municipal Information & Zoning

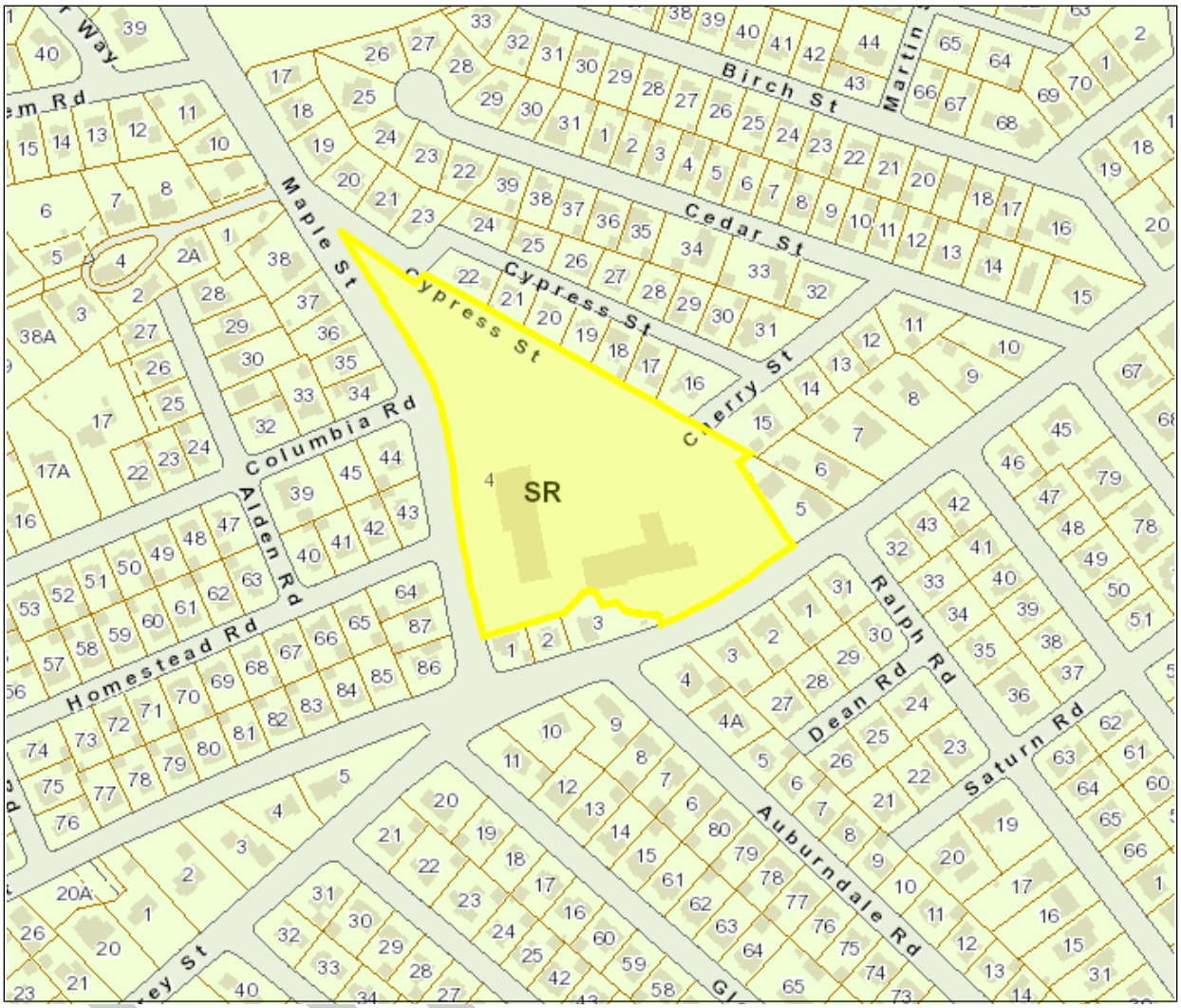
Municipal Information

Readily available, reasonably ascertainable and *publicly viewable* municipal records at *Town of Marblehead* were reviewed on-line.

Zoning

The municipal zoning office personnel were consulted, the zoning office files were reviewed, and/or the zoning ordinance was reviewed to determine the zoning of the Subject Property. According to the information provided, the Subject Property is currently located within a *SR, Single Residence* district and appears to be a conforming use.

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Zoning Map

8.2 BUILDING & PLANNING DEPARTMENT

DESCRIPTION

The municipal Building and Planning Departments were consulted for open material violations, and to obtain, *readily available*, *reasonably ascertainable* and *publicly viewable* documents regarding the Subject Property.

CONCLUSION

The department interviews and/or file reviews do not show open material violations on the Subject Property.

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the

Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, our *Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

8.3 FIRE DEPARTMENT

DESCRIPTION

The local fire department was consulted for open material violations.

CONCLUSION

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, *EBI's Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

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9.0 HAZARDS

9.1 NATURAL HAZARDS

DESCRIPTIONS

9.1.1 Seismic

Chapter 16 of the 1997 edition of the Uniform Building Code (UBC) was reviewed to determine the Seismic Zone of the Subject Property. Chapter 16 includes calculations for and mapping of earthquake (seismic) loads on structures. Figure 16-2, Seismic Zone Map of the United States delineates differing ratings of seismic load and shows the United States having seismic Zones ranging from 0 to 4. These ratings indicate the severity of how horizontal ground motion and sub-surface soil types affect a structure.

9.1.2 Flood Zone

The Federal Emergency Management Agency (FEMA) maps and rates flood hazard zones throughout the United States. These zones are depicted on a Flood Insurance Rate Map (FIRM), designated by Community Map and Panel numbers. The flood hazard zones range from Zone A or AE (A1 – A130), with Base Flood Elevations (BFE) determined, to Zone X, unshaded areas outside the 500-year floodplain. EBI utilizes *CoreLogic's* FloodInsights mapping system, which searches the FEMA FIRM map and panel, to obtain the Flood Zone Determination of the Subject Property.

9.1.3 Wind Zone

FEMA maps and rates wind hazard zones, Special Wind Regions and Hurricane-Susceptible Regions throughout the United States. These zones are depicted on a Map of Wind Zones in the United States on FEMA's website – www.fema.gov/fima/tsfs13.shtm and http://www.fema.gov/graphics/library/wmap.gif.

CONCLUSIONS

9.1.1 Seismic

According to Figure 16-2 in the *UBC*, the Subject Property appears to be located in Zone 2A, with a low to moderate probability of damaging ground motion.

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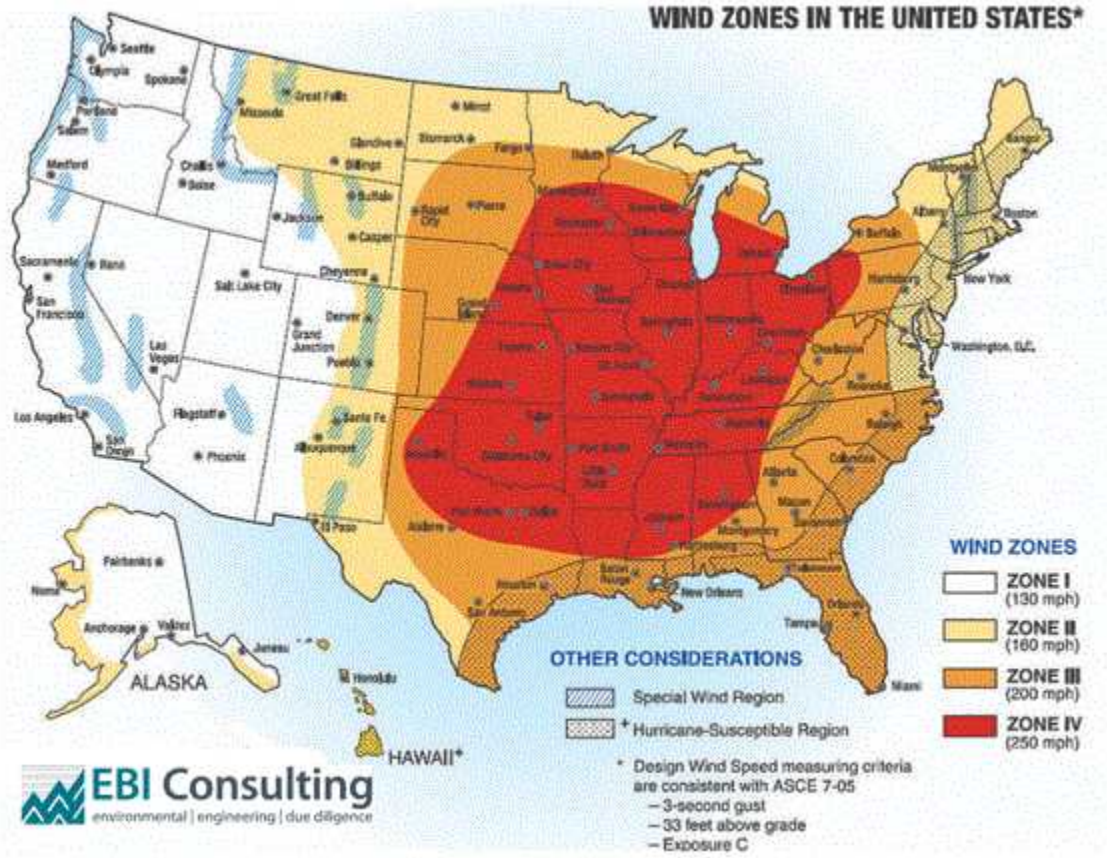


9.1.2 Flood Zone

The Subject Property Flood Zone Determination appears to be Zone X, defined as an area outside the 100- and 500-year floodplains, as shown on First American Flood Data Services' Flood Hazard Certification, Community Map #250091, Panel #0532G, dated July 16, 2014.

9.1.3 Wind Zone

Based on FEMA's Map of Wind Zones in the United States, the Subject Property appears to be located in Zone II, up to 160 mph winds. The Subject Property appears to be located in a Hurricane Susceptible or a Special Wind Region. However, the Subject Property is not located in a Special Wind Region.



9.2 SUSPECT MOLD AND MOISTURE

Interior areas of the Subject Property buildings to which access was provided, and in which building elements were readily observable, were reviewed for the presence of moisture and visible or olfactory evidence of microbial development (suspect mold). No observations were conducted within concealed locations (construction elements behind wall and ceiling finishes, and other building components, etc.). No sampling or testing was performed to confirm the presence of invisible airborne microbial elements. In addition to *EBI's* observation efforts, property personnel did not indicate the presence of moisture or suspect mold during the survey, or in *EBI*'s Pre-Survey Questionnaire completed on site.

Representative Subject Property observations and interviews revealed no obvious visual or olfactory indications of the presence of active moisture or suspect mold activity. No recommendations concerning moisture or mold are made at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

10.0 REFERENCES

10.1 CONTACTS

DESCRIPTION

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed for information concerning the Subject Property. Documentation applicable to the Subject Property was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Director of School Facilities, *Town of Marblehead*	Todd Bloodgood	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021
Electrician - Facilities, *Town of Marblehead*	Mike Ellconus	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021

10.2 PERTINENT INFORMATION PROVIDED OR OBTAINED

EBI's Pre-Survey Questionnaire was forwarded to the designated property contact. The information requested in the questionnaire assists in *EBI's* research of the property to obtain pertinent property data; discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs; and pending repairs and improvements. The Pre-Survey Questionnaire was completed on site with escorts.

The following information was provided and reviewed on a cursory basis as background information of this report:

EXHIBITS RECEIVED AND REVIEWED	YES	NO	DESCRIPTION/COMMENTS
1. A.L.T.A. Survey		X	Not provided
2. Legal Description of the Property	X		Obtained by EBI
3. Location Maps	X		Obtained by EBI
4. Project Specifications		X	Not provided
5. Soils Report		X	Not provided
6. Local Building Code Compliance		X	Request submitted by EBI
7. Date of Permits and Cert. of Occupancy for Each Building		X	Request submitted by EBI
8. Building Plans:			
a. Architectural		X	Not provided
b. Structural		X	Not provided

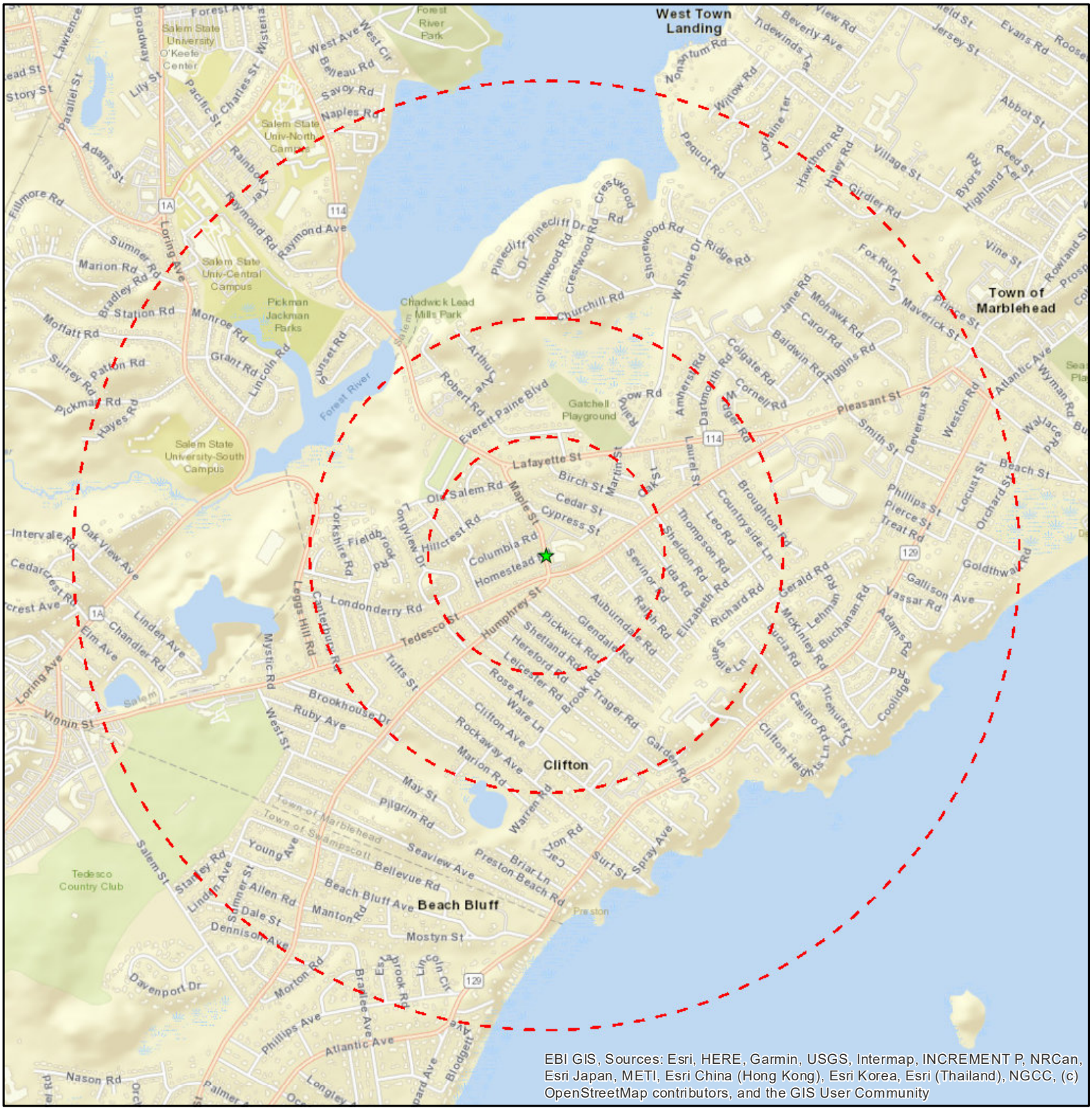
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c. Mechanical		X	Not provided
d. Electrical		X	Not provided
e. Plumbing		X	Not provided
9. Owner's Repair List and Cost Breakdown		X	Not provided
10. Other			

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APPENDIX A - FIGURES, DRAWINGS AND PLANS

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Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

Date: 2/8/2021

Figure 1: Site Location Map

NULL GLOVER SCHOOL
9 MAPLE ST
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000046

EBI Consulting
environmental | engineering | design



Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

USGS 24K Quad: Lynn, MA 1986, Marblehead South, MA 1986

Date: 2/8/2021

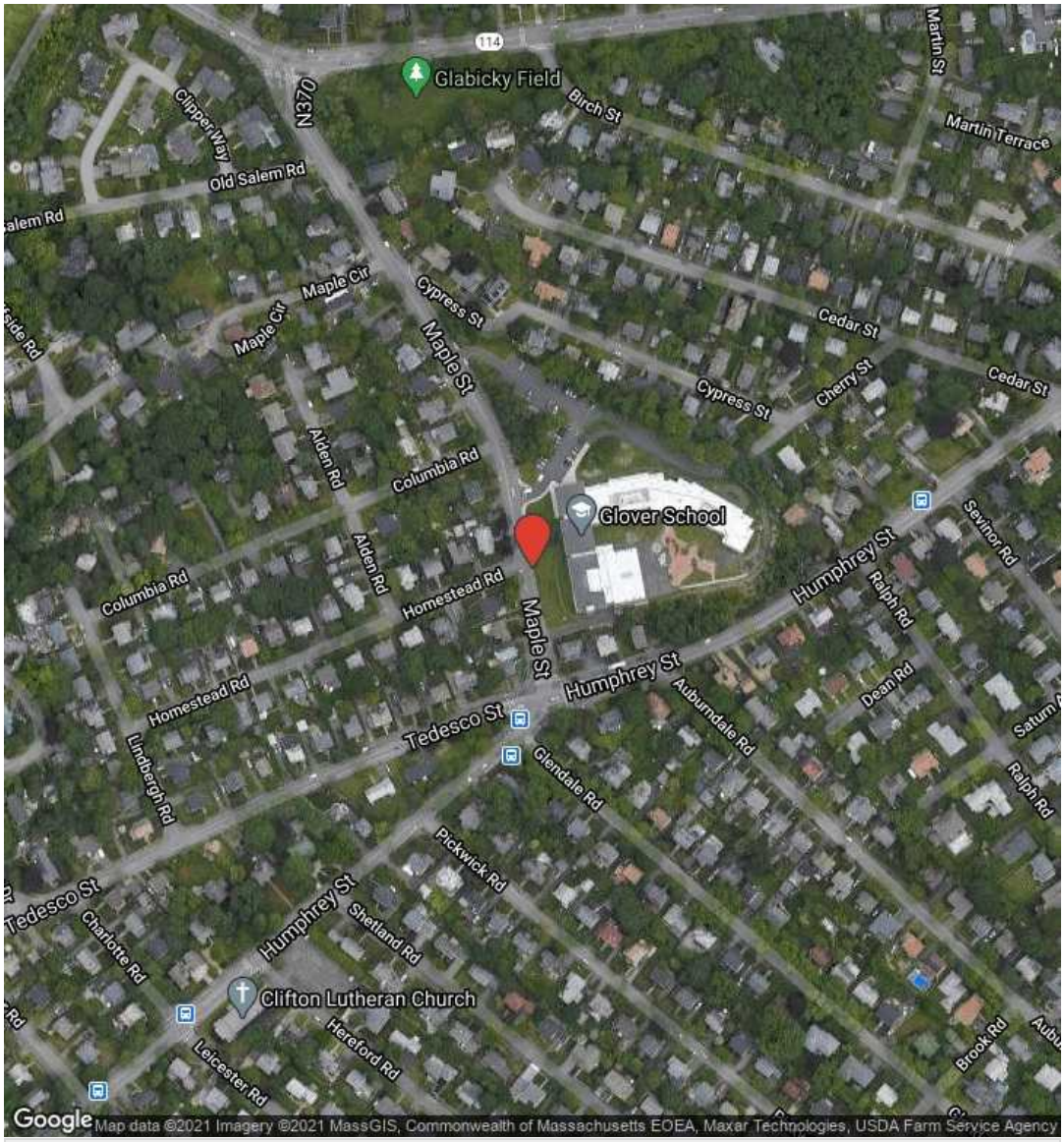
Figure 2 - Topographic Map

NULL GLOVER SCHOOL
9 MAPLE ST
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000046

EBI Consulting
environmental | engineering | design

Overview Map



Flood Zones: X500 or B Zone | A Zone | V Zone | D Zone | Floodway | CBRA

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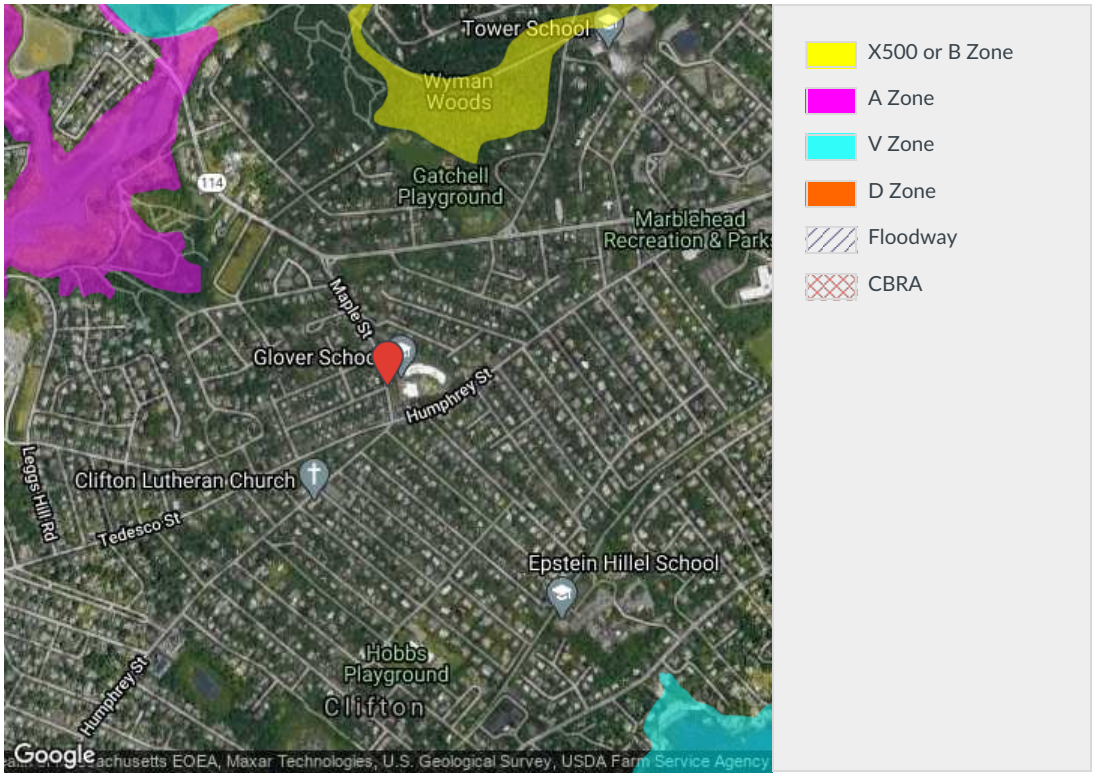
LATITUDE: 42.490039, LONGITUDE: -70.880121

LOCATION ACCURACY: *User-defined location* **LATITUDE:** 42.490039 **LONGITUDE:** -70.880121 **MATCH CODE:** **SOURCE:** **CENSUS BLOCK ID:** 250092031001019

Flood Zone Determinations Report

Flood Zone Determinations: OUT

SFHA (FLOOD ZONE)	OUT	**WITHIN 250 FEET OF FLOOD ZONE**	NO
FLOOD ZONE	X	**COMMUNITY**	250091
COMMUNITY NAME	MARBLEHEAD, TOWN OF	**PANEL**	0532G
PANEL DATE	July 16, 2014	**COBRA**	OUT
MAP NUMBER	25009C0532G	**FIPS CODE**	25009



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APPENDIX B - OTHER RELEVANT DOCUMENTS

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APPENDIX C - PROFESSIONAL QUALIFICATIONS

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EBI Consulting
environmental | engineering | design

Jennifer Flanders, PE, LEED AP BD+C
Project Engineer
Westwood, MA 02090
Office/Mobile: 978.660.0227

Summary of Experience

Mrs. Flanders is a structural engineer with over 9 years of experience in the building industry. She has provided management on a wide variety of projects including renovations and new construction of commercial, institutional, and municipal facilities. She has a broad knowledge of structural design, condition assessments, forensic investigation, litigation support, property loss consulting, and construction administration.

Relevant Project Experience

Prior to her employment at EBI, Mrs. Flanders contributed to the following representative assignments:

Alewife Parking Garage Investigation, Cambridge MA
Investigation of a 1,000,000 sq. ft. precast concrete garage structure supported by structural steel columns. The ongoing structural investigation process consisted of a visual survey and non-destructive testing (NDT) of a representative portion of the garage to determine an approximate estimate of damage. A cost estimate was provided with recommended priority levels of repair.

University of Massachusetts Boston Calf Pasture Pump Facility, Boston MA
Condition assessment of three buildings originally constructed in 1887. Provided repair program to structurally stabilize, secure, and weather-protect the facility for future use.

Two Drydock Avenue, Boston MA
Project manager of the structural design and construction administration of a new thirteen-story 298,700 sq. ft. office building with ground floor retail, above-ground parking, and a roof terrace.

Hurricane Irma Response, Florida
Investigation of flooding and wind damage caused by Hurricane Irma. Findings reports along with recommended repairs were generated for a variety of commercial and residential properties.

Westfield Mall Garage Floor Investigation, Bethesda MD
Forensic investigation of a double-tee concrete floor panel that collapsed during a renovation project. Assisted with document review and analysis to opine on the cause of collapse.

Silo Investigation, Tallahassee FL
Forensic investigation of a collapsed, steel cylindrical silo at a manufacturing facility. Provided document review and analysis to opine on the cause of collapse and provide repair recommendations.

Canterbury Earthquake Sequence Portfolios, Christchurch New Zealand
Structural evaluation of several commercial, hotel, multi-family, and educational buildings that sustained damage following a series of earthquakes in 2010 and 2011. The scope included condition assessments of post-earthquake damages, evaluation of remaining seismic capacities, and development of conceptual repairs and seismic upgrades.

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Jennifer Flanders, PE, LEED AP BD+C
Project Engineer
Westwood, MA 02090
Office/Mobile: 978.660.0227

Liberty Mutual Storm Damage Portfolio, Various Locations
Assisted with the investigation of flooding, wind damage, and the most likely cause of electrical service interruptions, caused by the CAT-90 Sandy storm. Findings reports were generated for more than 500 property locations throughout the east coast of the United States.

Armed Forces Retirement Home, Washington DC
Structural evaluation and emergency stabilization at the Sherman Building after the Central Virginia Earthquake. Work involved immediate emergency assessment of the structure and stabilization of the bell tower. The project included a thorough visual evaluation, documentation of the damage, and recommendations for further remedial action.

NAVFAC Embassy Security Facilities, Quantico VA
Structural design of a new two-story, steel-framed headquarters building, a warehouse, and two entry control facilities totaling 36,000 sq. ft.

Verizon Chesapeake Office Complex, Silver Spring MD
Investigation of a deteriorated masonry façade. Identified the extent of damage caused by corrosion of a steel structure supporting the exterior wall of a seven-story office building.

Social Security Administration National Computer Center, Urbana MD
Structural design of a 400,000 sq. ft. data center with an attached office building.

Additional Projects
Past experience includes design, assessment, and recommendations on commercial, institutional, and municipal properties of various sizes located primarily throughout the eastern seaboard of the United States and abroad.

Education

Master of Engineering in Civil Engineering, Cornell University, Ithaca, NY
Bachelor of Science in Civil Engineering, Worcester Polytechnic Institute, Worcester, MA

Professional Affiliations

CREW Network, Boston

Professional Registrations

Registered Professional Engineer (Civil-Structural) in Massachusetts (#54309) and Virginia (#402052253)
LEED Accredited Professional, Building Design + Construction (AP BD+C)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

SUMMARY OF EXPERIENCE

Mr. Davis has in excess of 37 years experience in real estate development and due diligence. He has performed a wide range of inspections including Physical Needs Assessments per Fannie Mae, Freddie Mac & HUD protocols, Property Condition Assessments to ASTM and custom protocols and Property Condition Equity Evaluations for acquisition. In addition, he has performed and managed a variety of detailed engineering investigations including infra-red roof studies, façade investigations, structural studies, MEP and fire and life safety studies. In total over the past ten years, Mr. Davis has performed more than 500 site surveys and detailed investigations and directed more than 7,500 due diligence assessments for clients.

As senior technical lead on over 50 portfolios, both nationwide and international, he has worked closely with clients to provide timely analysis and critical insight as they make their business decisions on each project. With portfolios ranging in size from 20 locations to over 600 sites, and property types including hospitality, restaurant, retail, office, industrial, and skilled nursing, Mr. Davis has successfully provided progress information on issues and each portfolio was completed on or ahead of schedule.

Mr. Davis' background includes managing design, construction, and engineering projects in over twenty states and five provinces in Canada. His experience as a consultant, owner's representative, contractor and code official brings a unique perspective to each project.

RELEVANT PROJECT EXPERIENCE

Projects on which Mr. Davis has been involved include Assessments for:

- The World Trade Center, Long Beach, California
- Anaheim Garden Walk Mall, Anaheim, California
- Boca Raton Resort and Corporate Center, Boca Raton, Florida
- Inter-Continental Hotel, New Orleans, Louisiana
- Bethesda Hotel & Conference Center, Bethesda, Maryland
- Westin Resort Properties, Puerto Vallarta, Mexico
- The Cosmopolitan, Las Vegas, Nevada (2,900 room resort)
- University Mall, North Carolina (BOMA Lease Study)
- 900 North Michigan Avenue, Chicago, IL (Constrcution Monitoring)
- Numerous large-scale retail, office, multi-family residential, hospitality, healthcare and other commercial facilities

Several large property portfolios, including:

- 8 hospitality property portfolios (ea. 75 to 600 sites)
- 10 retail/office/industrial property portfolios (ea. 100 to 335 sites)
- 3 restaurant property portfolios (ea. 150 to 530 sites)
- 7 assisted living, skilled nursing, and full nursing home property portfolios (ea. 50 to 140 sites)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

- Miscellaneous portfolios including gas service station, self-storage, resort, manufactured home and other portfolios in the US and Canada (ea. 25 to 125 sites)

EDUCATION

Bachelor of Science in Building Sciences, Rensselaer Polytechnic Institute, Troy, NY (1976)
Graduate Coursework, Architectural Design – Drexel University, Philadelphia, PA (1980)

CAPITAL NEEDS ASSESSMENT



Prepared for:

Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945



Village School

93 Village St
Marblehead, Massachusetts

EBI Project No. 1321000047

March 29, 2020

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March 29, 2020

Ms. Michelle L. Cresta
Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945

Subject: Capital Needs Assessment, Village School
93 Village St, Marblehead, Massachusetts
EBI Project #1321000047

Dear Ms. Michelle L. Cresta:

Attached please find our *Capital Needs Assessment*, (the *Report*) for the above-mentioned asset (the Subject Property). During the property survey and research, our property surveyor met with agents representing the Subject Property, or agents of the owner, and reviewed the property and its history. The *Report* was completed according to the terms and conditions authorized by you. The gathering of data and information for this *Report* has been completed in general conformance with ASTM E 2018 – 15.

The exclusive purpose of the *Report* is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools* in its Due Diligence effort in evaluating the Property.

This *Report* was performed utilizing methods and procedures consistent with established commercial practices and in conformance with industry standards. The suggestions represent *EBI's* opinion based on written, graphic or verbal information, the property condition and data available to us at the time of the survey. Factual information regarding operations, conditions or data provided by the Client, occupants, owner or their representative has been assumed to be correct and complete.

The *Report* speaks only as of its date in the absence of a specific written update of the *Report* signed and delivered by *EBI Consulting*.

EBI Consulting is an independent contractor, not an employee of either party to this transaction, and its compensation was not based on the findings or recommendations made in the *Report* or on the closing of any business transaction.

Thank you for the opportunity to prepare this *Report* and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully submitted,

Jennifer Flanders, P.E., LEED AP BD+C
Author/Engineer

Dennis L. Davis 918.924.1642
Reviewer/Equity Services, National Program Director
ddavis@ebiconsulting.com

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EXECUTIVE SUMMARY TABLE

Property Name:	**Village School**	*Property Type:*	**School**
Address:	**93 Village St**	*Property Age:*	**66**
City and State:	**Marblehead, Massachusetts**	*No. of Units or Tenants:*	**1**
Site Survey Date:	**February 9, 2021**	*Square Feet:*	**143,125**
Report Date:	**March 29, 2021**	*Analysis Term (Yrs.):*	**20**
EBI Project #:	**1320000047**		

Section #	Section Name	Critical Repairs	Non-Critical Repairs	Capital Needs
2.0 SITE CONDITIONS				
2.1	Site Features			
2.2	Landscaping & Site Improvements	$300		$33,630
2.3	Pavement and Parking		$17,495	$112,624
2.4	Site Amenities			$117,351
2.5	Utilities			
3.0 STRUCTURE				
3.1	Substructure			
3.2	Superstructure			
4.0 BUILDING ENVELOPE				
4.1	Roofing		$7,200	$647,863
4.2	Facades	$10,200		$7,321
4.3	Windows & Doors			$221,605
5.0 BUILDING INTERIORS				
5.1	Basements/Attics/Penthouses			
5.2	Interior Finishes & Components	$720		$1,018,008
6.0 ACCESSIBILITY				
6.1	Accessibility Compliance	$150		
7.0 BUILDING SYSTEMS				
7.1	Building Plumbing			$74,270
7.2	HVAC			$382,081
7.3	Building Electrical	$2,050		$10,251
7.4	Building & Site Fire/Life Safety	$29,810		
7.5	Elevators & Conveying Systems			$150,348
8.0 MUNICIPAL RESEARCH				
8.1	Municipal Information & Zoning			
8.2	Building & Planning Department			
8.3	Fire Department			
9.0 HAZARDS				
9.1.1	Seismic			
9.1.2	Flood Zone			
9.1.3	Wind Zone			
9.2	Suspect Mold and Moisture			
	TOTALS:	**$43,230**	**$24,695**	**$2,775,352**

	Dollars per sf/yr	Dollars per unit/yr	
Present Value of Capital Needs Cost Estimate	$0.97	$138,767.61	$2,775,352
Inflated Value of Capital Needs Cost Estimate	*$1.22*	*$174,551.29*	*$3,491,026*
Critical Repairs Cost Estimate	$43,230		
Non-Critical Repairs Cost Estimate		$24,695	
Total Deferred Maintenance Cost Estimate, After Multiplier	$67,925		

EXECUTIVE SUMMARY

PROPERTY DESCRIPTION

The Subject Property, known as Village School, is located in Marblehead, Massachusetts at 93 Village St in Essex County. The Subject Property was reportedly constructed in 1955 and 1967 and renovated in 2010. The Subject Property consists of a one to three-story approximately 143,125-gross square foot[1] elementary school building located on an 18.2-acre lot. The buildings contains a partial unfinished basement and crawl spaces.

The school building is irregular-shaped and has rough dimensions of 530 feet in length and 375 feet in depth and is configured to the north wing is three stories tall and primarily one story elsewhere.

The interior of the property is laid out with the main lobby at the south entrance and common corridors providing access to classroom, auditorium, and cafeteria spaces.

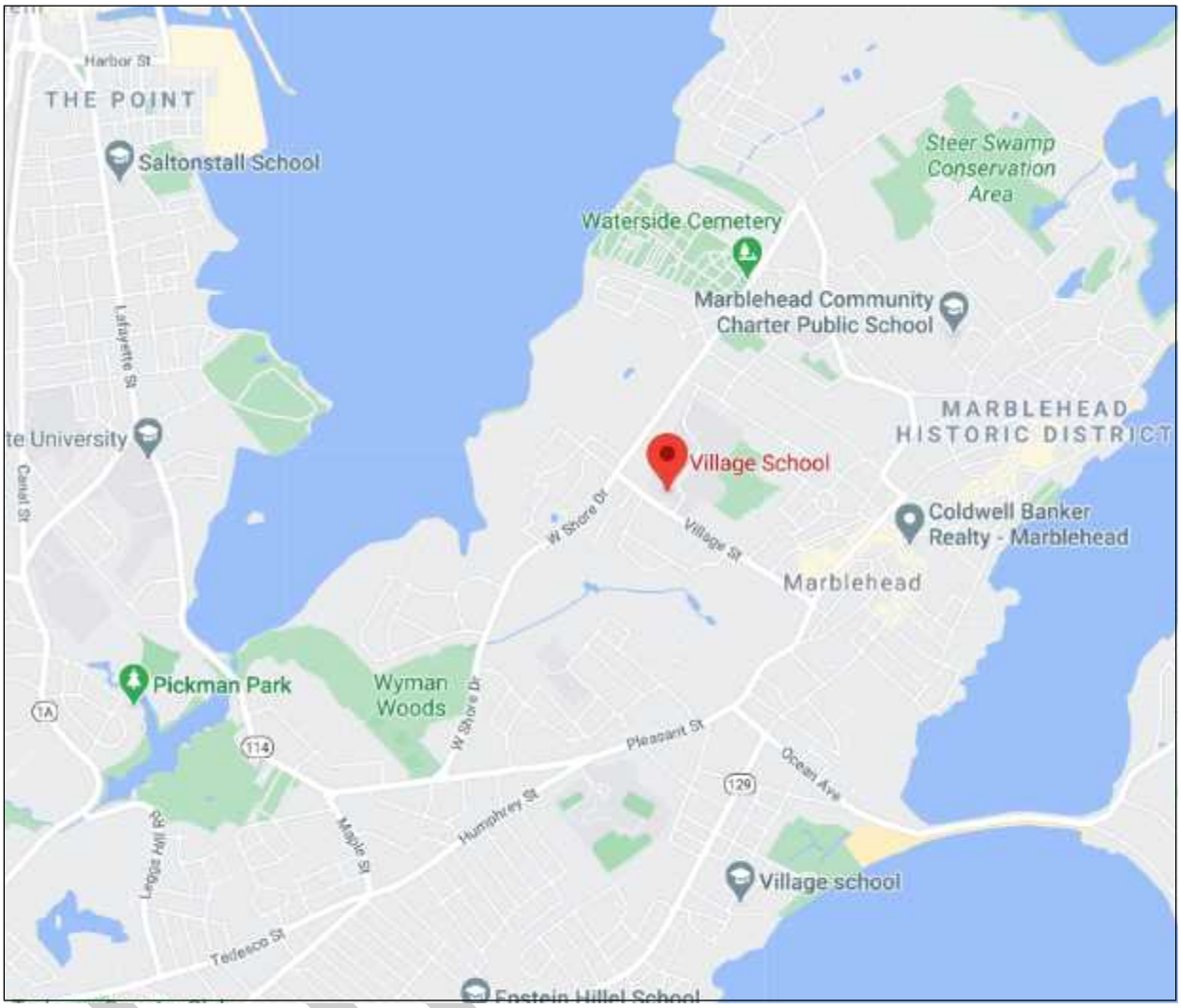
LOCATION

The Subject Property is located approximately 475 feet east of the intersection of Village Street and W Shore Drive. The Subject Property has approximately 470 feet of frontage along Village Street.

Local surface arteries, Interstate, and state highway systems provide access to the property. The Subject Property is located approximately one mile northeast of Route 114.

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1 **Gross square footage** obtained from the tax assessor's records.



Location Map

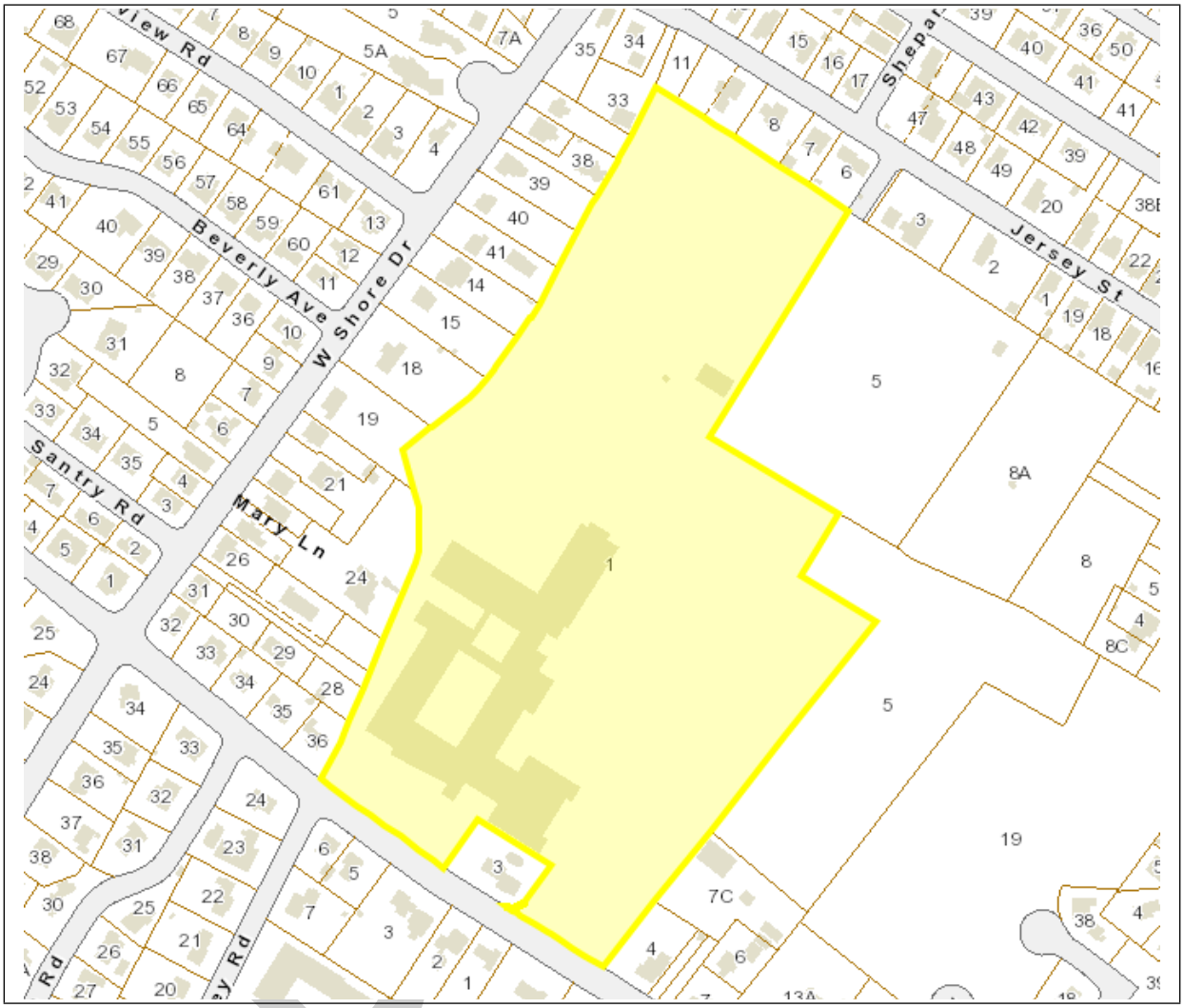
Four drives provide access to the Subject Property from the adjacent road frontages. The property is improved with asphalt-paved vehicle parking areas and drive lanes located along the front, sides, and rear of the building, and with asphalt-paved service, and loading areas.

The primary parcel of land the school is located on includes 18.2 acres. There is a small, 0.145-acre parcel to the north that allows school access from Jersey Street. There is also a 4.149-acre parcel to the northeast of the school that includes half of the football field/track. A 4.270-acre and 6.320-acre parcel to the east includes portions of the soccer fields. All parcels are owned by the *Town of Marblehead School Department* per the Marblehead GIS website.

The site is gently rolling, with moderate slopes up to the north where the football field and track are. Wooded areas are located to the east property line.

Property use in the vicinity of the Subject Property is primarily characterized by residential development.

According to the *Marblehead GIS*, the Subject Property is currently owned by the *Town of Marblehead School Department*. The Subject Property includes one irregular-shaped parcel totaling 18.2 acres of land. *Marblehead Assessor* records indicate that the Subject Property assessor parcel number is 119-1-0.



Tax Map

SITE OBSERVATION & OBSERVATION SUMMARY

Jennifer Flanders and Don Gerardi of *EBI* surveyed the property on February 9, 2021 and were accompanied by and interviewed Mr. Todd Bloodgood, Director of School Facilities and Mr. Mike Ellconus, Electrician both with the *Town of Marblehead.* At the time of the survey, the weather was cloudy and approximately 25º Fahrenheit. During the survey, representative areas of the site, interior areas, common areas, educational spaces, mechanical spaces, mechanical equipment and building components were observed.

Overall, the Subject Property appears to be in good condition with a limited level of deficiencies observed. This *Report* recommends certain actions, repairs, and replacements as Critical Repairs, Non-Critical Repairs and Capital Needs, commensurate with our observations. Additional less notable issues may be present that require attention as part of routine maintenance. Please refer to each specific report sections for details.

CAPITAL, MAINTENANCE & OWNER/TENANT RESPONSIBILITY

According to the facilities manager, the school was fully renovated in 2010 for approximately 20 million dollars. The renovation included new interiors, windows, mechanical equipment, ADA upgrades, and roofs.

Maintenance, repair, and replacement of the roof, facades, landscaping, pavement and parking, tenant space interior finishes, plumbing, mechanical, electrical, HVAC, elevator and conveying, life safety systems and components at the property is reportedly the responsibility of the Subject Property owner.

General day-to-day maintenance is reportedly handled by the school facilities department. The maintenance technicians are reportedly qualified to handle general repairs. Repair and maintenance of specialty and large-scale equipment, i.e., central HVAC plant equipment, elevators, roofing, fire and smoke detection and alarm systems, etc., are subcontracted to outside vendors. The level and quality of on-site maintenance repairs reviewed while at the site were of good workmanship and materials. In general, the Subject Property appears to have been constructed within industry standards and has been well maintained.

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CRITICAL REPAIRS AND REPLACEMENT RESERVES

Itemized Immediate and Short Term repairs, as well as Capital Needs are provided as part of this *Report*. The cost estimates shown on the tables are based on data obtained from the Owner for items already planned, quotes from contractors, *EBI's* in-house Equity database costs and our experience with costs and estimates for similar issues, property and building types, city cost indexes, and assumptions regarding future economic conditions. These projected costs are augmented by cost estimate resource documents such as the *National Construction Estimator*, *Means Building Construction Cost Data*, or *Means Facilities Maintenance and Repair Cost Data Publications*.

CRITICAL REPAIRS & NON-CRITICAL REPAIRS - TABLE 1

Each of the Immediate Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at a Subject Property.

Each of the Short Term Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Short Term Repair, and/or that cannot be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

CAPITAL NEEDS - TABLE 2

Each of the Replacement Reserve items noted during the survey are listed on the following pages on Table 2 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by *Report* section. Routine or customary annual maintenance items are not reported or included in this *Report* unless otherwise noted.

DEFICIENCY PRIORITIES #1 TO #4

Each of the deficiencies and costs noted during the survey are prioritized in the following manner:

Priority 1: Current Critical, Conditions in this category require immediate action to:

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility to operation
- Correct an environmental hazard

Priority 2: Potentially Critical, Conditions in this category, if not corrected expeditiously will become critical within a year. Situations within this category include:

- Intermittent operations

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- Rapid deterioration
- Potential life safety hazards
- Environmental non-compliance

Priority 3: Recommended, conditions in this category require appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further. These are not required for the most basic function of the facility; however, Priority 3 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 4: Does not meet current codes/standards, "Grandfathered" conditions in this category include items that do not conform to existing codes, but are "grandfathered" in their condition. No action is required at this time, but should be considered as an upgrade or if substantial work is to be undertaken in contiguous areas, certain existing conditions may require correction

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Table 1 - Critical and Non-Critical Repairs

Village School
93 Village St
Marblehead, Massachusetts
EBI Project # **1320000047**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 3

Building Area: 143,125
Number of Units: 1
Property Age: 66
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	***PRIORITY***	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
2.0	**SITE CONDITIONS**											
2.1	Site Features		None			20.0%						
2.2	Landscaping / Improvements	**#1**	Repair chain-link fence	10	$25.00	20.0%	$30.00	per linear foot	$300.00			Small localized areas of chain link fence damaged adjacent to fields
2.3	Pavement/ Parking	**#2**	Patching, crack sealing, sealing and striping of asphalt pavement	40,000	$0.36	20.0%	$0.44	per square foot		✔	$17,495.04	Localized areas of cracking throughout asphalt pavement
2.4	Amenities		None			20.0%						
2.5	Utilities		None			20.0%						
3.0	**STRUCTURE**											
3.1	Substructure		None			20.0%						
3.2	Superstructure		None			20.0%						
4.0	**BUILDING ENVELOPE**											
4.1	Roof	**#3**	Extend condensation drain line at roof top units	1	$1,000.00	20.0%	$1,200.00	allowance		✔	$1,200.00	Establish roof maintenance program
4.1	Roof	**#3**	PMP Ongoing roof maintenance, psf	100,000	$0.05	20.0%	$0.06	per square foot		✔	$6,000.00	Establish roof maintenance program
4.2	Facades	**#1**	Remove delaminated concrete at entrance canopy	1	$8,500.00	20.0%	$10,200.00	allowance	$10,200.00			Delaminated concrete at front entrance which creates a falling hazard
4.3	Windows and Doors		None			20.0%						

Table 1 - Critical and Non-Critical Repairs

Village School
93 Village St
Marblehead, Massachusetts
EBI Project # **1320000047**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
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Building Area: 143,125
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SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	QUANTITY	UNIT COST	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (Including Markup)	UNIT DESCRIPTION	ESTIMATED CRITICAL REPAIR COST	Non-Critical Repair?	ESTIMATED NON-CRITICAL REPAIR COST	COMMENTS OR ADDITIONAL DESCRIPTION
5.0	**BUILDING INTERIORS**											
5.1	Bsmt/Attic		None			20.0%						
5.2	Interior F & C	#3	Acoustical ceiling tile	1	$100.00	20.0%	$120.00	allowance	$120.00			Replace stained acoustic ceiling tiles near east entrance
5.2	Interior F & C	#2	Vinyl flooring - common area	1	$500.00	20.0%	$600.00	allowance	$600.00			Replace cracked vinyl flooring at east entrance threshold
6.0	**ACCESSIBILITY**											
6.1	Accessibility	#4	Complete accessibility compliance upgrades	1	$125.00	20.0%	$150.00	allowance	$150.00			Refer to accessibility checklist
7.0	**BUILDING SYSTEMS**											
7.1	Plumbing		None			20.0%						
7.2	HVAC		None			20.0%						
7.3	Electric	#2	Perform IR survey	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050.20			Perform an IR survey
7.3	Electric	#2	Remove equipment in electrical room	1	$0.00	20.0%	$0.00	action item	$0			Remove equipment stored within 36" of electrical equipment
7.4	F/L Safety	#2	Fire extinguisher renewal inspections	6	$56.95	20.0%	$68.34	each	$410.04			Fire Extinguisher inspection tags missing
7.4	F/L Safety	#2	Sprinkler system 5 year test	1	$4,500.00	20.0%	$5,400.00	Allowance	$5,400.00			Sprinkler test paperwork not available during assessment
7.4	F/L Safety	#2	Replace security system	1	$20,000.00	20.0%	$24,000.00	Allowance	$24,000.00			Security system is not working properly
7.5	Elevators		None			20.0%						
8.0	**MUNICIPAL RESEARCH**											
8.1	Municipal Information & Zoning		None			20.0%						
8.2	Building & Planning		None			20.0%						
8.3	Fire Department		None			20.0%						
9.0	**NATURAL HAZARDS**											
9.1.1	Seismic		None			20.0%						
9.1.2	Flood Zone		None			20.0%						
9.1.3	Wind Zone		None			20.0%						
9.2	Suspect Mold & Moisture		None			20.0%						
								DEFERRED MAINTENANCE:	**CRITICAL**		**NON-CRITICAL**	Note:
									$43,230		**$24,695**	Priority 1: Current Critical
												Priority 2: Potential Critical
								TOTAL:	**$67,925**			Priority 3: Recommended
												Priority 4: Non-Compliant with current standards

TABLE 2 - CAPITAL NEEDS OVER TERM

Village School
93 Village St
Marblehead, Massachusetts
EBI Project # **1320000047**

Site Survey Date: 2/9/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 3

Building Area: 143,125
Number of Units: 1
Property Age: 66
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	AVERAGE EFFECTIVE USEFUL LIFE	EFFECTIVE AGE	REMAINING USEFUL LIFE	TOTAL QUANTITY OVER TERM	APPROXIMATE QUANTITY PER YEAR	UNIT COST (adjusted by location factor)	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (including Markup)	UNIT DESCRIPTION	ESTIMATED COST PER YEAR	Annual Costs																					RECOMMENDED TOTAL OVER THE TERM
														2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
														YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	
2.0	**SITE CONDITIONS**																																		
2.1	Site Features		None	-						20.0%																									
2.2	Landscaping / Improvements	#3	Routine concrete sidewalk repairs (linear foot allowance)	20	11	9	300	300	$9.11	20.0%	$10.93	linear foot	$3,280									3,280													$3,280
2.2	Landscaping / Improvements	#3	Routine asphalt sidewalk repairs (LF)	25	11	14	1,800	1,800	$7.40	20.0%	$8.88	per linear foot	$15,992														15,992								$15,992
2.2	Landscaping / Improvements	#3	Signage, Entrance/Monument	25	11	14	1	1	$6,606.20	20.0%	$7,927.44	allowance	$7,927														7,927								$7,927
2.2	Landscaping / Improvements	#3	Replace pole-mounted light fixture	20	11	9	13	13	$77.51	20.0%	$93.01	each	$1,209									1,209													$1,209
2.2	Landscaping / Improvements	#3	Repair chain-link fence	40	var		2,000	1,000	$2.18	20.0%	$2.61	per linear foot	$2,611					2,611										2,611							$5,221
2.3	Pavement/ Parking	#3	Mill and overlay asphalt pavement	25	11	14	40,000	40,000	$1.25	20.0%	$1.50	per square foot	$60,139														60,139								$60,139
2.3	Pavement/ Parking	#3	Patching, crack sealing, sealing and striping of asphalt pavement	5		5	120,000	40,000	$0.36	20.0%	$0.44	per square foot	$17,495					17,495					17,495										17,495	$52,485
2.4	Amenities	#3	Field house refurbishment	-	-		1	1	$35,000.00	20.0%	$42,000.00	allowance	$42,000			42,000																			$42,000
2.4	Amenities	#3	Resurface asphaltic sport/tennis court (full-size)	25	11	14	1	1	$6,501.98	20.0%	$7,802.38	each	$7,802														7,802								$7,802
2.4	Amenities	#3	Replace playground equipment	20	11	9	1	1	$24,000.00	20.0%	$28,800.00	each	$28,800									28,800													$28,800
2.4	Amenities	#3	Replace playground loose surfacing	6	2	4	13,500	4,500	$2.39	20.0%	$2.87	per square foot	$12,916				12,916						12,916						12,916						$38,749
2.5	Utilities		None	-						20.0%																									
3.0	**STRUCTURE**																																		
3.1	Substructure		None	-						20.0%																									
3.2	Superstructure		None	-						20.0%																									
4.0	**BUILDING ENVELOPE**																																		
4.1	Roof	#3	TPO 60 mil roof replacement - low rise	20	11	9	100,000	100,000	$5.40	20.0%	$6.48	square foot	$647,863									647,863													$647,863
4.2	Facades	#3	Renew/recaulk expansion & control joints	15	11	4	5,200	2,600	$1.17	20.0%	$1.41	linear foot	$3,660				3,660																3,660		$7,321
4.3	Windows and Doors	#3	Renew/recaulk windows and doors	15	11	4	20,800	10,400	$1.17	20.0%	$1.41	linear foot	$14,641				14,641																14,641		$29,282
4.3	Windows and Doors	#3	Overhead service door replacement 12' x 16'	15	11	4	2	1	$3,251.85	20.0%	$3,902.21	each	$3,902				3,902																3,902		$7,804
4.3	Windows and Doors	#3	Commercial window replacement	25	11	14	180	180	$854.25	20.0%	$1,025.10	each	$184,518														184,518								$184,518
5.0	**BUILDING INTERIORS**																																		
5.1	Bsmt/Attic		None	-						20.0%																									
5.2	Interior F & C	#3	Corridor finish refurbishment	8	5	3	78,000	26,000	$10.00	20.0%	$12.00	per square foot	$312,000			312,000								312,000									312,000		$936,000
5.2	Interior F & C	#3	Kitchen refurbishment (commercial)	8	5	3	6,000	2,000	$11.39	20.0%	$13.67	per square foot	$27,336			27,336								27,336									27,336		$82,008
6.0	**ACCESSIBILITY**																																		
6.1	Accessibility		None	-						20.0%																									
7.0	**BUILDING SYSTEMS**																																		
7.1	Plumbing	#3	Replace commercial gas-fired water heater (<200 MBH)	15	11	4	4	2	$9,631.61	20.0%	$11,557.93	each	$23,116				23,116																23,116		$46,232
7.1	Plumbing	#3	Replace commercial gas-fired water heater (201-359 MBH)	15	11	4	2	1	$11,682.67	20.0%	$14,019.20	each	$14,019				14,019																14,019		$28,038
7.2	HVAC	#3	Through wall packaged or split unit replacement 2-ton	12	10	2	10	5	$2,957.98	20.0%	$3,549.58	each	$17,748		17,748												17,748								$35,496
7.2	HVAC	#3	Replace rooftop package unit (6-ton) - 100% OA, Single Zone	20	12	8	3	3	$19,370.40	20.0%	$23,244.48	each	$69,733								69,733														$69,733
7.2	HVAC	#3	Replace gas/oil-fired HW boiler (203 MBH)	30	11	19	3	3	$43,387.93	20.0%	$52,065.51	each	$156,197																				156,197		$156,197
7.2	HVAC	#3	Replace Air-Cooled Condenser (45 ton)	25	11	14	2	2	$50,273.18	20.0%	$60,327.82	each	$120,656														120,656								$120,656
7.3	Electric	#3	Perform IR survey	-			5	1	$1,708.50	20.0%	$2,050.20	Action Item	$2,050				2,050				2,050				2,050								2,050	$10,251
7.4	F/L Safety		None	-						20.0%																									
7.5	Elevators	#3	Elevator modernization - 3-story Hydraulic	20	11	9	1	1	$125,290.00	20.0%	$150,348.00	per elevator	$150,348									150,348													$150,348
8.0	**MUNICIPAL RESEARCH**																																		
8.1	Municipal Information & Zoning		None	-						20.0%																									
8.2	Building & Planning		None	-						20.0%																									
8.3	Fire Department		None	-						20.0%																									
9.0	**NATURAL HAZARDS**																																		
9.1.1	Seismic		None	-						20.0%																									
9.1.2	Flood Zone		None	-						20.0%																									
9.1.3	Wind Zone		None	-						20.0%																									
9.2	Suspect Mold & Moisture		None	-						20.0%																									
												ANNUAL RECOMMENDATIONS, UNINFLATED			17,748	381,336	74,305	20,106			71,784	831,501	30,411	339,336	2,050		414,782	2,611	14,966			554,871	19,545	**$2,775,352**
												INFLATION FACTOR, IN PERCENTAGE 1.030	100.00%	103.00%	106.09%	109.27%	112.55%	115.93%	119.41%	122.99%	126.68%	130.48%	134.39%	138.42%	142.58%	146.85%	151.26%	155.80%	160.47%	165.28%	170.24%	175.35%	
												ANNUAL RECOMMENDATIONS, INFLATED @ 3.00% AFTER YEAR ONE		**$18,280**	**$404,559**	**$78,830**	**$21,330**			**$76,155**	**$882,139**	**$32,263**	**$360,002**	**$2,175**		**$609,122**	**$3,949**	**$23,317**			**$944,631**	**$34,273**	**$3,491,026**

Note:
Priority 1: Current Critical
Priority 2: Potential Critical
Priority 3: Recommended
Priority 4: Non-Compliant with current standards

PRESENT VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR **$0.97**

INFLATED VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR ***$1.22***

1.0 PURPOSE & LIMITATIONS

The exclusive purpose of this *Capital Needs Assessment* (the *Report*) is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools*, in its Due Diligence effort in evaluating the Property. Amendments to EBI's limitations as stated herein that may occur after issuance of the Re*port* are considered to be included in this *Report. EBI's* liability to the client wishing to use this *Report* is limited to the cost of the *Report*. By accepting draft and final Reports, *Marblehead Public Schools* agrees to these terms and limitations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, easily accessible or made accessible by the property contact and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property. Municipal information was obtained through file reviews of reasonably ascertainable standard government record sources, and interviews with the authorities having jurisdiction over the property. Findings, conclusions and recommendations included in the *Report* are based on our visual observations in the field, the municipal information reasonably obtained, information provided by the Client, and/or a review of readily available and supplied drawings and documents. No disassembly of systems or building components or physical or invasive testing was performed. EBI renders no opinion as to the property condition at un-surveyed and/or inaccessible portions of the Subject Property. EBI relies completely on the information provided during the site survey or provided or obtained during the writing of the draft *Report*, whether written, graphic or verbal, provided by the property contact, owner or agent, or municipal source, or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. EBI assumes no responsibility for property information or prior reports withheld or not provided during preparation of the *Report* for any reason whatsoever. The observations in this *Report* are valid on the date of the survey. EBI uses the date of first occupancy to establish the Subject Property age.

The contents of the *Report* may not represent a detailed analysis by individual consultants of the Subject Property façades, roof, paving, mechanical, electric, plumbing, elevator, sprinkler, or fire and life safety systems depending on the scope of work selected by *Marblehead Public Schools.* The extent of the physical survey for the production of this Report has been limited, by contract and agreed upon Scope of Work, (consistent with the guidelines of the ASTM E 2018 – 15 Scope of Work, as referenced below) to visual observations and a walk through of the property. Assumptions regarding the overall condition of the property have been developed based upon a survey of representative areas of the Subject Property. As such, no representation of *all* aspects of *all* areas or components is made.

Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at the Subject Property. Routine, normal or customary annual maintenance or preventative maintenance items are not reported or included in this *Report*.

Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Short Term Repair, and/or that can't be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

This assessment is based on the evaluator's opinion of the physical condition of the improvements and the estimated expected remaining useful life of those improvements, based on his observations in the field at the time of the survey, and the written or verbal information received. The conclusions presented are based on the evaluator's professional judgment. The actual performance of individual components or systems may vary from a reasonably expected standard and may be affected by circumstances that are not readily ascertainable or viewable, or that occur after the date of the survey.

Where quantities cannot be determined from information provided or physical takeoffs, lump sum estimates or allowances are used. The costs shown are based on professional judgment and the apparent or actual extent of the observed defect, including the cost to design, procure, construct and manage the repair or replacement. Where property-unique or specialty equipment is present, EBI relies solely on data regarding maintenance and/or replacement costs provided by the designated site contact or on-site individuals with first-hand knowledge of the specific equipment.

EBI provides Pre-Survey Questionnaires for completion by the designated site or property contact, as provided by *Marblehead Public Schools* or their agent. The information requested in the questionnaire assists in our research of the Subject Property to obtain pertinent property data, discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs, and pending repairs and improvements. If the completed Pre-Survey Questionnaire is not returned as of this *Report*, this is a limiting factor in our analysis. If the questionnaire is returned at a later date showing a material difference from information provided in the Report, we will forward the questionnaire to you under separate cover. If no response is received, or no material difference is noted in the questionnaire, our Report will not be modified.

EBI may not have been provided with roof design or installation details and may not have been provided with warranty information (see Section 3.4). EBI has relied on general industry performance of similar type roofs and general observations of the surface covering of the roof to determine if roof replacement is warranted during the analysis term. EBI is not responsible for roof failure that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

EBI may not have been provided with façade reports and cannot opine on costs to repair façades of buildings five stories or more without receipt of current façade reports (see *Section 3.3*). EBI has relied on general industry performance of similar façade systems and general observations of the surfaces of the façades to determine if repair or replacement is warranted during the analysis term. EBI is not responsible for façade failures that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

If the municipality in which the Subject Property is located has governing ordinances requiring façade studies, and a copy is not provided to EBI, this is a limiting factor in our assessment and analysis. Prudent property management will have had façade reports completed on their high-rise property, and if a copy of the report is not provided to EBI, this too, is a limiting factor in our assessment and analysis.

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The gathering of data and information for this *Report* was completed in general conformance with ASTM E 2018 – 15 Standard Guide for Property Condition Assessment: Property Condition Assessment Process, and with the scope of services approved by the client.

The survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. The level of care and skill exercised is also commensurate with the fees charged for EBI's services. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The *Report* speaks only as of its date, in the absence of a specific written update of the *Report*, signed and delivered by EBI.

Limiting factors

Any additional information that becomes available after *EBI's* survey and draft submission concerning the Subject Property should be provided to *EBI* so that *EBI's* conclusions may be revised and modified, if necessary, at additional cost. This *Report* has been prepared in accordance with *EBI's Standard Conditions for Engagement*, which is an integral part of this *Report.*

DEVIATIONS FROM THE GUIDE

EBI includes an analysis of estimated Capital Needs in this *Report*. *EBI* uses an approximate threshold of $1,000 in aggregate for reporting Critical & Non-Critical Repair or Replacement Reserve items. Material life, safety, health, fire or building code violation or building or property stabilization issues observed at the Subject Property will be reported regardless of cost.

CONDITION

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

Excellent	The component or system is in new or like new condition and no deferred maintenance is recommended.
Good	The component or system is sound and performing its function, and/or scheduled maintenance can be accomplished through routine maintenance. 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 at a capacity that is considered to be acceptably sufficient but may be obsolete or is approaching the end of its expected useful life. The component or system may exhibit evidence of deferred maintenance, previous repairs, or workmanship not in compliance with commonly accepted standards. Repair or replacement may be recommended in the near-term of the loan to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its expected useful life.
Poor	The component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its typical expected useful life, excessive deferred maintenance or state of disrepair. Present condition could contribute to, or cause, the deterioration of other adjoining elements or systems. Repair or replacement is recommended.

ABBREVIATIONS

EBI may use various abbreviations to describe various site, building or system components or legal descriptions. Not all abbreviations may be applicable to all *Reports.* The abbreviations most often utilized are defined below.

ACT	Acoustic Ceiling Tile
ABS	Acrylonitrile-Butadiene-Styrene
ADA	Americans with Disabilities Act
AHU	Air Handling Unit
APA	American Plywood Association
BTU	British Thermal Unit (a measurement of heat)
BTUH	British Thermal Units per Hour
BUR	Built Up Roof
CFM	Cubic Feet per Minute
CMU	Concrete Masonry Unit
CPVC	Chlorinated Poly Vinyl Chloride
DWH	Domestic Water Heater
EIFS	Exterior Insulating Finishing System
EPDM	Ethylene Propylene Diene Monomer
EUL	Expected Useful Life, Effective Useful Life
FF&E	Furniture, Fixtures & Equipment
FCU	Fan Coil Unit
HCP	Handicapped Person
FEMA	Federal Emergency Management Agency
FHA	Forced Hot Air
FHW	Forced Hot Water
FIRM	Flood Insurance Rate Map
FOIA	Freedom Of Information Act
FOIA	Freedom Of Information Act
FRT	Fire retardant treated plywood
GFI	Ground Fault Interrupt (circuit)
GWB	Gypsum Wall Board
HCP	Handicapped Person
HID	High Intensity Discharge (lighting)
HVAC	Heating, Ventilating and Air Conditioning
KW	Kilowatt
KVA	Kilovolt Ampere
MBH	Thousand BTUs per Hour
MDP	Main Distribution Panel
OSB	Oriented Strand Board
PEX	Polyethylene Cross-Linked Tubing
PTAC	Packaged Terminal Air Conditioning (Unit)
PVC	Poly Vinyl Chloride
RTU	Roof Top Unit
RUL	Remaining Useful Life
TPO	Thermoplastic polyolefin
SEER	Seasonal Energy Efficiency Rating
UBC	Uniform Building Code
VAV	Variable Air Volume box
VCT	Vinyl Composition Tile
VWC	Vinyl Wall Covering

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2.0 SITE

2.1 TOPOGRAPHY & DRAINAGE

DESCRIPTION

The Subject Property is located at an elevation of approximately 70 feet above mean sea level (msl). The topography of the Subject Property is tiered and slopes up towards the football field and track to the north. The Subject Property building is located in a relatively flat area, and the general slope of the surrounding region is down to the south (see Topo Map below).



Topographic Map

	
Topography along the east property line, looking northeast	Topography at the main entrance of the school, looking north
	
East topography, looking south	South topography, looking east

OBSERVATIONS

No topography problems were reported or observed. Slopes pitching drainage away from the building appear to be adequate. Detriments or problems such as ground fractures, settlement areas, or evidence of erosion or chronically standing water were not observed. Slopes within parking areas appeared to be adequate for storm water control.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.2 LANDSCAPING & SITE IMPROVEMENTS

DESCRIPTION

The property has municipally-owned, extensive, mature landscaping at the front of the site, the entrances to the property, around the buildings, and in islands throughout the parking areas. Landscaping includes deciduous and evergreen trees, shrubs, ground cover, and lawns.

An automatic irrigation system is present in the landscaped areas. Irrigation controllers are located in sub-surface utility boxes.

Pylon signage is located at the main entrances and smaller signage is located at the secondary entrances. The pylon signs are supported by wood posts.

Cast-in-place concrete and asphalt sidewalks are provided for pedestrian traffic. The concrete sidewalks are assumed be approximately 4-inches in thickness and with steel reinforcement.

Lighting is provided by pole-mounted fixtures on aluminum poles, approximately 20 feet in height and spaced around the site, parking areas, and along the main entrance drive. Building-mounted lights provide exterior building lighting at the rear of the building and along pedestrian walkways, and soffit-mounted lights are located at the entrances.

The Subject Property has chain link fencing along he fields and playground areas.



Landscaping and concrete sidewalk at front entrance



Landscaping and signage at front entrance

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Signage at front entrance	Representative lighting and asphalt sidewalk
	
Soffit lighting at front entrance	Representative chain link fence east of the building

OBSERVATIONS

The property landscaping appears to be in good condition, although some areas show signs of distress due to typical winter conditions.

The irrigation system appears to be in good condition. Landscape maintenance is handled by the municipality as part of routine maintenance.

The pylon signs at the main entrance are in good overall condition. The wood sign was observed with some areas of worn staining. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for refurbishment during the analysis term.

The sidewalks appear to be in good condition with no observed areas of deterioration or trip hazards. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for routine sidewalk repairs during the analysis term.

The parking area lighting and exterior light fixtures appear to be in good condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for exterior light fixture replacement during the analysis term.

The fencing between the school building and the fields have some broken portions at the football field and the south end of the soccer fields. Based on observed and reported conditions, Critical Repairs are recommended for damaged fencing replacement. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for fencing repairs during the analysis term.



Worn staining on front entrance sign



Broken chain link fence at football field



Broken chain link fence at soccer field



Broken chain link fence at soccer field

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Repair fencing**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Repair concrete sidewalks**
- **Repair asphalt sidewalks**
- **Refurbishment of pylon signs**
- **Replacement of parking area poles and lighting**
- **Repair fencing**

2.3 PAVEMENT AND PARKING

DESCRIPTION

According to a count in the field, the property is improved with parking areas for 104 cars, including 5 accessible spaces. See *Section 3.6 Americans with Disabilities Act Accessibility Guidelines (ADAAG)* for additional accessible parking information for people with physical disabilities.

The property has approximately 2,200 feet of drive lanes and roadways running through the site, and the parking is laid out along these drive lanes. The parking is configured in areas along the front, east, and north of the building.

Four entry drives provide access to the Subject Property from the adjacent road frontages.

The parking areas have asphalt pavement, and the loading areas also have asphalt pavement.

The parking area has precast concrete curbing.



Parking looking south



Pavement and parking at front (south) entrance

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Representative accessible parking	Representative curbing

OBSERVATIONS

No problems were reported regarding the adequacy of the parking areas.

The asphalt paved areas are in good to fair condition. Minor cracking, settlement, alligator cracking in the pavement were noted in a few locations. Based on observed and reported conditions, Non-Critical Repairs are recommended for patching, crack sealing, sealing, and striping of the asphalt pavement.

Based on its reported age, current condition, and expected useful life, Capital Needs are recommended asphalt overlay, during the analysis term.

The parking area sealant and striping is in good condition, with indications of average wear. The facilities representatives noted that striping was completed within the past year. Based on the observed condition of the parking and drive areas and the average effective useful life of pavement and pavement sealants and striping, the application of sealants and striping of the parking and/or lane markings are recommended as Capital Needs during the analysis term.

The curbs are in good condition. The curbs will be maintained at the property as part of operational expenses during the analysis term.

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Cracking in asphalt pavement at the front entrance	Cracking in the asphalt pavement along the east side of the building

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Patching, crack sealing, sealing, and striping of asphalt pavement**

Please see Table 2 for the recommended Capital Needs listed below:

- **Asphalt overlay**
- **Patching, crack sealing, sealing, and striping of asphalt pavement**

2.4 SITE AMENITIES

DESCRIPTION

A field house with corrugated metal siding and a metal roof is situated at the north of the site, adjacent to the football field.

To the east of the school building is a playground and sport court.

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Field house	Playground
	
Playground	Sport court adjacent to playground

OBSERVATIONS

The field house wasn't accessible during our site visit. The facilities staff noted it contains showers and toilets and they winterize the building each year. They noted the building is overall worn and due for renovation. Based on the reported age, current condition, and expected useful life, building refurbishment is recommended as a Capital Need during the reserve term.

The sport court appears to be in good condition. Based on the reported age, current condition, and expected useful life, sport court resurfacing and repainting is recommended as a Capital Need during the reserve term.

The playground equipment appears to be in good condition. Based on the reported age, current condition, and expected useful life, playground equipment and loose surfacing replacement is recommended as a Capital Need during the reserve term.

RECOMMENDATIONS

Please see Table 1 for the recommended Immediate Repairs listed below:

- **None**

Please see Table 1 for the recommended Short Term Repairs listed below:

- **None**

Please see Table 2 for the recommended Replacement Reserves listed below:

- **Field house refurbishment**
- **Sport court resurfacing**
- **Playground equipment replacement**
- **Playground loose surfacing replacement**

2.5 UTILITIES

2.5.1 Water & Sewer

DESCRIPTION

Town of Marblehead water and sewer department provides water and sewer service to the Subject Property site. The sewer is discharged into the municipal lines beneath the abutting street.

2.5.2 Gas/Oil

DESCRIPTION

National Grid provides propane service to the Subject Property. No oil service is provided to the Subject Property.

2.5.3 Electrical

DESCRIPTION

Marblehead Municipal Light Department (MMLD) provides electric service to the site. The service enters the property overhead from a pole at the front of the site, then runs underground to a pad-mounted transformer feeding secondary runs to the main switchgear. The utility reportedly owns and maintains the lines up to the transformers. The secondary feeds to the switchgear are the responsibility of the Subject Property owner.

2.5.4 Storm Drainage

DESCRIPTION

The storm water flow from the site is controlled via on-site structures discharging into the municipal system. The building's internal roof drains are tied to catch basins in the Subject Property parking areas. The parking lots are configured with slopes toward curbs and catch basins controlling storm water flow. The drainage system is the responsibility of the Subject Property owner.

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Incoming water service	Incoming gas service
	
Main distribution panel	Representative electrical equipment

OBSERVATIONS

There were no reported or observed problems with the Subject Property water, sewer, gas, electric, or storm water drainage systems. The utilities appeared to be configured and operating in a manner consistent with their intended use and reportedly adequate to meet the needs of the Subject Property.

There is one pad-mounted electrical transformers on site. The on-site contact stated that they are reportedly owned and maintained by the utility company.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.0 STRUCTURE

3.1 GENERAL INFORMATION

Design information was not obtained or provided to *EBI* for review.

3.2 SUBSTRUCTURE

DESCRIPTION

The majority of the Subject Property substructure was not visible due to the surrounding grade. Construction documents were not available for our review. Based on our visual survey the property appears to have cast-in-place, reinforced concrete foundations supporting the exterior walls and load bearing interior walls and/or columns.

Concrete slabs-on-grade of underdetermined thickness are provided throughout the building. The design and construction of the foundation footings is intended to properly spread out the building's vertical loads without exceeding the bearing capacity of the underlying soil.

The concrete floor slabs are typically reinforced with welded wire mesh or steel reinforcement bars or fiber mesh for added flexural strength and to minimize cracking. The concrete slabs are generally constructed over a compacted gravel or sand base and vapor barrier to aid in preventing water migration from the bearing soil to the slab.

In cold climates the footings are constructed below the prescribed frost level to minimize movement due to freeze-thaw conditions. Varying sizes of steel reinforcing bars typically exist in the foundation walls and footings for tensile and bending strength.

In cold climates the slabs and/or foundation walls are often insulated around the perimeter of the building. Foundation walls servings as retaining walls for basement areas of the building generally are constructed with waterproofing and drainage systems to prevent moisture infiltration.



Representative slab on grade



Crawl space with concrete pier foundation elements

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OBSERVATIONS

The majority of the Subject Property substructure was not visible due to the surrounding grade. The substructure appears to be sound and in good condition. No indications of problems with the substructure were reported or observed. Unless visible, EBI's assessment of substructure condition is primarily based on obvious irregularities with the superstructures (including limited observations of exterior and interior construction and finishes) and the condition of the slab-on-grade when present. The condition of substructure hidden construction elements, or defects not readily observable, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the substructures appear to be in good overall condition and are performing as designed. No obvious indications of irregularities, including differential settlement, sloped floors, significant cracks, out-of-plumb building elevations, or other perceived movement, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.3 SUPERSTRUCTURE

DESCRIPTION

Based on *EBI's* visual survey and experience with similar structures, and review of available construction drawings the Subject Property's superstructure consists of steel framing.

Primary load-bearing members consist of steel columns and steel girders supporting steel floor and roof beams. Typical column spacing is approximately 25 lineal feet on center. Upper floor structures consist of concrete on steel decking or concrete planks. The roof structure likely consists of rigid insulation on concrete decking, supported by steel beams. Lateral resistance is provided by a combination of floor and roof diaphragms, and interior and exterior braced walls.

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Steel framing connection at the roof hatch	Roof framing in the boiler room

OBSERVATIONS

The superstructures are partially obscured from view by interior and exterior finishes. Unless visible, EBI's assessment of superstructure condition is predominantly based on obvious irregularities with exterior and interior construction and finishes. Concealed and/or obscured structural systems or connections were not viewed. The condition of the hidden structural defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the superstructures appear to be in good overall condition and appear to be performing as designed. No obvious indications of irregularities, including significant floor and/or roof deflections, significant cracks, noticeably out-of-plumb building elevations, or other perceived structural defects, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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4.0 BUILDING ENVELOPE

4.1 ROOFING

DESCRIPTION

During the site survey, the roof was accessed through a roof hatch and surface-mounted ladder located in a utility room and representative areas of the roof was observed. *EBI* was not provided with roof design or installation details and was not provided with warranty information. Reportedly, no warranty is in place is in place on the Subject Property roof.

The Subject Property has a low-slope, fully-adhered, TPO-membrane roof. Low-slope roof membranes terminate at vertical interfaces (equipment platforms, parapets and/or facades) with metal or membrane flashings. Roof penetrations are typically flashed with TPO-membrane.

Roof slope and crickets direct rainwater to internal perimeter roof drains and leaders.

Rooftop features include dedicated roof hatches, mechanical penthouses, curb-mounted HVAC units and equipment, electrical conduit, traction pads, natural gas pipe and exhaust penetrations.



Representative roof looking east



Representative roof drain



Representative curb mounted HVAC unit



Representative roof looking north with guards



Representative metal flashing at edge



Representative flashed penetration

OBSERVATIONS

In estimating the condition and effective useful life of roofs, *EBI* has relied on general industry performance of similar type roofs and general observations of the surface covering to determine if replacement is warranted during the analysis term. Discussions with facilities regarding the roof's condition revealed no negative comments.

During our site visit the majority of the roof was covered with snow, making observations limited. From what we were able to see, the TPO roof appears to be in good condition. The roof is a replacement and approximately 11 years old. Roofs of this type typically have an average effective useful life of approximately 20 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. The roof maintenance consists of mastic touchup and re-coating of seams and roof penetrations every two to three years. Based on the reported age, current condition, and expected useful life, roof replacement is recommended as a Capital Need during the analysis term.

Evidence of past roof leaks in the form of stained ceiling tiles were observed during the survey in the main corridor. The facilities team noted past leaks have been repaired.

The slope and drainage design of each building roof appeared to be generally adequate.

Based on observed and reported conditions Non-Critical Repairs are recommended for implementation of a roof preventative maintenance practice program (PMP). The PMP should include routine roof walks, seasonal gutter cleanouts, roof drain cleaning, routine tree trimming around the roof and other best management practices.

The roof hatch is accessed from an internal ladder in a utility space and appears to be in good condition.

The condensation drain lines for roof top HVAC units discharges directly onto the roof membrane at most units. This condition can lead to advanced degradation of the roof surface at these locations. Based on the observed conditions, Non Critical Repairs are recommended to extend the condensation drain line discharge to a roof drain.



RTU without condensation line to drain



RTU without condensation line to drain

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Extend condensation drain line at roof top units**
- **Ongoing roof repairs & maintenance, before roof replacement**

Please see Table 2 – Capital Needs for the recommended items listed below:

- **TPO roof replacement**

4.2 FAÇADES

DESCRIPTION

Primary exterior materials consist of red brick veneer. The façades have concrete bands oriented vertically and horizontally throughout as an architectural feature. Punched and ribbon windows are located throughout each façade. The front entrance is enhanced with a large canopy. The front façade additionally includes a large mural and concrete clock incorporated into the façade

<table>
<tr><td> 
</td><td>  </td></tr>
<tr><td>Front entrance</td><td>Front entrance, looking north</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Representative east façade at the three-story wing</td><td>Representative north façade of the one-story wing</td></tr>
</table>

OBSERVATIONS

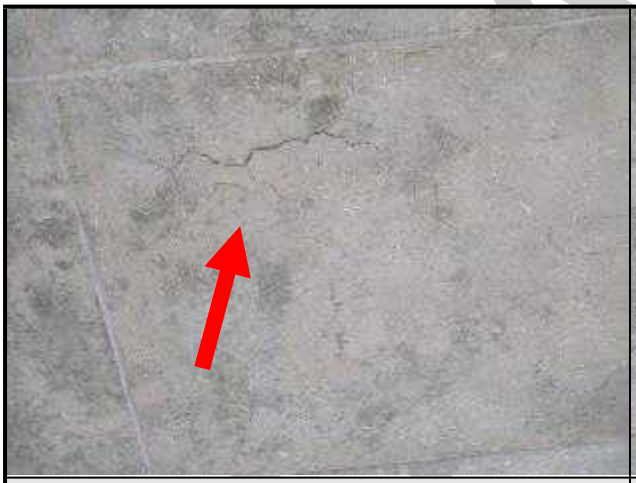
The estimate of the façade condition is based on limited observation of representative observed areas of the exterior walls and the age of the improvements. Façade observations for a multi-story building are limited to exterior finishes of the ground level façades and those portions of the façades observable from adjacent roof areas or adjacent buildings. This does not represent a comprehensive or in-depth façade survey. Therefore, observations in this *Report* cannot be the sole source of façade analysis.

Concealed and/or obscured façade material attachment systems were not viewed. hidden defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this assessment.

The observed areas of the brick and concrete veneer appear to be in good overall condition. Based on the age and the condition of the brick masonry exterior walls, it is recommended that a dedicated repair program be instituted for anticipated degradation of the mortar joints and overall exterior wall performance. Walls should be routinely checked for fractured, spalling, or missing mortar joints, and cleaning or tuck pointing of the brick and joints should be performed where necessary as part of routine maintenance.

The observed sealants along the control and panel joints appear to be in good condition overall. Based on the reported age, current condition, and expected useful life, sealant and control joint renewal is recommended as a Capital Need during the analysis term.

The entrance canopy appears to be in good to fair condition. The underside consists of concrete that appears delaminated in several areas. Some sections appear to be loose and are falling hazards for pedestrians underneath. Based on observed and reported conditions, removing delaminated concrete is recommended as a Critical Repair.



Delaminated concrete at front entrance canopy ceiling



Delaminated concrete at front entrance canopy ceiling

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Remove delaminated concrete at entrance canopy**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Control joint sealant renewal**

4.3 WINDOWS AND DOORS

DESCRIPTION

Aluminum-framed fixed and hopper windows with insulated glazing are located along all elevations of the building and on each floor level.

The exterior doors consist of average-quality, commercial-grade, dual-leaf, aluminum, and glass doors accessing the lobby areas. Secondary entrances and service doors are dual-leaf aluminum and glass units. Service and access doors are metal. The doors are furnished with standard hardware, and panic hardware was observed at emergency exit doors. The loading dock has electrically-operated, sectional doors.



Representative windows and service door at front façade



Representative window gasket



Representative windows at the three-story wing



Representative ribbon windows at the north façade of the one-story wing

	
Student entrance at the east façade	Loading area with sectional roll-up door

OBSERVATIONS

Aside from normal wear, the observed doors appear to be in good condition. Based on the reported age, current condition, and expected useful life, sealant renewal around doors is recommended as a Capital Need during the analysis term.

Aside from normal wear, the observed garage doors appear to be in good condition. Based on the reported age, current condition, and expected useful life, garage door replacement is recommended as a Capital Need during the analysis term.

The observed windows appeared to be weather-tight and in good overall condition. Facilities noted that windows were replaced in the 2010 building renovation. Based on the reported age, current condition, and expected useful life, sealant renewal around the windows is recommended as a Capital Need during the analysis term. Additionally, based on the reported age, current condition, and expected useful life, window replacement is recommended as a Capital Need during the analysis term.

The observed storefront entry systems appeared to be weather-tight and in good overall condition.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Renewal of the sealants around the windows and doors**
- **Garage door replacement**
- **Window replacement**

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5.0 BUILDING INTERIORS

5.1 BASEMENTS/ATTICS/PENTHOUSES

DESCRIPTION

The Subject Property has a partial, unfinished basement and crawl space. The basement is located in the south portion of the building and used for storage and mechanical purposes. The basement is accessed by one stair

No attic spaces are present at the property.



Basement looking south



Crawl space

OBSERVATIONS

There were no reported or observed problems with the Subject Property basements.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

5.2 INTERIOR FINISHES & COMPONENTS

DESCRIPTION

The interior areas into which entry was made possible by the site contact are finished with average quality materials consistent with similar property use types. The finishes generally consist of the materials listed in the table below.

TYPICAL INTERIOR FINISHES

AREA OR ROOM	FLOOR	WALLS	CEILING
Lobby	Vinyl tile	Painted GWB	Suspended acoustic tile
Administrative offices	Carpet / Vinyl tile	Painted GWB	Suspended acoustic tile
Corridors	Vinyl tile	Painted GWB, Brick	Suspended acoustic tile
Auditorium	Carpet	Painted GWB, Wood paneling	Suspended acoustic tile
Classrooms	Vinyl tile	Painted GWB	Suspended acoustic tile
Cafeteria	Vinyl tile	Painted GWB	Suspended acoustic tile
Kitchen	Vinyl & ceramic tile	Painted GWB, Ceramic tile	Suspended acoustic tile
Restrooms	Ceramic mosaic tile	Ceramic tile, painted GWB	Suspended acoustic tile
Stairs	Rubber floor tile	Painted GWB, Brick	Exposed stair structure

The lobby area of the building has vinyl tile, painted GWB walls, and suspended acoustic tile ceilings. Classrooms and cafeteria spaces typically include vinyl tile floors, painted GWB walls, and acoustic tile ceilings. Corridor walls include some exposed brick walls.

The cafeteria and kitchen are located at the rear (north) end of the building. The cafeteria is provided with vinyl tile floors and the kitchen is provided with some ceramic tile floors. Kitchen equipment includes gas ranges, warming ovens, food preparation tables and mixing centers, refrigerators, walk-in coolers, commercial dishwasher, and associated equipment.

Stairways are included in the three-story wind in the rear (north). Stairs are constructed with steel stringers and steel pipe railings. The treads and risers are rubber tile.



Lobby



Representative corridor

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Auditorium	Representative classroom
	
Cafeteria	Kitchen
	
Representative bathroom	Stairway

OBSERVATIONS

A representative sampling of the elementary school areas were surveyed. The interior spaces are in good overall condition. Stained ceiling tiles were observed in the east entrance vestibule. See Section 4.1 for further details. Based on the observed conditions, Non-Critical Repairs are recommended for replacement of all stained ceiling tiles.

The corridors were generally in good condition. There was one observed area of broken vinyl tile at the threshold of the east entrance. Based on the observed conditions, Non-Critical Repairs are recommended to replace the deteriorated vinyl floor tile. Based on their reported age and estimated remaining useful life and current condition, corridor refurbishment, including painting the walls and trim, and flooring replacement is recommended as a Critical Need item.

The administrative offices, auditorium, and classrooms were all found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The kitchen finishes were found to be in good condition. Based on their reported age and estimated remaining useful life and current condition, kitchen refurbishment is recommended as a Capital Need during the analysis term.

The observed restroom finishes were found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The interior stairs and stair finishes appear to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

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Stained ceiling tile at east entrance



Cracked vinyl tile at east entrance threshold

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Term Repairs listed below:

- **Replace stained acoustical ceiling tiles**
- **Repair vinyl flooring**

Please see Table 2 for the recommended Capital Needs listed below:

- **Corridor refurbishment**
- **Kitchen refurbishment**

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6.0 ACCESSIBILITY

DESCRIPTION

The *Americans with Disabilities Act (ADA)*, *Title III*, *28 CFR Part 36*, enacted July 26, 1990 and effective January 26, 1992, governs public accommodation and commercial properties. *Title III* of the *ADA* divides facilities into two basic categories: places of *public accommodation* and *commercial facilities*, with different obligations for each facility type. The provisions of *Title III* provide that persons with disabilities should have accommodations and access to public facilities that are equal, or similar, to those available to the general public. Assessment of any other *Titles*, or their provisions of the *ADA*, including those that govern employer and/or tenant responsibilities, is specifically excluded from this Scope of Work and *Report*. Since tenants and employers at properties are usually responsible for making their leased areas *ADAAG*-compliant, assessment for *ADAAG* compliance in these areas was not completed.

Regardless of a property's age, these areas and facilities must be maintained and operated to comply with the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)*. Facilities initially occupied after the effective date are required to fully comply with the *ADAAG*. Existing facilities constructed prior to this date are held to the lesser standard of compliance as *Title III* calls for owners of buildings occupied prior to the effective date to expend "reasonable" sums, and make "reasonable efforts", to make "practicable" or "readily achievable" modifications to remove barriers, unless said modification would create an undue financial burden on the property or is structurally infeasible. When renovating buildings occupied prior to the effective date, the area renovated, and the path of travel accessing the renovated area, must comply with the *ADAAG*. As an alternative, a *reasonable accommodation* pertaining to the deficiency must be made. The definitions of "reasonable," "reasonable efforts," "practicable." and "readily achievable," are site dependent and vary based on the owner's financial status.

Due to the unique nature of each property, the extent of analysis required, and the many variables of compliance with the *ADAAG* guidelines, the evaluation of costs for full *ADAAG* compliance is beyond the scope of this *Report*. A separate *ADAAG Compliance Audit* may be ordered and may reveal aspects of the property that are not in compliance.

For the purposes of this *Report* the survey is limited to visual observations of only a representative sample of areas readily observable or easily accessible, and to those areas set forth in *EBI's Modified Accessibility Compliance Checklist and Costs* included in Appendix C of this *Report*. The survey is limited to identifying potential routine maintenance or renovation actions that can increase accessibility over time and may or may not, achieve full *ADAAG* compliance. Places of *public accommodation* at the Subject Property were visually observed for general compliance with the major requirements of the ADA, taking into consideration the current use of the property, its age and renovation history. No actual measurements were taken to verify compliance.

Questions concerning the *ADA* and the *ADAAG* may be addressed to the *United States Department of Justice (USDOJ) ADA Hotline* at (800) 514-0301 followed by touching "7" on the touch tone keypad. Additional information is available online at the ADA.gov website.

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Accessible parking



Van accessible sign



Curb cut at sidewalk



Handicap bathroom stall

OBSERVATIONS

The Subject Property falls into the *public accommodation* category. Therefore, the Americans with Disabilities Act (ADA), Title III, 28 CFR Part 36, is applicable.

A visual review of the property completed in conformance with *EBI's Modified Accessibility Compliance Checklist and Costs*, identified issues of non-compliance with the *ADAAG.* Modifications to correct observed *ADAAG* deficiencies for the Subject Property and their associated estimated costs are detailed in *EBI's Modified Accessibility Compliance Checklist and Costs* immediately following.

Modifications to correct observed *ADA* deficiencies for the Subject Property and their associated estimated cost are beyond the scope of this assessment. The client should engage an accessibility specialist to determine what modifications, if necessary, are required to bring the property into compliance with *ADA* guidelines.

	
Toilet provided with only one grab bar	Toilet provided with only one grab bar

RECOMMENDATIONS

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Complete ADA compliance upgrades**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Village School
Facility Address: 93 Village St
Marblehead, Massachusetts
Property Age: 66 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

A. SCOPE OF THE ASSESSMENT

1.0 ADA - Parking and Exterior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
1.1	Does there appear to be sufficient handicapped-accessible parking spaces with respect to the total number of reported spaces?	✔			ADA 208.2						
1.2	At least on in every six accessible spaces is required requred to be van-accessible.	✔			ADA 208.2.4						
1.3	Are accessible car parking spaces 96 inches wide minimum? (Measure from the centerline of the markings.) (NOTE: In Florida accessible spaces must be 144 inches wide minimum)	✔			ADA 502.2						
1.4	Are accessible van parking spaces 132 inches wide minimum? (Exception: Van parking spaces can be 96 inches wide minimum when the access aisle is 96 inches wide minimum.) (Measure from the centerline of the markings.)	✔			ADA 502.2						
1.5	Are there access aisles adjacent to each accessible space, and if present, are they at least 60 inches wide? (Two spaces may share an access aisle that is between them. Exception: Angled van accessible parking spaces must have the access aisle on the passenger side of the accessible space.)	✔			ADA 502.3						
1.6	Do the access aisles adjoin an accessible route? (NOTE: Compliant curb ramps present at head of access aisle, or access aisles flush with sidwalks.)	✔			ADA 502.3						
1.7	Do the **existing** ADA spaces appear to be marked with the International Symbol of Accessibility on a vertically-mounted sign?	✔			ADA 502.6						
1.8	Do the **existing** van-accessible spaces appear to be marked with a sign reading "Van-Accessible"?	✔			ADA 502.6						
1.9	Is the bottom edge of the ISA sign at least 60 inches above the finish grade of the parking space? (NOTE: "VAN ACCESSIBLE" sign can be lower than 60 inches.)	✔			ADA 502.6						
1.10	Are the clear widths of the walking surface of the accessible routes 36 inches minimum?	✔			ADA 403.5.1						
1.11	Are accessible routes free from barriers, such as stairs, steps, or vertical changes greater than 1/4"? (NOTE: a vertical change up to 1/2" is allowable if beveled with a slope no steeper than 1:2. This does not include ramps.)	✔			ADA 303.2, 303.3						
1.12	Do all protruding objects located between 27 inches above the floor and 80 inches above the floor protrude no greater than 4 inches into the circulation path if they do not have protection via a guardrail or other barrier with a bottom edge 27 inches above finish grade?	✔			ADA 307.2						
1.113	Is the clear opening width of the accessible entrance door at least 32", between the face of the door and the stop, when door is open 90 degrees?	✔			ADA 404.2.3						
1.14	Is the door hardware on exterior access doors to *areas of public accommodation* operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 402.7						
1.15	At accessible entrances, is the door threshold height less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
1.16	Does the accessible route feature a stable, firm, and slip-resistant walking surface?	✔			ADA 502.4						
1.17	If not all entrances are accessible, is there a sign at the accessible entrance with the International Symbol of Accessibility?			✔	ADA 216.6						
1.18	Do all ramps on accessible pathways serving *areas of public accommodation* (including curb ramps) appear to have a slope not exceeding 1:12?	✔			ADA 405.2						
1.19	Do depressed curb ramps on accessible pathways serving *areas of public accommodation* have flared sides with a slope not exceeding 1:10?	✔			ADA 406.3						
1.20	If a ramp has a rise higher than 6", are there handrails on both sides?			✔	ADA 405.8						
1.21	Does the width between railings for ramps on accessible pathways serving *areas of public accommodation* appear to be at least 36 inches?			✔	ADA 405.5						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Village School
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1.22	Is there a level landing at least 60" x 60" at the top and bottom of each ramp run?	✔			ADA 405.7						
2.0 ADA - Interior Accessible Routes		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
2.1	Are all accessible routes at least 36" wide (32" wide through doorways)?	✔			ADA 403.5.1						
2.2	Do floor surfaces appear to be firm, stable, and slip resistant ?	✔			ADA 40.2, 302.1						
2.3	If carpeting is present, is it securely fastened, with a maximum pile height of 1/2 inch?	✔			ADA 302.2						
2.4	Do all objects on circulation paths through public areas, e.g. fire extinguishers, drinking fountains, signs, etc, protrude no more than 4" into the path, **or** if object protrudes more than 4", is the bottom leading edge at 27 inches or lower above the floor, or 80 inches or higher above the floor?	✔			ADA 307.4						
2.5	Is the door hardware on interior doors serving areas of public accommodation operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
2.6	Are the door threshold heights less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
2.7	**For elevators in areas of public accommodation only:** Is the interior at least 54" deep by at least 36" wide?	✔			ADA 407.4.1						
2.8	**For elevators in areas of public accommodation only:** Are in-car controls no less than 15" and no greater than 48" above the floor, **or** up to 54 inches above the floor for a parallel approach?	✔			ADA 408.4.6, 407.6.1						
2.9	**For elevators in areas of public accommodation only:** Do elevator control buttons appear to be designated by both Braille and by raised standard alphabet characters (mounted to the left of the button)?	✔			ADA 407.4.1.1, 703.2						
2.10	**For elevators in areas of public accommodation only:** Are there audible signals which sound as the car passes or is about to stop at a floor?	✔			ADA 407.4.8						
2.11	**For elevators in areas of public accommodation only: I**s there a two-way emergency communication system within the elevator cab that is push-button activated, and does it providevisual indication that a rescue is on the way?	✔			ADA 407.4.9, 308						
3.0 ADA - Public Restrooms		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
3.1	Is the door hardware on accessible restroom doors operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
3.2	Do accessible restroom entry doors have a 32" minimum clear width when the door is opened 90 degrees?	✔			ADA 404.2.3						
3.3	Do public restrooms feature an unobstructed wheelchair turnaround (60" turning diameter)?	✔			ADA 306.2.1						
3.4	**Floor-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 59"-deep?	✔			ADA 604.8						
3.5	**Wall-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 56"-deep?			✔	ADA 604.8						
3.6	Is the centerline of the toilet 16 inches minimum to 18 inches maximum from the side wall or partition?	✔			ADA 604.2						
3.7	Is the height of the toilet seat 17 inches minimum to 19 inches maximum above finish floor?	✔			ADA 604.4						
3.8	Do sink/toilet handles appear to be operable with one hand without grasping, pinching or twisting?	✔			ADA 606.4						
3.9	Do the sinks appear to be provided with clearance for a wheelchair to roll under (minimum 27" clearance)?	✔			ADA 606.2, 606.3						
3.10	Is the height of the lavatory rim or counter 34 high maximum above the finished floor?	✔			ADA 606.3						
3.11	Are water supply, drain, and primer pipes, as well as sharp or abrasive surfaces under lavatories insulated or otherwise shielded to protect against contact?	✔			ADEA 606.5						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

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3.12	Do soap dispensers, towel dispensers and other accessories that are not over an obstruction (i.e., a sink) mounted no higher than 48" above the floor?	✔			ADA 308.2						
3.13	Are mirrors that are located above lavatories or countertops installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor?	✔			ADA 603.3						
3.14	Are compliant toilet grab bars provided in toilet **rooms** (minimum 36" rear and 42" side)?		✔		ADA 604.5	Only one grab par provided at representative restroom observed	Install compliant grab bars at toilet.	1	$125	per grab bar	$125
							Total Estimated Cost of Handicapped-Accessibility Compliance Recommendations:				**$125**

7.0 BUILDING SYSTEMS

7.1 PLUMBING

DESCRIPTION

Domestic water service to the building consists of a 2" diameter water line which enters from under the slab and into the boiler room. Domestic water pressure at the Subject Property is provided by the incoming municipal service.

The reported and observed supply domestic water piping is copper. Sanitary sewer drain and vent lines were observed as cast iron piping.

Backflow devices are furnished for the potable water and fire sprinkler systems at the site. The backflow preventers are located in the boiler room adjacent to the water service entrance.

A main gas meter and 4" service is located on the southeast side of the building. Welded and threaded black iron pipe is used for main gas piping throughout the Subject Property. Service lines from the main line are yellow coated stainless steel to the heating equipment. The split system refrigerant lines are insulated and exit the roof via metal sleeves which minimize water infiltration from the elements.

Domestic hot water is provided by two 125,000-BTUH, 60-gallon and one, 199,999-BTUH, 100-gallon, *Bradford White* gas-fired hot water heaters. The water heaters are approximately eleven years old.

The Subject Property domestic hot water systems are reported as follows:

SUBJECT PROPERTY DOMESTIC WATER HEATERS

MANUFACTURER	FUEL TYPE	CAPACITY	APPROX. AGE	LOCATION
Bradford White	gas	60-gallon	11	Boiler room A
Bradford White	gas	60-gallon	11	Boiler room A
Bradford White	gas	100-gallon	11	Boiler room B

The domestic hot water service has a circulating system to provide the hot water fixtures with readily available hot water. The circulating pump system consists of two, 10-hp pumps manufactured by *Taco* with capacities of 520 gpm each.

The observed supply domestic water piping is copper. Sanitary sewer drain and vent lines were reported and observed as hub and spigot cast iron.

A main gas meter is located on the southeast side of the building. Welded and threaded black iron pipe is used for gas piping throughout the Subject Property

The plumbing fixtures are vitreous china with chrome fittings. The building restrooms contain *American Standard* 1.2 gallons-per-flush (GPF) vitreous china water closets with manual flush valves. The building

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contains vitreous china urinals with manual flush valves. Janitor closets containing a cultured stone floor-mounted mop sinks. There are six (boy/girl) student restrooms and three staff restrooms in the Subject Property building. The buildings contain stainless steel drinking fountains throughout the common areas.

	
Backflow device overview	Typical water meter
	
Main gas line in meter overview	Typical *Bradford White* 60-gallon water heater

	
Hot water centrifugal circulation pumps	Typical janitors sink

OBSERVATIONS

The water closets and urinals were reportedly installed during renovation in 2010. The manual flush valves for the water closets appear to be in good working order. Based on the reported age, current condition, and expected useful life, water closet and urinal replacement is not anticipated during the analysis term.

The bathroom fixtures observed appeared to be in good overall condition and in working order. Ongoing maintenance as part of the property's maintenance program is recommended during the analysis term.

The water heaters are approximately eleven years old and in working order. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended during the analysis term.

The hot water circulating pumps are approximately 11 years old and appear to be in good condition and operating. Based on their low cost, replacement, when necessary, can be accomplished as part of Routine Maintenance operations.

The Subject Property domestic water piping where observable appears to be in good condition, with no reported problems noted. Based on the reported age, current condition, and expected useful life, piping replacement is not anticipated during the analysis term.

The observed domestic water supply piping appears to be in good condition.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Water heater replacement**

7.2 HVAC

DESCRIPTION

A summary of the HVAC equipment at the Subject Property is presented in the table below, followed by a detailed system description.

HVAC COMPONENTS

AREA SERVED	NO. OF UNITS	MFR., MODEL #	TONS OR BTUS	TYPE OF EQUIPMENT	AGE (YEARS)
Administration	1	*Trane,* YHC060	5-ton	Rooftop package unit	11
Guidance & Nursing	1	*Trane,* YHC060	5-ton	Rooftop package unit	11
Computer labs	1	*Trane,* YHC060	5-ton	Rooftop package unit	11
Throughout building	12	*Greenheck,* 6B-101-4	80-ton	Downblast exhaust	11
Data, electric and storage	5	*Mitsubishi, Mr Slim*	2.5-ton	Mini-split air conditioner	11
Throughout building	3	*Primera,* 2000 B1	2,000,000 BTUH	Hot Water Boiler	11
Throughout building	3	*Riverside*, 28 WB 250A	1,000,000 BTUH	Hot Water Boiler	3
Boiler room A	2	*Sigma, 062H*	57.5 MBH	Hydronic unit heater	11
Boiler room B	2	*Qmark,* MUH078,	25.6 BTUH	Electric unit heater	11

The six boilers provide hydronic heat to the radiators throughout the Subject Property building.

Three rooftop-mounted packaged units provide gas-fired heating and DX cooling to the computer labs, Nursing and Guidance rooms and administration offices.

Additional heating and cooling for select office areas is provided by split-systems comprised of condenser and air handlers. Condenser units are rooftop-mounted and use R410a refrigerant.

Three hydronic heating and ventilation units serve the gymnasium and auditorium.

Destratification (ventilation) fans are located in the gymnasium.

Hot water for the heating system is provided by three *Promera* 2,000,000 BTUH central boilers, and three *Riverside* 1,000,000 BTUH central boilers, all are fueled by natural gas.

The Subject Property building is furnished with gravity and electric-powered ventilation and exhaust fans of various sizes ranging in capacity from 200 to 1,250 CFM.

Temperature control for each space is provided by wall-mounted digital thermostats**.**

Also, part of the complete heating and cooling system are various pumps, valves, piping, sensors, etc.; all of which are controlled by a computer-operated building automation system.

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Bohn condensing units are used on the kitchen walk in cooler and freezer.



Typical rooftop package unit, number 1 of 3



Typical rooftop package unit, number 2 of 3



Typical rooftop package unit, number 3 of 3



Ductless split-system serving the data, electrical and storage rooms



Kitchen ventilation overview



Mitsubishi Electric controls for the heating



Promera 2,000,000 BTUH central boilers



Riverside 1,000,000 BTUH central boilers



Hydronic unit heater example



Steam radiator example

OBSERVATIONS

The heated water loop piping appear to be serviceable. The insulation, where observed, appears to be serviceable and is intended to deter condensation on the chilled water piping and heat loss from the hot water lines. Based on the reported age, current condition, and expected useful life, replacement of the heated water loop piping is anticipated after the analysis term.

The gas service lines were noted and reported to be in good condition. The gas service piping will be maintained at the subject property as part of operational maintenance during the analysis term.

The split-systems appear to be in good overall condition. The average useful life of split-system units of this size and type is approximately 12 years, depending upon their location, maintenance and use type. Based on observed and reported conditions, split-system replacement is recommended as a Capital Need.

The rooftop-mounted HVAC units appear to be in good to fair overall condition. The average useful life of packaged units of this size and type is approximately 14 to 18 years, depending upon their location, maintenance and use type. The HVAC units are reportedly serviced on a regular basis. Based on their average effective useful life, current condition and reported maintenance program, replacement of the rooftop-mounted HVAC units is recommended as a Capital Need during the analysis term.

The boilers appear to be in good overall condition. The maintenance representative stated that due to constant repair problems, the three older boilers (*Promera)* will be shut down within the next year using the three newer boilers (*Riverside*) as the primary hydronic heating source. The average useful life of boilers of this size and type is approximately 25 to 30 years, depending upon their location, maintenance and use type, but can be extended with proper maintenance and/or refurbishment to 35 to 40 years. The boilers are reportedly serviced on a regular basis. Based on their average effective useful life, current condition and reported maintenance program, replacement of the older boilers (*Promera*) is recommended as a Capital Need during the analysis term.

The cooler and freezer condenser units appear to be in good overall condition. Based on their average effective useful life, current condition and reported maintenance program, replacement of the condensers is recommended as a Capital Need during the analysis term.

The ventilation units were operating at the time of the assessment. The maintenance representative noted no problems with the units. Replacement of the ventilation units is not anticipated during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Split-system unit replacement**
- **HVAC unit replacement**
- **Boiler replacement - large commercial gas fired**
- **Condenser replacement**

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7.3 ELECTRICAL

DESCRIPTION

The main electrical service entrance is rated as a 2,000-Amp, three-phase, four-wire 120/208-volt main, feeding the main distribution panels (MDPs). The MDP is located in room 64, the main electric room. The observed services are protected by circuit breakers. Beyond standard ground rods or grounded connections to major piping systems, additional lightning protection was not observed.

The electrical equipment is made by *Cutler-Hammer*. The equipment was installed in during major renovation work in 2010. There are separate switches for the one main buss riser. The buss riser feed power to the electrical room on each floor. The electrical room has a minimum of two, 120/208-volt panels. A copy of the one-line diagram was not provided to *EBI*.

The Subject Property was observed with copper branch wiring and copper feeder cables. Standard electrical devices, switches, and fixtures consistent with the Subject Property use type were also observed through the building. GFCI fixtures were observed during the survey in the restrooms and kitchen areas.

From a review of the electrical system, it appears that the Subject Property has a network distribution system to the main electrical switchboard. The utility company distribution system powers one liquid filled transformer located near the southeast corner of the site. *EBI* requested information on ownership of the transformers from the site contact and was told the transformers are owned and maintained by the utility company, *Marblehead Municipal Light Department*.

The transformers fall into two basic categories, dry and liquid-filled, with the most widely used type being liquid-filled containing mineral oil. Prior to 1979, many liquid-filled transformers contained oils with Polychlorinated Biphenyls or PCBs. A conversation *Marblehead Municipal Light Department* stated the municipality owned transformer was installed in 2010 indicating the transformer containing PCBs may not be a factor. The liquid-filled transformers are typically located outside due to the potential of fire hazard from oil leaks.

A 250-kVA, diesel-fueled emergency generator serves the Subject Property. The diesel fuel is stored in a 1,000-gallon underground storage tank located underneath the generator.

SUBJECT PROPERTY EMERGENCY GENERATORS

MANUFACTURER	APPROXIMATE KVA	FUEL	HOURS	AGE
Kohler	250 KVA	Diesel	135.6	11

Lighting in the office areas is mixed with fluorescent and LED fixtures. The fixtures typically are 2'x4' with T-12 lamps. Mechanical and support area lighting includes fluorescent tube fixtures of varying length (typically 4' and 8').

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Main panel



Typical circuit breaker panels



Main switchboard rating



Typical electrical meter



Emergency generator overview



Emergency generator example

OBSERVATIONS

There were no reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type. However, stored materials were observed within 36 inches of the electrical switchgear. This condition can be a fire hazard. Based on the observed conditions, Critical Repairs are recommended to remove all stored materials within 36 inches of the electrical switchgear.

Discussions with the maintenance representative indicate that building management is responsible for interior electric repairs and replacement.

Management reported that an infrared (IR) survey of the building has not been performed in at least five years. Based on to the age of the building and electrical components, Immediate Repairs are recommended for an IR survey and periodically as a Replacement Reserve item during the analysis term.

Infrared (IR) surveys are done by either electricians or testing firms specializing in this work using an infrared camera (thermal imaging) to detect relative "hot spots" in switchgear panels and breaker panels. The "hot spots" indicate higher resistance in wires, normally at connection points, and thus indicate areas that may not have proper connections between wires and termination points. The normal course of action if a "hot spot" is detected is to check the torque on the screws/bolts that hold the wire to the panel connection, as well as clean off any oxidation on the wire. Once a firm completes their survey, they typically affix inspection tags to the switchgear and breaker panels, noting the firm name and the date of testing, as well as supplying a written report to the property owner documenting their findings and the corrective action taken.

GFCI receptacles were observed consistently in the adjacent to the water sources in the restrooms, kitchen, and breakroom sinks.

The emergency generator is approximately eleven years old. Generators of this size and type have an average expected useful life of approximately 25 to 30 years, depending on their maintenance and amount of regular testing and usage, but can be extended with refurbishment/overhaul of the unit. The emergency generator was not operating during our on-site assessment. According to maintenance personnel, the generator is exercised at regular intervals during the year and was last tested in January 2021. The generator has a non-resettable hour meter and indicates approximately 135.6 hours run on the unit. Management provided information concerning the maintenance and fuel records, and from this information, it appears the emergency generator system is compliant and in good overall condition. Based on its reported age, current condition, and expected useful life, Replacement Reserves are not recommended for the emergency generator during the analysis term.

There were no other reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type.

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Stored materials within 36 inches of the electrical switchgear.	Stored materials within 36 inches of the electrical switchgear.

RECOMMENDATIONS

Please see Table 1 for the recommended Immediate Repairs listed below:

- **Remove stored materials at main switchgear**
- **Perform IR survey**

Please see Table 1 for the recommended Short-Term Repairs listed below:

- **None**

Please see Table 2 for the recommended Replacement Reserves listed below:

- **Perform IR Survey**

7.4 BUILDING & SITE FIRE & LIFE SAFETY

DESCRIPTION

The fire sprinkler water service is supplied to the building underground via Schedule 40 steel four (4)-inch line where it is fed through a backflow preventer; both located in the main boiler room. Sprinkler water distribution is via a steel fire rated piping system throughout the building.

Observed fire and life safety systems serving the building include a *Siemens* multiple-zone, fire alarm control panel that has an auto-dialer reportedly tying the system to the fire department, an addressable master fire control panel with interface from remote panels. The fire panel has supervision interface with network display units located in the F.A.C.P room number 72 room.

The Subject Property also has hardwired with battery-backup smoke detectors, pull stations at entrances to building entrances, illuminated exit lights with battery-backup along exit paths, horn/light annunciators in common area restrooms and corridors, and fire extinguishers spread throughout the building and security system with closed circuit TV cameras.

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The Subject Property is equipped with an automated emergency defibrillator (AED) near the front desk and an eye wash station in the boiler room. The property also has an Ansul dry chemical vent hood in the kitchen.

	
Fire alarm control panel overview	Pull station example
	
Fire extinguisher with valid inspection tag	Firefinder control panel

	
Sprinkler system control valve	Inspected valid sprinkler heads

OBSERVATIONS

The fire sprinkler water service lines were noted and reported to be in good condition. The site contact was not aware of the last date of inspection of the devices and based on the current condition and the expected useful life, Immediate Repair is recommended for backflow device inspection.

There were no reported or observed problems with the life safety system or configuration. Based on observed and reported conditions, Immediate Repairs are recommended for updating the expired inspection tags.

The fire alarm control panel is eleven years old and appears to be in serviceable condition. Based on its reported age, current condition, and expected useful life of approximately 20 to 25 years, Replacement Reserves are not recommended for fire alarm control panel replacement during the analysis term.

The fire extinguishers are reportedly inspected annually, were last inspected March 2020, and appear to be in serviceable condition

The Subject Property has fire hoses cabinets throughout the building and appear to be in serviceable condition. Fire hoses tend not to be checked and maintained in good condition on a regular basis. Their presence also tends to encourage occupants, who are not properly equipped or trained in fighting fires, to attempt and engage in fighting fires instead of evacuating the building. For these reasons, many jurisdictions and fire marshal offices recommend either removal or inspection of the hoses on a yearly basis to ensure they are in good condition and can be relied on if needed.

NFPA 25, the standard that sets the inspection, testing and maintenance requirements for sprinkler systems, is used fairly universally across the U.S. Some municipalities also add their own requirements. As part of the standard, sprinkler systems are to be service tested every five years. The site contact, Mr. Bloodgood, was unaware of the last system test. Based on observed and reported conditions, Immediate Repairs are recommended to perform the 5-year sprinkler system test.

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The system demand is approximately 1,650 GPM discharge and approximately 70 PSI residual pressure at the base of the riser.

The *U.S. Consumer Product Safety Commission* has recalled approximately 35 million sprinkler heads manufactured by *Central Sprinkler Co*. A complete list of the recalled sprinklers can be found at http://www.sprinklerreplacement.com or by calling (866) 505-8553. The recall involves mostly "wet" sprinkler heads manufactured from 1989-2000, and "dry" sprinkler heads manufactured from the mid-1970s to 2001. No recalled heads were reported or observed to be at the property.

The emergency exit doors and panic hardware appear to be in serviceable condition. The doors are to swing-open into the direction of emergency egress.

Illuminated exit signs are located at the entry doors to the emergency exits and appear to be in serviceable condition. The exit signs are recommended for annual inspection, and inoperative lamps replaced as required as part of routine maintenance operations.

The security system is in fair condition. The facilities staff noted the alarm sounds when the sensors are not properly triggered. Based on observed and reported conditions, a replacement of the security system is recommended as a Critical Repair item.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Complete NFPA 5-year sprinkler test**
- **Provide current inspection tags for fire sprinkler and alarm systems (Action Item)**
- **Replace security alarm system**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

7.5 ELEVATORS AND CONVEYING SYSTEMS

DESCRIPTION

The Subject Property is provided with one, 2500-pound capacity hydraulic elevator. The elevator has a rated speed of 125 feet-per-minute (FPM). The elevator serves all three floors of the northern multi-story wing. The elevator machinery and controls are located in an equipment room adjacent to the lower level landing. The elevator was installed during the 2010 renovation.

The elevator cab is finished with carpet flooring, laminate-paneled walls, and paneled ceilings. The elevator cab interior includes a single car operating panel. The front returns and car doors have a painted metal finish. There is a flat stainless steel handrail on rear and side walls. The ceiling has florescent lighting.

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Elevator interior



Elevator lighting



Elevator exterior



Elevator inspection certificate

OBSERVATIONS

The elevator machinery and controls were reported, and appear to be in good condition. The elevator is covered under an annual maintenance and service agreement that includes regular inspections, repairs, and limited parts replacement. Based on its reported age, current condition, and expected useful life, modernization is recommended as a Capital Need during the analysis term.

The inspection certificate was posted and is current and will expire on September 30, 2021.

The elevator equipment room was clean and well maintained. The equipment room is recommended to be cleaned as part of Routine Maintenance operations.

The passenger elevator cab and interiors appear to be in good condition.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Elevator modernization program**

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8.0 Municipal Research

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed, and state, county or local municipal departments consulted. Documentation applicable to the Subject Property in those departments was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

MUNICIPAL REFERENCES				
Resource	**Contact**	**Information Provided**	**Phone or Web**	**Date**
Town of Marblehead Assessor	online	Property ownership & size information	https://www.marblehead.org/assessors-office	1.17.2021
Town of Marblehead Building/Inspections Department	online	Code compliance & violations	https://www.marblehead.org/building-inspection-department	1.24.2021
Town of Marblehead Planning & Zoning	online	Zoning information	https://www.marblehead.org/zoning-board-appeals/pages/zoning-laws-regulations	1.24.2021
Town of Marblehead Fire Department	online	Fire history & code violations	https://www.marblehead.org/fire-department	1.24.2021

8.1 Municipal Information & Zoning

Municipal Information

Readily available, reasonably ascertainable and *publicly viewable* municipal records at *Town of Marblehead* were reviewed on-line.

Zoning

The municipal zoning office personnel were consulted, the zoning office files were reviewed, and/or the zoning ordinance was reviewed to determine the zoning of the Subject Property. According to the information provided, the Subject Property is currently located within a *SR, Single Residence* district and appears to be a conforming use.

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Zoning Map

8.2 BUILDING & PLANNING DEPARTMENT

DESCRIPTION

The municipal Building and Planning Departments were consulted for open material violations, and to obtain, *readily available*, *reasonably ascertainable* and *publicly viewable* documents regarding the Subject Property.

CONCLUSION

The department interviews and/or file reviews do not show open material violations on the Subject Property.

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the

Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, our *Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

8.3 FIRE DEPARTMENT

DESCRIPTION

The local fire department was consulted for open material violations.

CONCLUSION

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, *EBI's Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

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9.0 HAZARDS

9.1 NATURAL HAZARDS

DESCRIPTIONS

9.1.1 Seismic

Chapter 16 of the 1997 edition of the Uniform Building Code (UBC) was reviewed to determine the Seismic Zone of the Subject Property. Chapter 16 includes calculations for and mapping of earthquake (seismic) loads on structures. Figure 16-2, Seismic Zone Map of the United States delineates differing ratings of seismic load and shows the United States having seismic Zones ranging from 0 to 4. These ratings indicate the severity of how horizontal ground motion and sub-surface soil types affect a structure.

9.1.2 Flood Zone

The Federal Emergency Management Agency (FEMA) maps and rates flood hazard zones throughout the United States. These zones are depicted on a Flood Insurance Rate Map (FIRM), designated by Community Map and Panel numbers. The flood hazard zones range from Zone A or AE (A1 – A130), with Base Flood Elevations (BFE) determined, to Zone X, unshaded areas outside the 500-year floodplain. EBI utilizes *CoreLogic's* FloodInsights mapping system, which searches the FEMA FIRM map and panel, to obtain the Flood Zone Determination of the Subject Property.

9.1.3 Wind Zone

FEMA maps and rates wind hazard zones, Special Wind Regions and Hurricane-Susceptible Regions throughout the United States. These zones are depicted on a Map of Wind Zones in the United States on FEMA's website – www.fema.gov/fima/tsfs13.shtm and http://www.fema.gov/graphics/library/wmap.gif.

CONCLUSIONS

9.1.1 Seismic

According to Figure 16-2 in the *UBC*, the Subject Property appears to be located in Zone 2A, with a low to moderate probability of damaging ground motion.

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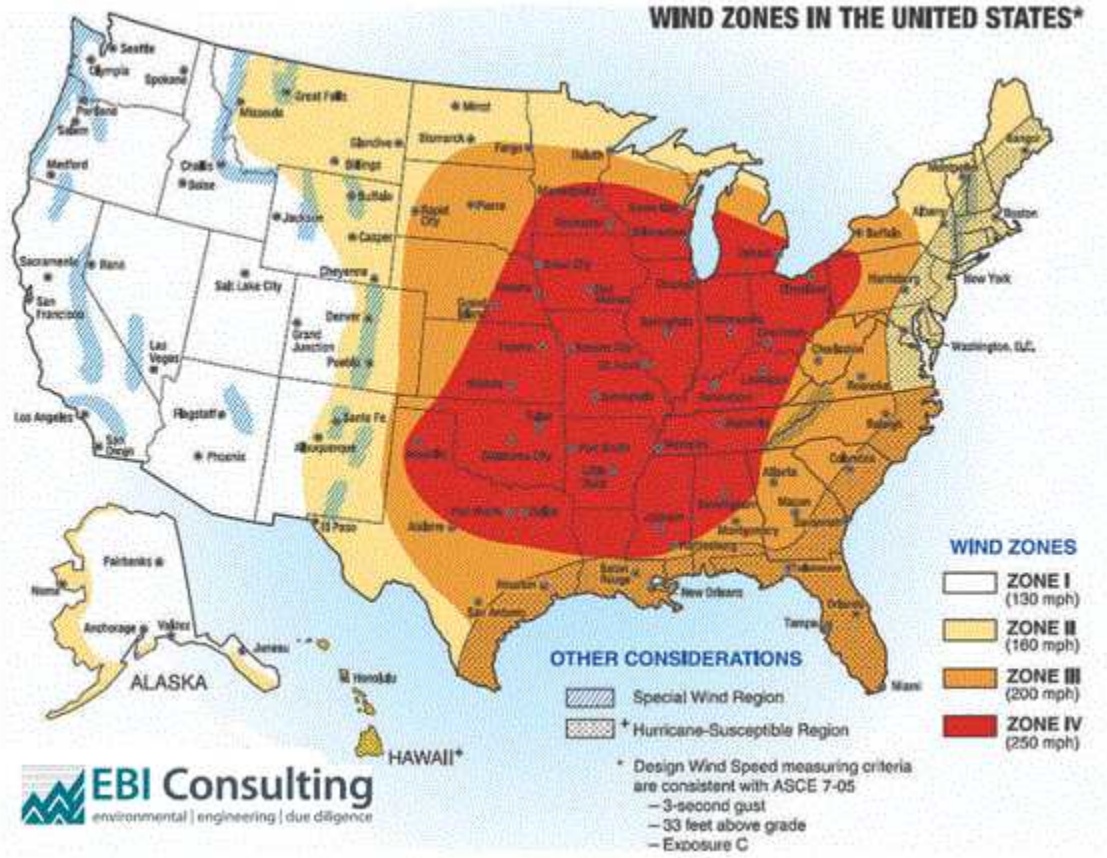


9.1.2 Flood Zone

The Subject Property Flood Zone Determination appears to be Zone X, defined as an area outside the 100- and 500-year floodplains, as shown on First American Flood Data Services' Flood Hazard Certification, Community Map #250091, Panel #0438G, dated July 16, 2014.

9.1.3 Wind Zone

Based on FEMA's Map of Wind Zones in the United States, the Subject Property appears to be located in Zone II, up to 160 mph winds. The Subject Property appears to be located in a Hurricane Susceptible or a Special Wind Region. However, the Subject Property is not located in a Special Wind Region.



9.2 SUSPECT MOLD AND MOISTURE

Interior areas of the Subject Property buildings to which access was provided, and in which building elements were readily observable, were reviewed for the presence of moisture and visible or olfactory evidence of microbial development (suspect mold). No observations were conducted within concealed locations (construction elements behind wall and ceiling finishes, and other building components, etc.). No sampling or testing was performed to confirm the presence of invisible airborne microbial elements. In addition to *EBI's* observation efforts, property personnel did not indicate the presence of moisture or suspect mold during the survey, or in *EBI*'s Pre-Survey Questionnaire.

Representative Subject Property observations and interviews revealed no obvious visual or olfactory indications of the presence of suspect mold activity. However, indications of active moisture infiltration were noted in the areas of stained ceiling tiles. Repairs to this area to address moisture infiltration are discussed under other sections of this *Report*, which are directly related to the apparent causes of the infiltration. No additional recommendations concerning moisture are made at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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10.0 REFERENCES

10.1 CONTACTS

DESCRIPTION

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed for information concerning the Subject Property. Documentation applicable to the Subject Property was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Director of School Facilities, *Town of Marblehead*	Todd Bloodgood	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021
Electrician - Facilities, *Town of Marblehead*	Mike Ellconus	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.9.2021

10.2 PERTINENT INFORMATION PROVIDED OR OBTAINED

EBI's Pre-Survey Questionnaire was forwarded to the designated property contact. The information requested in the questionnaire assists in *EBI's* research of the property to obtain pertinent property data; discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs; and pending repairs and improvements. The Pre-Survey Questionnaire was completed on site with escorts.

The following information was provided and reviewed on a cursory basis as background information of this report:

EXHIBITS RECEIVED AND REVIEWED	YES	NO	DESCRIPTION/COMMENTS
1. A.L.T.A. Survey		X	Not provided
2. Legal Description of the Property	X		Obtained by EBI
3. Location Maps	X		Obtained by EBI
4. Project Specifications		X	Not provided
5. Soils Report		X	Not provided
6. Local Building Code Compliance		X	Request submitted by EBI
7. Date of Permits and Cert. of Occupancy for Each Building		X	Request submitted by EBI
8. Building Plans:			
a. Architectural		X	Not provided
b. Structural		X	Not provided
c. Mechanical		X	Not provided

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d. Electrical		X	Not provided
e. Plumbing		X	Not provided
9. Owner's Repair List and Cost Breakdown		X	Not provided
10. Other			

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APPENDIX A - FIGURES, DRAWINGS AND PLANS

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EBI GIS, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

Date: 2/8/2021

Figure 1: Site Location Map

NULL VILLAGE SCHOOL
93 VILLAGE ST
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000047

EBI Consulting
environmental | engineering | design



Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

USGS 24K Quad: Marblehead North, MA 1986, Lynn, MA 1986
Marblehead South, MA 1986, Salem, MA 1986

Date: 2/8/2021

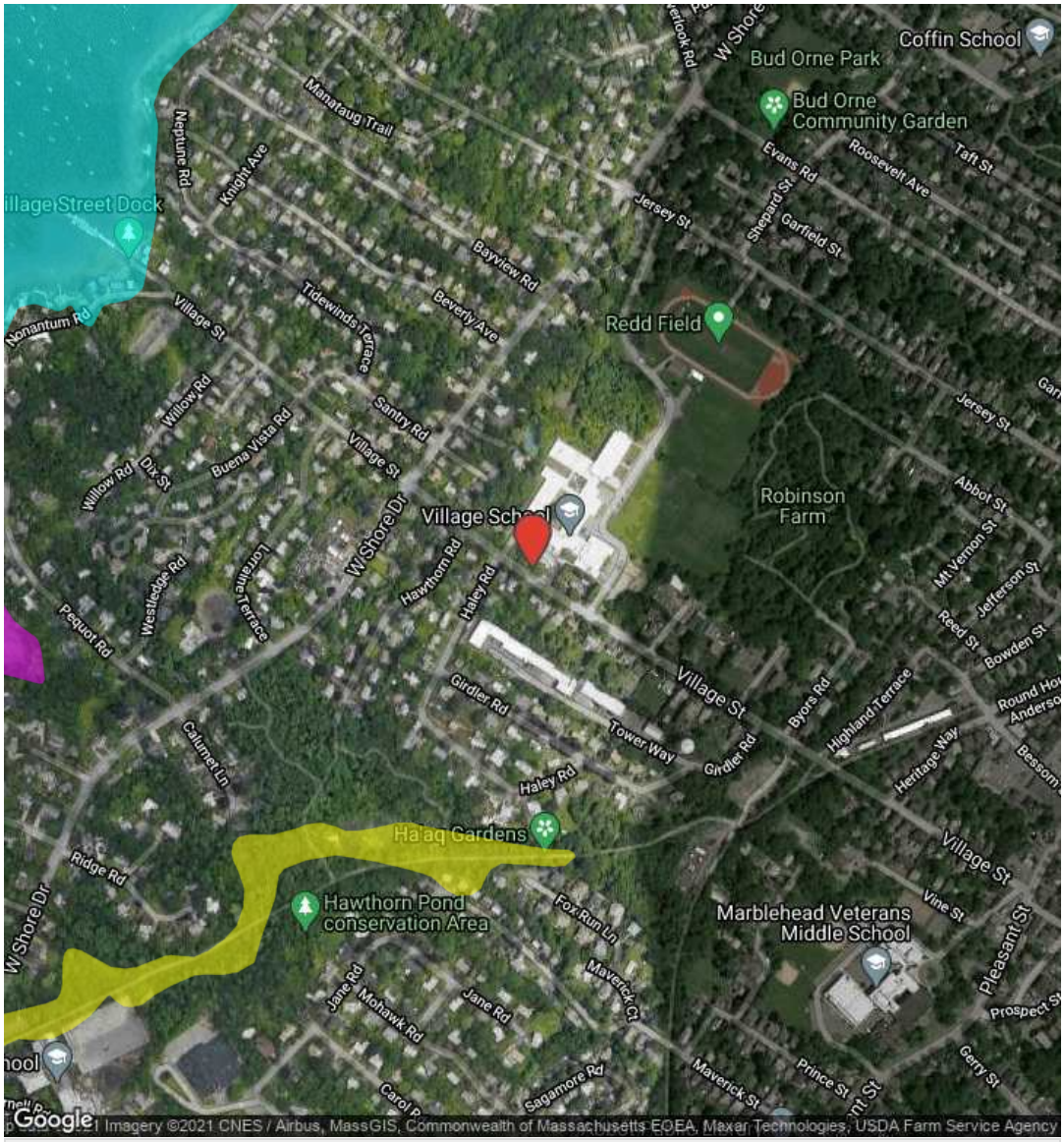
Figure 2 - Topographic Map

NULL VILLAGE SCHOOL
93 VILLAGE ST
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000047

EBI Consulting
environmental | engineering | design

Overview Map



Flood Zones: X500 or B Zone | A Zone | V Zone | D Zone | Floodway | CBRA

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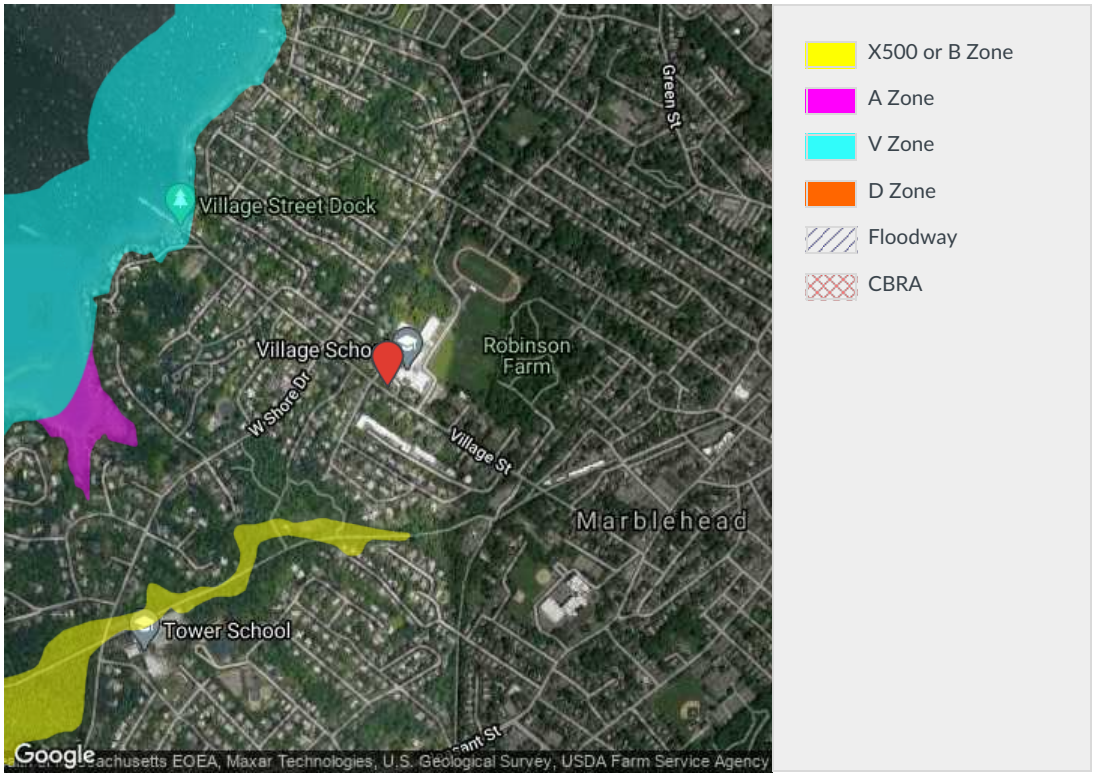
LATITUDE: 42.502724, LONGITUDE: -70.866871

LOCATION ACCURACY: *User-defined location* **LATITUDE:** 42.502724 **LONGITUDE:** -70.866871 **MATCH CODE:** **SOURCE:** **CENSUS BLOCK ID:** 250092033012015

Flood Zone Determinations Report

Flood Zone Determinations: OUT

SFHA (FLOOD ZONE)	OUT	**WITHIN 250 FEET OF FLOOD ZONE**	NO
FLOOD ZONE	X	**COMMUNITY**	250091
COMMUNITY NAME	MARBLEHEAD, TOWN OF	**PANEL**	0438G
PANEL DATE	July 16, 2014	**COBRA**	OUT
MAP NUMBER	25009C0438G	**FIPS CODE**	25009



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APPENDIX B - OTHER RELEVANT DOCUMENTS

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Village School

EBI Consulting

environmental | engineering | due diligence

Please fill out and sign this questionnaire for the site visit. Email to Samantha Spano at sspano@ebiconsulting.com for our report files, and keep the original to provide to the Site Assessor.

Subject Property Name: Marblehead **EBI Project #:** ~~1321000050~~

Address: 93 Village St.

Subject Property Owner: MARBLEHEAD **Purchase Date:** —

On-Site Property Contact: " **Telephone:** 781. 389. 4943.

Fax: — **Email:** bloodgood.todd@marbleheadschools.org.

* **Name and title of Individual Completing Form** **Signature** **Date**

Additional plans and documentation (see page 2) must be forwarded to the site for the Engineer during the survey. For questions not applicable please respond "N/A." Attach additional pages if necessary. This questionnaire and your responses will be included as an exhibit in the Report. Accurate and full completion is critical to a timely completion of our reports, and timely deal closing.

LOCAL JURISDICTIONAL INFORMATION

1. What is the Subject Property ID #, Lot and Block, or Township/Range ID #? Parcel 119-1-0
2. What is the legal Municipality or County that has jurisdiction over the Subject Property? ESSEX / MARBLEHEAD
3. What are the Subject Property tax assessors file ID number and tax file ID number if available? —

SUBJECT PROPERTY INFORMATION

4. What is the size of the Subject Property lot or lots, in acres? 18.2 ACRES.
5. How many parking spaces (and HCP parking spaces) are present at the Subject Property? —
6. How many buildings comprise the Subject Property? 1 + Athletic field restrooms
   a. If the Subject Property is a mall or large retail center, please confirm and list ownership of each building, i.e., out pads, etc. —
7. What is the gross and net rentable square footage of the building(s)? 143,125 SF.
8. What is the date of construction of the building(s)? When was the building(s) first occupied? 1955.
9. How many tenant spaces or apartments are at the Subject Property? 1
   a. If the Subject Property is apartments, provide a unit and type count by bedroom and square feet. —
10. Please list all deficiencies or problems with the site, parking area, amenities or utilities. N/A
11. Please list all structural, façade, water infiltration, mold, roof, plumbing, HVAC, electrical, elevator, or fire alarm system(s) deficiencies or problems. Security system is tripping and due for replacement. OLD SENSORS.

* completed by Jennifer Flanders w/ Todd Bloodgood and Mike Ellcomus on site. 2/9/21

12. During the last five years, have any major capital improvements been made to the site or building(s)? If so, please explain, with the approximate cost.
Replaced hot water heater, 3 yrs ago, and 1 month ago.

Does the Subject Property have	Y or N	Does the Subject Property have	Y or N
Polybutylene piping		Compressed wood or composite board siding	
Galvanized steel water lines		EIFS exterior finishes	
ABS sanitary lines		Fire Retardant Treated plywood	
Aluminum branch wiring		Cadet/Encore electric heaters installed 1982-99	—
Omega (Central or CSC) brand sprinkler heads		GE or Hotpoint dishwashers installed 1983-89	—

13. Please list any deficiencies noted during any Building, Fire or Health Department inspections in the last three years.
—

14. When the fire alarm systems and/or sprinkler systems (if any) were last tested?
~ Aug 2020.

15. Please list the following utility providers:
Electricity: town
Water: town
Storm Drainage: town
Sanitary Sewer: town
Natural Gas or Oil: National Grid.
Trash Hauler: town and, Frequency of Pick-ups:

16. If you are performing or planning any repairs or replacement work to the Subject Property that will exceed an aggregate cost of $2,000 please explain, with the approximate cost.
Security system and hot water heater.

17. Please list the responsible party for tenant improvements and maintenance of major systems (if applicable).
town / owner

18. Please attach a brief history of the Subject Property. This information helps us properly assess, evaluate and understand the Subject Property, and will assist in the financial analysis. The information should include:

- The date of approvals and construction, the contractor who built the Subject Property
- History of major capital improvements, repairs, additions or modifications
- History of fires or violations
- A list of any ongoing maintenance issues
- Tenant history, approximate turnover rate

DOCUMENT AND INFORMATION CHECKLIST

Please provide the following information (as much as possible in electronic format) so EBI can proceed with the survey. Asterisk (*) items are critical to report completion. The documents will become exhibits in the Consultant's report.

A. Plans	B. Municipal Documents	C. Additional Information
▪ ALTA Survey or Site Plan* ▪ Architectural Building Plans* - plans, elevations, wall section, foundation, HVAC & elec. schedules ▪ Reduced scale Site and Building Plans ▪ ***Extremely critical for properties in seismically active zones 3 and 4**** *STRUCTURAL PLANS – **Seismic Assessments are required for these properties.***	▪ Certificate of Occupancy* ▪ Building Permit* ▪ Façade inspection compliance* ▪ Copy of tax cards ▪ Copy of violations ▪ Facade Reports or Certification	▪ Capital expense report for 1 to 3 years* ▪ Tenant Rent Roll* ▪ Roof warranty ▪ History of recent improvements ▪ Schedule of Floor Area Measurements - Gross and Rentable Square Feet ▪ Previous Due Diligence or Building Component Reports, including, but not

APPENDIX C - PROFESSIONAL QUALIFICATIONS

DRAFT

EBI Consulting
environmental | engineering | design

Jennifer Flanders, PE, LEED AP BD+C
Project Engineer
Westwood, MA 02090
Office/Mobile: 978.660.0227

Summary of Experience

Mrs. Flanders is a structural engineer with over 9 years of experience in the building industry. She has provided management on a wide variety of projects including renovations and new construction of commercial, institutional, and municipal facilities. She has a broad knowledge of structural design, condition assessments, forensic investigation, litigation support, property loss consulting, and construction administration.

Relevant Project Experience

Prior to her employment at EBI, Mrs. Flanders contributed to the following representative assignments:

Alewife Parking Garage Investigation, Cambridge MA
Investigation of a 1,000,000 sq. ft. precast concrete garage structure supported by structural steel columns. The ongoing structural investigation process consisted of a visual survey and non-destructive testing (NDT) of a representative portion of the garage to determine an approximate estimate of damage. A cost estimate was provided with recommended priority levels of repair.

University of Massachusetts Boston Calf Pasture Pump Facility, Boston MA
Condition assessment of three buildings originally constructed in 1887. Provided repair program to structurally stabilize, secure, and weather-protect the facility for future use.

Two Drydock Avenue, Boston MA
Project manager of the structural design and construction administration of a new thirteen-story 298,700 sq. ft. office building with ground floor retail, above-ground parking, and a roof terrace.

Hurricane Irma Response, Florida
Investigation of flooding and wind damage caused by Hurricane Irma. Findings reports along with recommended repairs were generated for a variety of commercial and residential properties.

Westfield Mall Garage Floor Investigation, Bethesda MD
Forensic investigation of a double-tee concrete floor panel that collapsed during a renovation project. Assisted with document review and analysis to opine on the cause of collapse.

Silo Investigation, Tallahassee FL
Forensic investigation of a collapsed, steel cylindrical silo at a manufacturing facility. Provided document review and analysis to opine on the cause of collapse and provide repair recommendations.

Canterbury Earthquake Sequence Portfolios, Christchurch New Zealand
Structural evaluation of several commercial, hotel, multi-family, and educational buildings that sustained damage following a series of earthquakes in 2010 and 2011. The scope included condition assessments of post-earthquake damages, evaluation of remaining seismic capacities, and development of conceptual repairs and seismic upgrades.

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Jennifer Flanders, PE, LEED AP BD+C
Project Engineer
Westwood, MA 02090
Office/Mobile: 978.660.0227

Liberty Mutual Storm Damage Portfolio, Various Locations
Assisted with the investigation of flooding, wind damage, and the most likely cause of electrical service interruptions, caused by the CAT-90 Sandy storm. Findings reports were generated for more than 500 property locations throughout the east coast of the United States.

Armed Forces Retirement Home, Washington DC
Structural evaluation and emergency stabilization at the Sherman Building after the Central Virginia Earthquake. Work involved immediate emergency assessment of the structure and stabilization of the bell tower. The project included a thorough visual evaluation, documentation of the damage, and recommendations for further remedial action.

NAVFAC Embassy Security Facilities, Quantico VA
Structural design of a new two-story, steel-framed headquarters building, a warehouse, and two entry control facilities totaling 36,000 sq. ft.

Verizon Chesapeake Office Complex, Silver Spring MD
Investigation of a deteriorated masonry façade. Identified the extent of damage caused by corrosion of a steel structure supporting the exterior wall of a seven-story office building.

Social Security Administration National Computer Center, Urbana MD
Structural design of a 400,000 sq. ft. data center with an attached office building.

Additional Projects
Past experience includes design, assessment, and recommendations on commercial, institutional, and municipal properties of various sizes located primarily throughout the eastern seaboard of the United States and abroad.

Education

Master of Engineering in Civil Engineering, Cornell University, Ithaca, NY
Bachelor of Science in Civil Engineering, Worcester Polytechnic Institute, Worcester, MA

Professional Affiliations

CREW Network, Boston

Professional Registrations

Registered Professional Engineer (Civil-Structural) in Massachusetts (#54309) and Virginia (#402052253)
LEED Accredited Professional, Building Design + Construction (AP BD+C)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

SUMMARY OF EXPERIENCE

Mr. Davis has in excess of 37 years experience in real estate development and due diligence. He has performed a wide range of inspections including Physical Needs Assessments per Fannie Mae, Freddie Mac & HUD protocols, Property Condition Assessments to ASTM and custom protocols and Property Condition Equity Evaluations for acquisition. In addition, he has performed and managed a variety of detailed engineering investigations including infra-red roof studies, façade investigations, structural studies, MEP and fire and life safety studies. In total over the past ten years, Mr. Davis has performed more than 500 site surveys and detailed investigations and directed more than 7,500 due diligence assessments for clients.

As senior technical lead on over 50 portfolios, both nationwide and international, he has worked closely with clients to provide timely analysis and critical insight as they make their business decisions on each project. With portfolios ranging in size from 20 locations to over 600 sites, and property types including hospitality, restaurant, retail, office, industrial, and skilled nursing, Mr. Davis has successfully provided progress information on issues and each portfolio was completed on or ahead of schedule.

Mr. Davis' background includes managing design, construction, and engineering projects in over twenty states and five provinces in Canada. His experience as a consultant, owner's representative, contractor and code official brings a unique perspective to each project.

RELEVANT PROJECT EXPERIENCE

Projects on which Mr. Davis has been involved include Assessments for:

- The World Trade Center, Long Beach, California
- Anaheim Garden Walk Mall, Anaheim, California
- Boca Raton Resort and Corporate Center, Boca Raton, Florida
- Inter-Continental Hotel, New Orleans, Louisiana
- Bethesda Hotel & Conference Center, Bethesda, Maryland
- Westin Resort Properties, Puerto Vallarta, Mexico
- The Cosmopolitan, Las Vegas, Nevada (2,900 room resort)
- University Mall, North Carolina (BOMA Lease Study)
- 900 North Michigan Avenue, Chicago, IL (Constrcution Monitoring)
- Numerous large-scale retail, office, multi-family residential, hospitality, healthcare and other commercial facilities

Several large property portfolios, including:

- 8 hospitality property portfolios (ea. 75 to 600 sites)
- 10 retail/office/industrial property portfolios (ea. 100 to 335 sites)
- 3 restaurant property portfolios (ea. 150 to 530 sites)
- 7 assisted living, skilled nursing, and full nursing home property portfolios (ea. 50 to 140 sites)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

- Miscellaneous portfolios including gas service station, self-storage, resort, manufactured home and other portfolios in the US and Canada (ea. 25 to 125 sites)

EDUCATION

Bachelor of Science in Building Sciences, Rensselaer Polytechnic Institute, Troy, NY (1976)
Graduate Coursework, Architectural Design – Drexel University, Philadelphia, PA (1980)

CAPITAL NEEDS ASSESSMENT



Prepared for:

Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945



Veterans Middle School

217 Pleasant St
Marblehead, Massachusetts

EBI Project No. 1320000048

March 29, 2020

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March 29, 2020

Ms. Michelle L. Cresta
Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945

Subject: Capital Needs Assessment, Veterans Middle School
217 Pleasant St, Marblehead, Massachusetts
EBI Project #1320000048

Dear Ms. Michelle L. Cresta:

Attached please find our *Capital Needs Assessment*, (the *Report*) for the above-mentioned asset (the Subject Property). During the property survey and research, our property surveyor met with agents representing the Subject Property, or agents of the owner, and reviewed the property and its history. The *Report* was completed according to the terms and conditions authorized by you. The gathering of data and information for this *Report* has been completed in general conformance with ASTM E 2018 – 15.

The exclusive purpose of the *Report* is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools* in its Due Diligence effort in evaluating the Property.

This *Report* was performed utilizing methods and procedures consistent with established commercial practices and in conformance with industry standards. The suggestions represent *EBI's* opinion based on written, graphic or verbal information, the property condition and data available to us at the time of the survey. Factual information regarding operations, conditions or data provided by the Client, occupants, owner or their representative has been assumed to be correct and complete.

The *Report* speaks only as of its date in the absence of a specific written update of the *Report* signed and delivered by *EBI Consulting*.

EBI Consulting is an independent contractor, not an employee of either party to this transaction, and its compensation was not based on the findings or recommendations made in the *Report* or on the closing of any business transaction.

Thank you for the opportunity to prepare this *Report* and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully submitted,

Jennifer Flanders, P.E., LEED AP BD+C
Author/Engineer

Dennis L. Davis 918.924.1642
Reviewer/Equity Services, National Program Director
ddavis@ebiconsulting.com

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EXECUTIVE SUMMARY TABLE

Property Name:	**Veterans Middle School**	*Property Type:*	**School**
Address:	**217 Pleasant St**	*Property Age:*	**117**
City and State:	**Marblehead, Massachusetts**	*No. of Units or Tenants:*	**1**
Site Survey Date:	**February 10, 2021**	*Square Feet:*	**131,250**
Report Date:	**March 29, 2021**	*Analysis Term (Yrs.):*	**20**
EBI Project #:	**1320000048**		

Section #	Section Name	Critical Repairs	Non-Critical Repairs	Capital Needs
2.0	**SITE CONDITIONS**			
2.1	Site Features			
2.2	Landscaping & Site Improvements	$444	$178	$22,444
2.3	Pavement and Parking		$39,364	$292,769
2.4	Site Amenities			
2.5	Utilities			
3.0	**STRUCTURE**			
3.1	Substructure			
3.2	Superstructure			
4.0	**BUILDING ENVELOPE**			
4.1	Roofing	$153,533	$6,450	$349,846
4.2	Facades	$2,400	$4,054	$4,054
4.3	Windows & Doors		$11,262	$182,071
5.0	**BUILDING INTERIORS**			
5.1	Basements/Attics/Penthouses	$6,000		
5.2	Interior Finishes & Components	$24,000	$1,200	$1,162,008
6.0	**ACCESSIBILITY**			
6.1	Accessibility Compliance		$1,920	
7.0	**BUILDING SYSTEMS**			
7.1	Building Plumbing			$27,860
7.2	HVAC			$963,655
7.3	Building Electrical	$2,050		$10,251
7.4	Building & Site Fire/Life Safety	$9,500		$105,000
7.5	Elevators & Conveying Systems	$0		$300,696
8.0	**MUNICIPAL RESEARCH**			
8.1	Municipal Information & Zoning			
8.2	Building & Planning Department			
8.3	Fire Department			
9.0	**HAZARDS**			
9.1.1	Seismic			
9.1.2	Flood Zone			
9.1.3	Wind Zone			
9.2	Suspect Mold and Moisture			
	TOTALS:	**$197,927**	**$64,428**	**$3,420,654**

	Dollars per sf/yr	Dollars per unit/yr	
Present Value of Capital Needs Cost Estimate	$1.30311	$171,032.71	$3,420,654
Inflated Value of Capital Needs Cost Estimate	*$1.49679*	*$196,454.26*	*$3,929,085*
Critical Repairs Cost Estimate	$197,927		
Non-Critical Repairs Cost Estimate		$64,428	
Total Deferred Maintenance Cost Estimate, After Multiplier	$262,356		

EXECUTIVE SUMMARY

PROPERTY DESCRIPTION

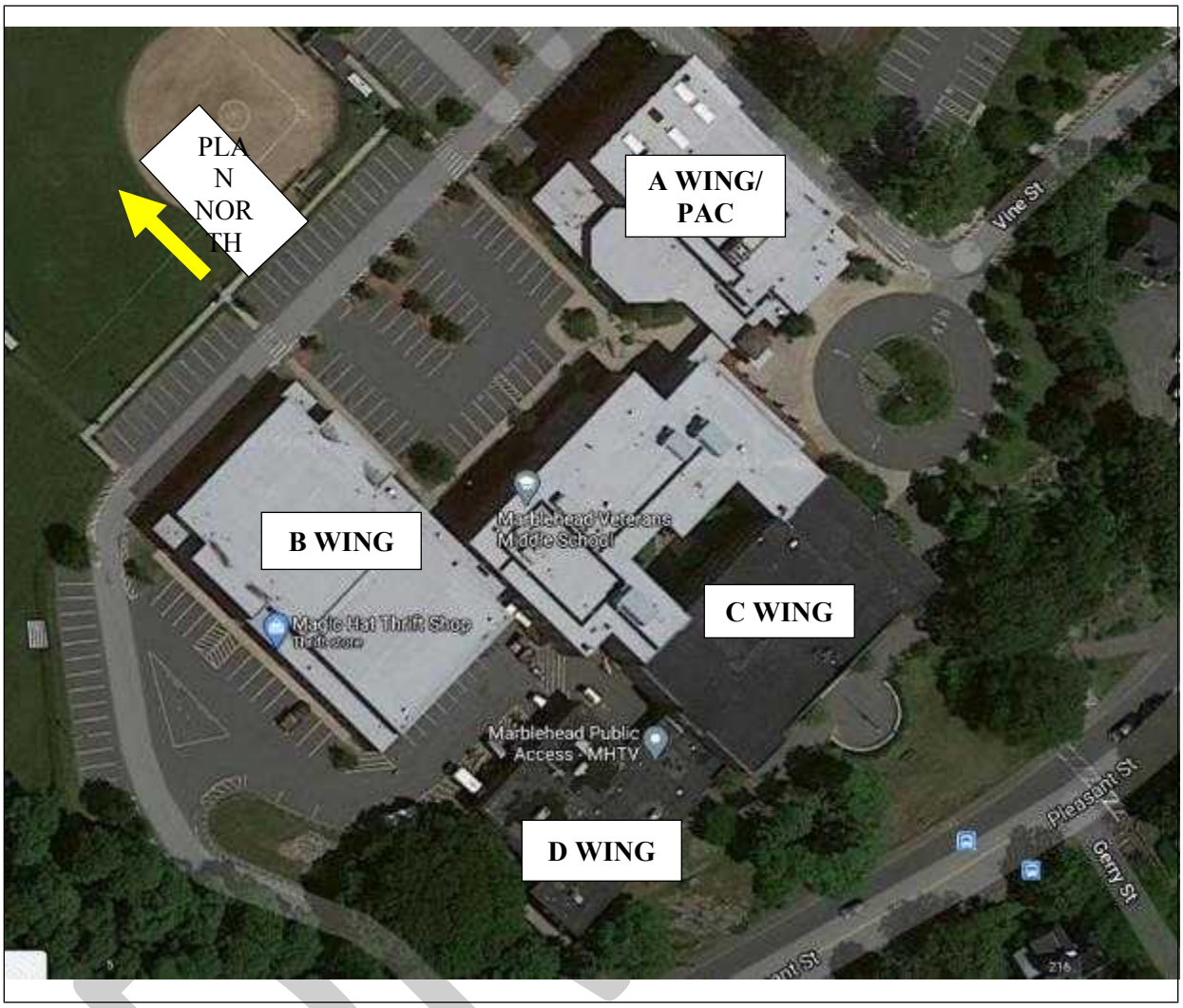
The Subject Property, known as Veterans Middle School, is located in Marblehead, Massachusetts at 217 Pleasant St in Essex County. The Subject Property was originally constructed in 1904 with renovations in 1935, 1937, 1986, and an extensive renovation completed in 2004. The Subject Property consists of a three-story approximately 131,250-gross square foot[1] middle school building located on a 11.48-acre lot. The buildings contain a partial unfinished basement.

The school building is irregular-shaped and has rough dimensions of 400 feet in length and 330 feet in depth. The building is configured as three-stories tall in most locations.

For the purposes of this report the front of the building parallel with Pleasant Street is the "south" side. And the façade facing the baseball field is the "north" side. See the following figure for a building layout key. There is a central portion of the building that is part of the original construction (C and D Wing) and a west (B Wing) and east wing (A Wing) adjacent. The interior of the property is laid out with the main entrance in the at the southeast corner and common corridors providing access to classroom, auditorium, and cafeteria spaces. The Performing Arts Center ("PAC") is located in the A Wing.

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1 **Gross square footage** obtained from the tax assessor's records.



School Layout

LOCATION

The Subject Property is located approximately 400 feet west of the intersection of Pleasant Street and Village Street. The Subject Property has approximately 500 feet of frontage along Pleasant Street to the south and Edgewood Road to the north.

Local surface arteries, Interstate, and state highway systems provide access to the property. The Subject Property is located approximately 0.5 miles east of Route 114.



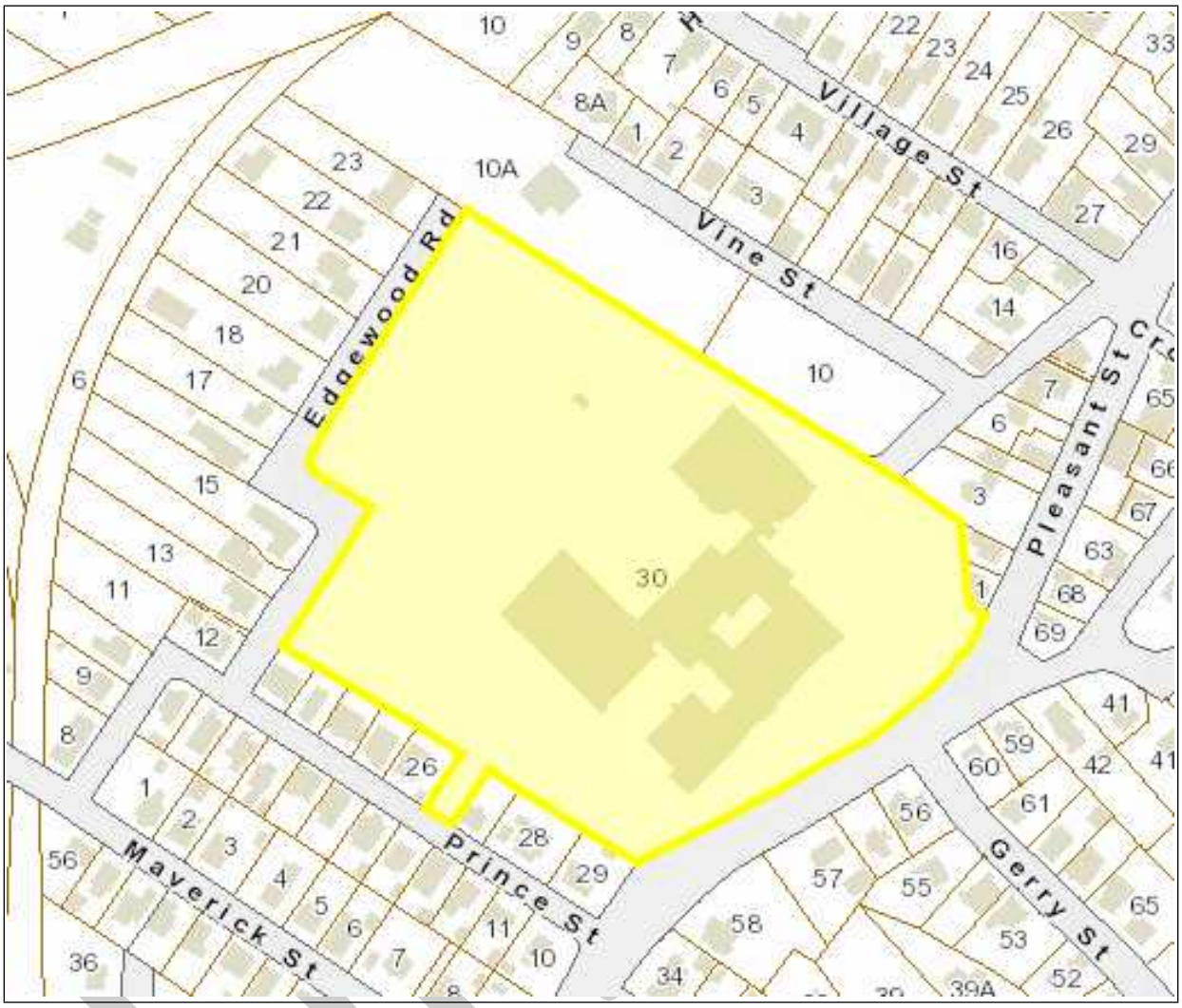
Location Map

Two drives provide access to the Subject Property from the adjacent road frontages. The property is improved with asphalt-paved vehicle parking areas and drive lanes located along the sides and rear of the building, and with asphalt-paved service and loading areas.

The site is rolling, with moderate slopes to the south toward Pleasant Street. The school is built into the grade and approximately 20 feet higher than the adjacent Pleasant Street.

Property use in the vicinity of the Subject Property is primarily characterized by residential development.

According to the *Marblehead GIS*, the Subject Property is currently owned by the *Town of Marblehead School Department*. The Subject Property includes one irregular-shaped parcel totaling 11.48 acres of land. *Marblehead Assessor* records indicate that the Subject Property assessor parcel number is 97-30-0.



Tax Map

SITE OBSERVATION & OBSERVATION SUMMARY

Jennifer Flanders and Don Gerardi of *EBI* surveyed the property on February 10, 2021 and were accompanied by and interviewed Mr. Todd Bloodgood, Director of School Facilities and Mr. Mike Ellconus, Electrician both with the *Town of Marblehead.* At the time of the survey, the weather was sunny and approximately 27º Fahrenheit. During the survey, representative areas of the site, interior areas, common areas, educational spaces, mechanical spaces, mechanical equipment and building components were observed.

Overall, the Subject Property appears to be in good to fair condition with a limited level of deficiencies observed. This *Report* recommends certain actions, repairs, and replacements as Critical Repairs, Non-Critical Repairs and Capital Needs, commensurate with our observations. Additional less notable issues may be present that require attention as part of routine maintenance. Please refer to each specific report sections for details.

CAPITAL, MAINTENANCE & OWNER/TENANT RESPONSIBILITY

According to the facilities manager, the school was fully renovated in 2004 for an approximate cost of $23 million dollars. The renovation included new interiors, windows, mechanical equipment, ADA upgrades, and partial roof replacement.

Maintenance, repair, and replacement of the roof, facades, landscaping, pavement and parking, tenant space interior finishes, plumbing, mechanical, electrical, HVAC, elevator and conveying, life safety systems and components at the property is reportedly the responsibility of the Subject Property owner.

General day-to-day maintenance is reportedly handled by the school facilities department. The maintenance technicians are reportedly qualified to handle general repairs. Repair and maintenance of specialty and large-scale equipment, i.e., central HVAC plant equipment, elevators, roofing, fire and smoke detection and alarm systems, etc., are subcontracted to outside vendors. The level and quality of on-site maintenance repairs reviewed while at the site were of good workmanship and materials. In general, the Subject Property appears to have been constructed within industry standards and has been well maintained.

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CRITICAL REPAIRS AND CAPITAL NEEDS

Itemized Critical and Non-Critical repairs, as well as Capital Needs are provided as part of this *Report*. The cost estimates shown on the tables are based on data obtained from the Owner for items already planned, quotes from contractors, *EBI's* in-house Equity database costs and our experience with costs and estimates for similar issues, property and building types, city cost indexes, and assumptions regarding future economic conditions. These projected costs are augmented by cost estimate resource documents such as the *National Construction Estimator*, *Means Building Construction Cost Data*, or *Means Facilities Maintenance and Repair Cost Data Publications*.

CRITICAL REPAIRS & NON-CRITICAL REPAIRS - TABLE 1

Each of the Critical Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at a Subject Property.

Each of the Non-Critical Repair items noted during the survey are listed on the following page on Table 1 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Non-Critical Repair, and/or that cannot be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

CAPITAL NEEDS - TABLE 2

Each of the Capital Needs items noted during the survey are listed on the following pages on Table 2 and compiled on the Executive Summary Table. Items are grouped and cross-referenced by *Report* section. Routine or customary annual maintenance items are not reported or included in this *Report* unless otherwise noted.

DEFICIENCY PRIORITIES #1 TO #4

Each of the deficiencies and costs noted during the survey are prioritized in the following manner:

Priority 1: Current Critical, Conditions in this category require immediate action to:

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility to operation
- Correct an environmental hazard

Priority 2: Potentially Critical, Conditions in this category, if not corrected expeditiously will become critical within a year. Situations within this category include:

- Intermittent operations

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- Rapid deterioration
- Potential life safety hazards
- Environmental non-compliance

Priority 3: Recommended, conditions in this category require appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further. These are not required for the most basic function of the facility; however, Priority 3 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 4: Does not meet current codes/standards, "Grandfathered" conditions in this category include items that do not conform to existing codes, but are "grandfathered" in their condition. No action is required at this time, but should be considered as an upgrade or if substantial work is to be undertaken in contiguous areas, certain existing conditions may require correction

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Table 1 - Critical and Non-Critical Repairs

Veterans Middle School
217 Pleasant St
Marblehead, Massachusetts
EBI Project # **1320000048**

Site Survey Date: 2/10/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 3

Building Area: 131,250
Number of Units: 1
Property Age: 117
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	*PRIORITY*	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
2.0	**SITE CONDITIONS**											
2.1	Site Features		None			20.0%						
2.2	Landscaping / Improvements	**#1**	Repair trip hazards - concrete sidewalks	1	$370.18	20.0%	$444.21	each	$444.21			Settled area of sidewalk north of C-Wing
2.2	Landscaping / Improvements	**#2**	Routine concrete sidewalk repairs (LF)	20	$7.40	20.0%	$8.88	per linear foot		✔	$177.68	Repair localized concrete spalls and cracks
2.3	Pavement/ Parking	**#2**	Patching, crack sealing, sealing and striping of asphalt pavement	90,000	$0.36	20.0%	$0.44	per square foot		✔	$39,363.84	Cracking and settlement throughout paved area
2.4	Amenities		None			20.0%						
2.5	Utilities		None			20.0%						
3.0	**STRUCTURE**											
3.1	Substructure		None			20.0%						
3.2	Superstructure		None			20.0%						
4.0	**BUILDING ENVELOPE**											
4.1	Roof	**#1**	EPDM 60 mil roof replacement -low rise	23,500	$5.44	20.0%	$6.53	square foot	$153,532.64			Replace EPDM-membrane roof that is past it's expected useful life and has active roof leaks in D-Wing
4.1	Roof	**#2**	Extend condensation drain line at roof top units	1	$1,500.00	20.0%	$1,800.00	allowance		✔	$1,800.00	Extend condensation drain lines to roof drains at roof top units
4.1	Roof	**#2**	PMP Ongoing roof maintenance, psf	77,500	$0.05	20.0%	$0.06	per square foot		✔	$4,650.00	
4.2	Facades	**#1**	Repair bowed brick	1	$2,000.00	20.0%	$2,400.00	allowance	$2,400.00			Cracked and bowed brick at A-Wing
4.2	Facades	**#2**	Renew/recaulk expansion & control joints	2,880	$1.17	20.0%	$1.41	linear foot		✔	$4,054.48	Sealants are worn and cracked throughout
4.3	Windows and Doors	**#2**	Renew/recaulk windows and doors	8,000	$1.17	20.0%	$1.41	linear foot		✔	$11,262.43	Sealants are worn and cracked throughout

Table 1 - Critical and Non-Critical Repairs

Veterans Middle School
217 Pleasant St
Marblehead, Massachusetts
EBI Project # **1320000048**

Site Survey Date: 2/10/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 3

Building Area: 131,250
Number of Units: 1
Property Age: 117
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	*PRIORITY*	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
5.0	**BUILDING INTERIORS**											
5.1	Bsmt/Attic	**#1**	Seal concrete cracks at basement	1	$5,000.00	20.0%	$6,000.00	allowance	$6,000.00			Floor slab and wall cracks in basement in A-Wing
5.2	Interior F & C	**#1**	Repair vinyl flooring/trip hazards	1	$20,000.00	20.0%	$24,000.00	allowance	$24,000.00			Cracking at flooring expansion area between school wings
5.2	Interior F & C	**#2**	Repair stained ceiling	1	$1,000.00	20.0%	$1,200.00	allowance		✔	$1,200.00	Water staining in auditorium ceiling from prior leaks
6.0	**ACCESSIBILITY**											
6.1	Accessibility	**#4**	Complete accessibility compliance upgrades	1	$1,600.00	20.0%	$1,920.00	allowance		✔	$1,920.00	Refer to accessibility checklist
7.0	**BUILDING SYSTEMS**											
7.1	Plumbing		None			20.0%						
7.2	HVAC		None			20.0%						
7.3	Electric	**#2**	Perform IR survey	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050.20			Perform an IR survey
7.4	F/L Safety	**#2**	Sprinkler system 5 year test	1	$4,500.00	20.0%	$5,400.00	Allowance	$5,400.00			Complete NFPA 5-year sprinkler test
7.4	F/L Safety	**#2**	Annual Fire Alarm Inspection	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050.20			Alarm Inspection tags invalid
7.4	F/L Safety	**#2**	Annual Fire Sprinkler Inspection	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050.20			Sprinkler Inspection tags invalid
7.5	Elevators	**#2**	Provide current inspection certificates	1	$0.00	20.0%	$0.00	Action Item	$0			Posted elevator certificates are expired
8.0	**MUNICIPAL RESEARCH**											
8.1	Municipal Information & Zoning		None			20.0%						
8.2	Building & Planning		None			20.0%						
8.3	Fire Department		None			20.0%						
9.0	**NATURAL HAZARDS**											
9.1.1	Seismic		None			20.0%						
9.1.2	Flood Zone		None			20.0%						
9.1.3	Wind Zone		None			20.0%						
9.2	Suspect Mold & Moisture		None			20.0%						
								DEFERRED MAINTENANCE:	**CRITICAL**		**NON-CRITICAL**	
									$197,927		**$64,428**	
								TOTAL:	**$262,356**			

TABLE 2 - CAPITAL NEEDS OVER TERM

Veterans Middle School
217 Pleasant St
Marblehead, Massachusetts
EBI Project # **1320000048**

Site Survey Date: 2/10/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 3

Building Area: 131,250
Number of Units: 1
Property Age: 117
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	AVERAGE EFFECTIVE USEFUL LIFE	EFFECTIVE AGE	REMAINING USEFUL LIFE	TOTAL QUANTITY OVER TERM	APPROXIMATE QUANTITY PER YEAR	UNIT COST (adjusted by location factor)	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (including Markup)	UNIT DESCRIPTION	ESTIMATED COST PER YEAR	Annual Costs																						RECOMMENDED TOTAL OVER THE TERM
														2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
														YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15	YEAR 16	YEAR 17	YEAR 18	YEAR 19	YEAR 20	
2.0	**SITE CONDITIONS**																																		
2.1	Site Features		None	-						20.0%																										
2.2	Landscaping / Improvements	**#3**	Signage, Entrance/Monument	25	17	8	1	1	$6,606.20	20.0%	$7,927.44	allowance	$7,927								7,927															$7,927
2.2	Landscaping / Improvements	**#3**	Routine concrete sidewalk repairs (linear foot allowance)	20	17	3	1,200	1,200	$9.11	20.0%	$10.93	linear foot	$13,121			13,121																				$13,121
2.2	Landscaping / Improvements	**#3**	Replace pole-mounted light fixture	20	17	3	15	15	$77.51	20.0%	$93.01	each	$1,395			1,395																				$1,395
2.3	Pavement/ Parking	**#3**	Mill and overlay asphalt pavement	25	17	8	90,000	90,000	$1.25	20.0%	$1.50	per square foot	$135,313								135,313															$135,313
2.3	Pavement/ Parking	**#3**	Patching, crack sealing, sealing and striping of asphalt pavement	5		5	360,000	90,000	$0.36	20.0%	$0.44	per square foot	$39,364					39,364					39,364					39,364						39,364	$157,455
2.4	Amenities		None	-						20.0%																										
2.5	Utilities		None	-						20.0%																										
3.0	**STRUCTURE**																																		
3.1	Substructure		None	-						20.0%																										
3.2	Superstructure		None	-						20.0%																										
4.0	**BUILDING ENVELOPE**																																		
4.1	Roof	**#3**	TPO 60 mil roof replacement - low rise	20	17	3	54,000	54,000	$5.40	20.0%	$6.48	square foot	$349,846			349,846																				$349,846
4.2	Facades	**#3**	Renew/recaulk expansion & control joints	15		15	2,880	2,880	$1.17	20.0%	$1.41	linear foot	$4,054																4,054							$4,054
4.3	Windows and Doors	**#3**	Commercial window replacement	25	17	8	170	170	$854.25	20.0%	$1,025.10	each	$174,267								174,267															$174,267
4.3	Windows and Doors	**#3**	Overhead service door replacement 12' x 16'	15	12	3	2	1	$3,251.85	20.0%	$3,902.21	each	$3,902			3,902																3,902				$7,804
5.0	**BUILDING INTERIORS**																																		
5.1	Bsmt/Attic		None	-						20.0%																										
5.2	Interior F & C	**#3**	Corridor finish refurbishment	8	5	3	90,000	30,000	$10.00	20.0%	$12.00	per square foot	$360,000			360,000								360,000									360,000		$1,080,000
5.2	Interior F & C	**#3**	Kitchen refurbishment (commercial)	8	5	3	6,000	2,000	$11.39	20.0%	$13.67	per square foot	$27,336			27,336								27,336									27,336		$82,008
6.0	**ACCESSIBILITY**																																		
6.1	Accessibility		None	-						20.0%																										
7.0	**BUILDING SYSTEMS**																																		
7.1	Plumbing	**#3**	Replace residential electric water heater (66 gal.)	15	5	10	1	1	$3,953.47	20.0%	$4,744.16	each	$4,744										4,744													$4,744
7.1	Plumbing	**#3**	Replace commercial gas-fired water heater (<200 MBH)	15	5	10	2	2	$9,631.61	20.0%	$11,557.93	each	$23,116										23,116													$23,116
7.2	HVAC	**#3**	Replace R-410a air cooled condensing unit (3.0 - 4.5 tons)	18	13	5	1	1	$4,703.44	20.0%	$5,644.13	each	$5,644					5,644																		$5,644
7.2	HVAC	**#3**	Replace rooftop package unit (80-ton) - Single Zone, VAV, DX Cooling, Gas Heat	20	var		5	1	$152,210.27	20.0%	$182,652.32	each	$182,652							182,652	182,652	182,652	182,652	182,652												$913,262
7.2	HVAC	**#3**	Replace MAU (150-200 MBH input) - Heating Only, Gas Fired	20	13	7	2	2	$18,645.43	20.0%	$22,374.52	each	$44,749							44,749																$44,749
7.3	Electric	**#3**	Perform IR survey	-			5	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050				2,050				2,050				2,050				2,050				2,050		$10,251
7.4	F/L Safety	**#3**	Replace fire alarm control panel with new devices per bid	20	17	3	1	1	$87,500.00	20.0%	$105,000.00	lump sum	$105,000			105,000																				$105,000
7.5	Elevators	**#3**	Elevator modernization - 3-story Hydraulic	20	17	3	2	2	$125,290.00	20.0%	$150,348.00	per elevator	$300,696			300,696																				$300,696
8.0	**MUNICIPAL RESEARCH**																																		
8.1	Municipal Information & Zoning		None	-						20.0%																										
8.2	Building & Planning		None	-						20.0%																										
8.3	Fire Department		None	-						20.0%																										
9.0	**NATURAL HAZARDS**																																		
9.1.1	Seismic		None	-						20.0%																										
9.1.2	Flood Zone		None	-						20.0%																										
9.1.3	Wind Zone		None	-						20.0%																										
9.2	Suspect Mold & Moisture		None	-						20.0%																										
												ANNUAL RECOMMENDATIONS, UNINFLATED			1,161,297	2,050	45,008		227,401	502,210	182,652	249,876	569,988	2,050			43,418	2,050		3,902	387,336	41,414	**$3,420,654**
												INFLATION FACTOR, IN PERCENTAGE 1.030	100.00%	103.00%	106.09%	109.27%	112.55%	115.93%	119.41%	122.99%	126.68%	130.48%	134.39%	138.42%	142.58%	146.85%	151.26%	155.80%	160.47%	165.28%	170.24%	175.35%	
												ANNUAL RECOMMENDATIONS, INFLATED @ 3.00% AFTER YEAR ONE			**$1,232,020**	**$2,175**	**$47,749**		**$241,250**	**$532,795**	**$193,776**	**$265,094**	**$604,701**	**$2,175**			**$65,674**	**$3,194**		**$6,450**	**$659,414**	**$72,620**	**$3,929,085**
																																		PRESENT VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR	**$1.30**
																																		INFLATED VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR	***$1.50***

1.0 PURPOSE & LIMITATIONS

The exclusive purpose of this *Capital Needs Assessment* (the *Report*) is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools*, in its Due Diligence effort in evaluating the Property. Amendments to EBI's limitations as stated herein that may occur after issuance of the Re*port* are considered to be included in this *Report. EBI's* liability to the client wishing to use this *Report* is limited to the cost of the *Report*. By accepting draft and final Reports, *Marblehead Public Schools* agrees to these terms and limitations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, easily accessible or made accessible by the property contact and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property. Municipal information was obtained through file reviews of reasonably ascertainable standard government record sources, and interviews with the authorities having jurisdiction over the property. Findings, conclusions and recommendations included in the *Report* are based on our visual observations in the field, the municipal information reasonably obtained, information provided by the Client, and/or a review of readily available and supplied drawings and documents. No disassembly of systems or building components or physical or invasive testing was performed. EBI renders no opinion as to the property condition at un-surveyed and/or inaccessible portions of the Subject Property. EBI relies completely on the information provided during the site survey or provided or obtained during the writing of the draft *Report*, whether written, graphic or verbal, provided by the property contact, owner or agent, or municipal source, or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. EBI assumes no responsibility for property information or prior reports withheld or not provided during preparation of the *Report* for any reason whatsoever. The observations in this *Report* are valid on the date of the survey. EBI uses the date of first occupancy to establish the Subject Property age.

The contents of the *Report* may not represent a detailed analysis by individual consultants of the Subject Property façades, roof, paving, mechanical, electric, plumbing, elevator, sprinkler, or fire and life safety systems depending on the scope of work selected by *Marblehead Public Schools.* The extent of the physical survey for the production of this Report has been limited, by contract and agreed upon Scope of Work, (consistent with the guidelines of the ASTM E 2018 – 15 Scope of Work, as referenced below) to visual observations and a walk through of the property. Assumptions regarding the overall condition of the property have been developed based upon a survey of representative areas of the Subject Property. As such, no representation of *all* aspects of *all* areas or components is made.

Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at the Subject Property. Routine, normal or customary annual maintenance or preventative maintenance items are not reported or included in this *Report*.

Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Non-Critical Repair, and/or that can't be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

This assessment is based on the evaluator's opinion of the physical condition of the improvements and the estimated expected remaining useful life of those improvements, based on his observations in the field at the time of the survey, and the written or verbal information received. The conclusions presented are based on the evaluator's professional judgment. The actual performance of individual components or systems may vary from a reasonably expected standard and may be affected by circumstances that are not readily ascertainable or viewable, or that occur after the date of the survey.

Where quantities cannot be determined from information provided or physical takeoffs, lump sum estimates or allowances are used. The costs shown are based on professional judgment and the apparent or actual extent of the observed defect, including the cost to design, procure, construct and manage the repair or replacement. Where property-unique or specialty equipment is present, EBI relies solely on data regarding maintenance and/or replacement costs provided by the designated site contact or on-site individuals with first-hand knowledge of the specific equipment.

EBI provides Pre-Survey Questionnaires for completion by the designated site or property contact, as provided by *Marblehead Public Schools* or their agent. The information requested in the questionnaire assists in our research of the Subject Property to obtain pertinent property data, discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs, and pending repairs and improvements. If the completed Pre-Survey Questionnaire is not returned as of this *Report*, this is a limiting factor in our analysis. If the questionnaire is returned at a later date showing a material difference from information provided in the Report, we will forward the questionnaire to you under separate cover. If no response is received, or no material difference is noted in the questionnaire, our Report will not be modified.

EBI may not have been provided with roof design or installation details and may not have been provided with warranty information (see Section 3.4). EBI has relied on general industry performance of similar type roofs and general observations of the surface covering of the roof to determine if roof replacement is warranted during the analysis term. EBI is not responsible for roof failure that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

EBI may not have been provided with façade reports and cannot opine on costs to repair façades of buildings five stories or more without receipt of current façade reports (see *Section 3.3*). EBI has relied on general industry performance of similar façade systems and general observations of the surfaces of the façades to determine if repair or replacement is warranted during the analysis term. EBI is not responsible for façade failures that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

If the municipality in which the Subject Property is located has governing ordinances requiring façade studies, and a copy is not provided to EBI, this is a limiting factor in our assessment and analysis. Prudent property management will have had façade reports completed on their high-rise property, and if a copy of the report is not provided to EBI, this too, is a limiting factor in our assessment and analysis.

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The gathering of data and information for this *Report* was completed in general conformance with ASTM E 2018 – 15 Standard Guide for Property Condition Assessment: Property Condition Assessment Process, and with the scope of services approved by the client.

The survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. The level of care and skill exercised is also commensurate with the fees charged for EBI's services. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The *Report* speaks only as of its date, in the absence of a specific written update of the *Report*, signed and delivered by EBI.

Limiting factors

Any additional information that becomes available after *EBI's* survey and draft submission concerning the Subject Property should be provided to *EBI* so that *EBI's* conclusions may be revised and modified, if necessary, at additional cost. This *Report* has been prepared in accordance with *EBI's Standard Conditions for Engagement*, which is an integral part of this *Report.*

DEVIATIONS FROM THE GUIDE

EBI includes an analysis of estimated Capital Needs in this *Report*. *EBI* uses an approximate threshold of $1,000 in aggregate for reporting Critical & Non-Critical Repair or Capital Need items. Material life, safety, health, fire or building code violation or building or property stabilization issues observed at the Subject Property will be reported regardless of cost.

CONDITION

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

Excellent	The component or system is in new or like new condition and no deferred maintenance is recommended.
Good	The component or system is sound and performing its function, and/or scheduled maintenance can be accomplished through routine maintenance. 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 at a capacity that is considered to be acceptably sufficient but may be obsolete or is approaching the end of its expected useful life. The component or system may exhibit evidence of deferred maintenance, previous repairs, or workmanship not in compliance with commonly accepted standards. Repair or replacement may be recommended in the near-term of the loan to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its expected useful life.
Poor	The component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its typical expected useful life, excessive deferred maintenance or state of disrepair. Present condition could contribute to, or cause, the deterioration of other adjoining elements or systems. Repair or replacement is recommended.

ABBREVIATIONS

EBI may use various abbreviations to describe various site, building or system components or legal descriptions. Not all abbreviations may be applicable to all *Reports.* The abbreviations most often utilized are defined below.

ACT	Acoustic Ceiling Tile
ABS	Acrylonitrile-Butadiene-Styrene
ADA	Americans with Disabilities Act
AHU	Air Handling Unit
APA	American Plywood Association
BTU	British Thermal Unit (a measurement of heat)
BTUH	British Thermal Units per Hour
BUR	Built Up Roof
CFM	Cubic Feet per Minute
CMU	Concrete Masonry Unit
CPVC	Chlorinated Poly Vinyl Chloride
DWH	Domestic Water Heater
EIFS	Exterior Insulating Finishing System
EPDM	Ethylene Propylene Diene Monomer
EUL	Expected Useful Life, Effective Useful Life
FF&E	Furniture, Fixtures & Equipment
FCU	Fan Coil Unit
HCP	Handicapped Person
FEMA	Federal Emergency Management Agency
FHA	Forced Hot Air
FHW	Forced Hot Water
FIRM	Flood Insurance Rate Map
FOIA	Freedom Of Information Act
FOIA	Freedom Of Information Act
FRT	Fire retardant treated plywood
GFI	Ground Fault Interrupt (circuit)
GWB	Gypsum Wall Board
HCP	Handicapped Person
HID	High Intensity Discharge (lighting)
HVAC	Heating, Ventilating and Air Conditioning
KW	Kilowatt
KVA	Kilovolt Ampere
MBH	Thousand BTUs per Hour
MDP	Main Distribution Panel
OSB	Oriented Strand Board
PEX	Polyethylene Cross-Linked Tubing
PTAC	Packaged Terminal Air Conditioning (Unit)
PVC	Poly Vinyl Chloride
RTU	Roof Top Unit
RUL	Remaining Useful Life
TPO	Thermoplastic polyolefin
SEER	Seasonal Energy Efficiency Rating
UBC	Uniform Building Code
VAV	Variable Air Volume box
VCT	Vinyl Composition Tile
VWC	Vinyl Wall Covering

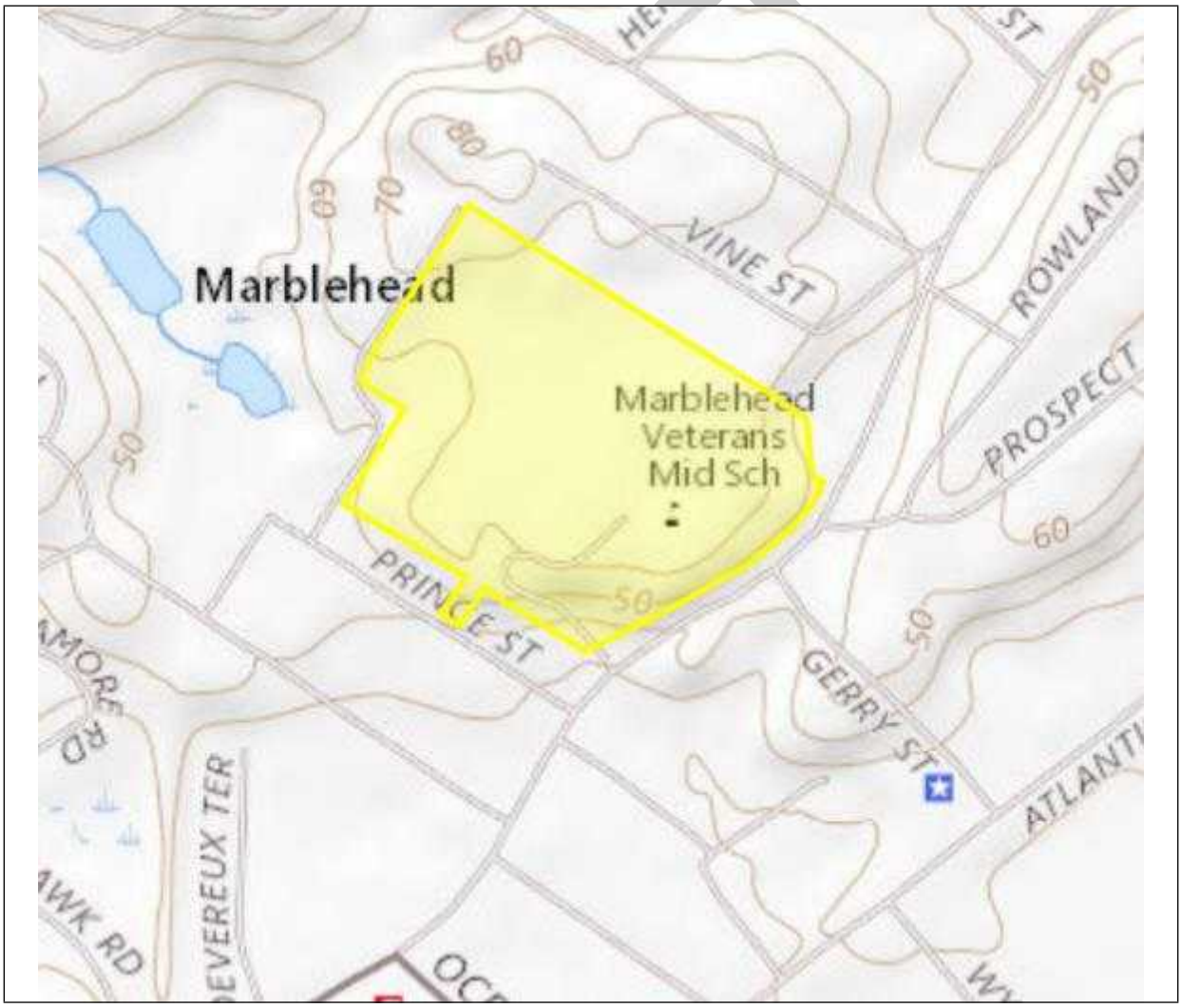
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2.0 SITE

2.1 TOPOGRAPHY & DRAINAGE

DESCRIPTION

The Subject Property is located at an elevation of approximately 60 feet above mean sea level (msl). The topography of the Subject Property is tiered and slopes moderately south 20 feet. The Subject Property is located in a relatively flat area, and the general slope of the surrounding region is down to the south and east (see Topo Map below).



Topographic Map

	
Looking at west façade from entrance drive	Patio and stairways leading to the entrance drive from the southwest building corner
	
East topography looking south	North topography looking east

OBSERVATIONS

No topography problems were reported or observed. Slopes pitching drainage away from the building appear to be adequate. Detriments or problems such as ground fractures, settlement areas, or evidence of erosion or chronically standing water were not observed. Slopes within parking areas appeared to be adequate for storm water control.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.2 LANDSCAPING & SITE IMPROVEMENTS

DESCRIPTION

The property has municipally-owned, extensive, mature landscaping at the front of the site, the entrances to the property, and around the building and parking areas. Landscaping includes deciduous and evergreen trees, shrubs, ground cover, and lawns.

Pylon signage is located at the front of the building along Pleasant Street. The pylon sign is supported by wood posts.

Cast-in-place concrete sidewalks are provided for pedestrian traffic. The concrete sidewalks are assumed be approximately 4-inches in thickness and with steel reinforcement. Exterior stairs provide access to the buildings and are constructed with cast-in-place concrete and steel pipe railings.

Lighting is provided by pole-mounted fixtures on aluminum poles, approximately 20 feet in height and spaced around the site, parking areas, and along the main entrance drive. Building-mounted lights provide exterior building lighting at the rear of the building and along pedestrian walkways, and soffit-mounted lights are located at the entrances.

The Subject Property has chain link fencing along the athletic fields.



Representative landscaping and sidewalks at the south side of the east wing



Representative sidewalk and ramp



Representative sidewalk



Main pylon sign at front of building



Exterior concrete stair



Pole-mounted lighting

OBSERVATIONS

The property landscaping appears to be in good condition, although some areas show signs of distress due to typical winter conditions.

The pylon sign at the main entrance is in good condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for refurbishment of the sign during the analysis term.

The sidewalks appear to be in good to fair condition with observed areas of deterioration and a trip hazard at the north walkway between the west and east wings. Based on observed and reported conditions, Critical Repairs are recommended for trip hazard repairs and Non-Critical Repairs are recommended for sidewalk repairs. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for routine concrete sidewalk repairs during the analysis term.

The concrete steps and accompanying railings appear to be in good condition.

The parking area lighting and exterior light fixtures appear to be in good condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for exterior light fixture replacement during the analysis term.

The fencing along the tennis court and athletic fields are in good condition.

The site retaining walls appear to be in good overall condition.



Settled area of sidewalk creating trip hazard



Crack in concrete sidewalk

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Repair trip hazards**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Repair concrete sidewalks**

Please see Table 2 for the recommended Capital Needs listed below:

- **Refurbishment of pylon signs**
- **Repair concrete sidewalks**
- **Replacement of parking area poles and lighting**

2.3 PAVEMENT AND PARKING

DESCRIPTION

According to a count in the field, the property is improved with parking areas for 131 cars, including 4 accessible spaces. See *Section 3.6 Americans with Disabilities Act Accessibility Guidelines (ADAAG)* for additional accessible parking information for people with physical disabilities.

The property has approximately 1,800 feet of drive lanes and roadways running through the site, and the parking is laid out along these drive lanes. The parking is configured in lots toward the rear and sides of the buildings.

Two entry drives provide access to the Subject Property from the adjacent road frontages.

The parking areas have asphalt pavement, and the loading areas also have asphalt pavement.

The parking area has precast concrete curbing.



Parking along the west side of the building



Parking lot in the rear, adjacent to the athletic fields



Parking in the rear, between the two school wings



East access drive, looking south

OBSERVATIONS

No problems were reported regarding the adequacy of the parking areas, with the exception of inaccessible access for buses at the main entrance. The facilities representative noted buses drop students off at a north entrance since the buses cannot navigate the rotary adjacent to the main southeast entrance.

The asphalt paved areas are in good to fair condition. Minor cracking, settlement, alligator cracking in the pavement were noted in a few locations. Based on observed and reported conditions, Non-Critical Repairs are recommended for patching, crack sealing, sealing and striping of the asphalt pavement.

Based on its reported age, current condition, and expected useful life, Capital Needs are recommended asphalt overlay, during the analysis term.

The parking area sealant and striping is in good condition, with indications of average wear. The facilities representatives noted that striping was completed within the past year. Based on the observed condition of the parking and drive areas and the average effective useful life of pavement and pavement sealants and striping, the application of sealants and striping of the parking and/or lane markings are recommended as Capital Needs during the analysis term.

The curbs are in good condition. The curbs will be maintained at the property as part of operational expenses during the analysis term.



Representative asphalt cracking



Cracking at asphalt joint in rear parking lot



Representative alligator cracking in rear lot between two building wings



Cracking at asphalt joint at front access road

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Patching, crack sealing, sealing and striping of asphalt pavement**

Please see Table 2 for the recommended Capital Needs listed below:

- **Asphalt overlay**
- **Patching, crack sealing, sealing and striping of asphalt pavement**

2.4 SITE AMENITIES

DESCRIPTION

A shed adjacent to the athletic fields acts as a "snack shack" and is apparently maintained by the local booster club.



Shed at rear of property, adjacent to athletic fields



Shed at rear of property, adjacent to athletic fields

OBSERVATIONS

The shed appears to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.5 UTILITIES

2.5.1 Water & Sewer

DESCRIPTION

Town of Marblehead water and sewer department provides water and sewer service to the Subject Property site. The sewer is discharged into the municipal lines beneath the abutting street.

2.5.2 Gas/Oil

DESCRIPTION

National Grid provides propane service to the Subject Property. No oil service is provided to the Subject Property.

2.5.3 Electrical

DESCRIPTION

Marblehead Municipal Light Department (MMLD) provides electric service to the site. The service enters the property overhead from a pole at the front of the site, then runs underground to a pad-mounted transformer feeding secondary runs to the main switchgear. The utility reportedly owns and maintains the lines up to the transformers. The secondary feeds to the switchgear are the responsibility of the Subject Property owner.

2.5.4 Storm Drainage

DESCRIPTION

The storm water flow from the site is controlled via on-site structures discharging into the municipal system. The building's internal roof drains are tied to catch basins in the Subject Property parking areas. The parking lots are configured with slopes toward curbs and catch basins controlling storm water flow. The drainage system is the responsibility of the Subject Property owner.



Incoming water service



Representative restroom plumbing

	
Main electrical service	Transformer

OBSERVATIONS

There were no reported or observed problems with the Subject Property water, sewer, gas, electric, or storm water drainage systems. The utilities appeared to be configured and operating in a manner consistent with their intended use and reportedly adequate to meet the needs of the Subject Property.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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3.0 STRUCTURE

3.1 GENERAL INFORMATION

Design information was not obtained or provided to *EBI* for review.

3.2 SUBSTRUCTURE

DESCRIPTION

The majority of the Subject Property substructure was not visible due to the surrounding grade. Construction documents were not available for our review. Based on our visual survey the property appears to have cast-in-place, reinforced concrete foundations supporting the exterior walls and load bearing interior walls and/or columns.

Concrete slabs-on-grade of underdetermined thickness are provided throughout the building. The design and construction of the foundation footings is intended to properly spread out the building's vertical loads without exceeding the bearing capacity of the underlying soil.

The concrete floor slabs are typically reinforced with welded wire mesh or steel reinforcement bars or fiber mesh for added flexural strength and to minimize cracking. The concrete slabs are generally constructed over a compacted gravel or sand base and vapor barrier to aid in preventing water migration from the bearing soil to the slab.

In cold climates the footings are constructed below the prescribed frost level to minimize movement due to freeze-thaw conditions. Varying sizes of steel reinforcing bars typically exist in the foundation walls and footings for tensile and bending strength.

In cold climates the slabs and/or foundation walls are often insulated around the perimeter of the building. Foundation walls servings as retaining walls for basement areas of the building generally are constructed with waterproofing and drainage systems to prevent moisture infiltration.



Representative slab on grade



Basement column on concrete pier

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OBSERVATIONS

The majority of the Subject Property substructure was not visible due to the surrounding grade. The substructure appears to be sound and in good condition. No indications of problems with the substructure were reported or observed. Unless visible, EBI's assessment of substructure condition is primarily based on obvious irregularities with the superstructures (including limited observations of exterior and interior construction and finishes) and the condition of the slab-on-grade when present. The condition of substructure hidden construction elements, or defects not readily observable, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the substructures appear to be in good overall condition and are performing as designed. No obvious indications of irregularities, including differential settlement, sloped floors, significant cracks, out-of-plumb building elevations, or other perceived movement, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.3 SUPERSTRUCTURE

DESCRIPTION

Based on *EBI's* visual survey and experience with similar structures, the Subject Property's superstructure consists of steel framing.

Primary load-bearing members consist of steel columns and steel girders or steel truss joists supporting steel floor and roof beams. Upper floor structures consist of concrete on steel decking , supported by the steel beams. The roof structure consists of steel decking, supported by steel beams or open-web steel roof joists. Lateral resistance is provided by a combination of floor and roof diaphragms, and interior and exterior braced walls.

There are some sections of the building, primarily the PAC (east) wing that appear to be constructed with precast concrete floor planks and cast in place concrete beams and girders.

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Representative steel braced frame



Metal deck supported by steel framing



Concrete floor and beam construction at PAC (east)



Steel truss framing in gym

OBSERVATIONS

The superstructures are partially obscured from view by interior and exterior finishes. Unless visible, EBI's assessment of superstructure condition is predominantly based on obvious irregularities with exterior and interior construction and finishes. Concealed and/or obscured structural systems or connections were not viewed. The condition of any hidden structural defects, or defects not readily observable from the areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the superstructures appear to be in good overall condition and appear to be performing as designed. No obvious indications of irregularities, including significant floor and/or roof deflections, significant cracks, noticeably out-of-plumb building elevations, or other perceived structural defects, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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4.0 BUILDING ENVELOPE

4.1 ROOFING

DESCRIPTION

During the site survey, the roof was accessed through a door in the stairwell and representative areas of the roof were observed. *EBI* was not provided with roof design or installation details and was not provided with warranty information. Reportedly, no warranty is in place on the Subject Property roof.

The Subject Property typically has a low-slope, TPO-membrane roof throughout except for the southern wing of the building where there is an EPDM-membrane roof per the following chart.

SUBJECT PROPERTY ROOFING

ADDRESS / NAME	ROOFING TYPE	APPROX. AREA	APPROX. AGE	PERIMETER
Front Building (South Side)	EPDM-Membrane	23,500	>17 (Unknown)	Metal flashing
Typical Roof	TPO-membrane	54,000	17	Metal flashing

Low-slope roof membranes terminate at vertical interfaces (equipment platforms, parapets and/or facades) with metal or membrane flashings. Roof penetrations are flashed with membrane boots. The roof membrane extends up parapets walls and terminates under metal copings.

Roof slope and crickets direct rainwater to internal perimeter roof drains and leaders.

Rooftop features include stair penthouse structures, curb-mounted HVAC units and equipment, perimeter parapet walls with metal coping, electrical conduit, traction pads, natural gas pipe and exhaust penetrations.



Representative TPO-roof



Flashing at roof termination

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Roof drain	Overall view of roof looking north
	
Parapet at front (south) side of building	Representative EPDM membrane

OBSERVATIONS

In estimating the condition and effective useful life of roofs, *EBI* has relied on general industry performance of similar type roofs and general observations of the surface covering to determine if replacement is warranted during the analysis term.

The TPO-membrane roof appears to be in good condition; however, most was not observable due to snow. The roof is a replacement and approximately 17 years old. Roofs of this type typically have an average effective useful life of approximately 20 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. The roof maintenance consists of mastic touchup and re-coating of seams and roof penetrations every two to three years. Based on the reported age, current condition, and expected useful life, roof replacement is recommended as a Capital Need during the analysis term.

The EPDM-membrane roof appears to be in fair condition. Discussions with the maintenance staff regarding the roof's condition revealed that there are active roof leaks at the D-Wing where the roofing

is EPDM. The roof age is unknown but known to be greater than 17 years old. Roofs of this type typically have an average effective useful life of approximately 20 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. The reported roof maintenance consists of mastic touchup and re-coating of seams and roof penetrations every two to three years. Based on observed and reported conditions Critical Repairs are recommended for replacing the EPDM-membrane roof.

The slope and drainage design of the building roof appeared to be generally adequate.

Based on observed and reported conditions Non-Critical Repairs are recommended for implementation of a roof preventative maintenance practice program (PMP). The PMP should include routine roof walks, seasonal gutter cleanouts, roof drain cleaning, routine tree trimming around the roof and other best management practices.

The parapet walls and metal coping were found to be in good overall condition.

The condensation drain lines for roof top HVAC units discharges directly onto the roof membrane at most units. This condition can lead to advanced degradation of the roof surface at these locations. Based on the observed conditions, Non-Critical Repairs are recommended to extend the condensation drain line discharge to a roof drain.



Worn roofing at C and D wing, where EPDM-membrane is present



RTU without condensation line to drain

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **EPDM roof replacement**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Extend condensation drain line at roof top units**
- **Ongoing roof repairs & maintenance, before roof replacement**

Please see Table 2 – Capital Needs for the recommended items listed below:

- **TPO roof replacement**

4.2 FAÇADES

DESCRIPTION

Primary exterior materials consist of red brick veneer. The façades have concrete bands oriented vertically and horizontally throughout as an architectural feature. Extruded bands of brick are provided in the vertical orientation for texture and interest. Punched and ribbon windows are located throughout each façade. The front entrance is enhanced with a large canopy. The original front entrance consists of a grand recessed arched doorway. The new entrance includes a canopy overhang.



Façade at the C Wing courtyard



Exterior of the PAC auditorium



Entrance at the south side of A Wing



Original front entrance

OBSERVATIONS

The estimate of the façade condition is based on limited observation of representative observed areas of the exterior walls and the age of the improvements. Façade observations for a multi-story building are limited to exterior finishes of the ground level façades and those portions of the façades observable from adjacent roof areas or adjacent buildings. This does not represent a comprehensive or in-depth façade survey. Therefore, observations in this *Report* cannot be the sole source of façade analysis.

Concealed and/or obscured façade material attachment systems were not viewed. hidden defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this assessment.

The observed areas of the brick and concrete veneer appear to be in good to fair condition. Significant defects include bowed brick on the east side of the PAC/A Wing above a vent. This could be a falling hazard. Based on observed and reported conditions, repairing bowed brick is recommended as a critical repair. Other than this area the brick appears in good condition with some areas of staining and worn mortar. Based on the age and the condition of the brick masonry exterior walls, it is recommended that a dedicated repair program be instituted for anticipated degradation of the mortar joints and overall exterior wall performance. Walls should be routinely checked for fractured, spalling or missing mortar joints, and cleaning or tuck pointing of the brick and joints should be performed where necessary as part of routine maintenance.

The observed sealants along the control joints appear to be in fair condition overall, with weathered and cracked sealant noted in several locations around the building. Based on observed and reported conditions Non-Critical Repairs are recommended for sealant and control joint renewal. Based on the reported age, current condition, and expected useful life, sealant and control joint renewal is recommended as a Capital Need during the analysis term.

The entrance canopy appears to be in good overall condition.

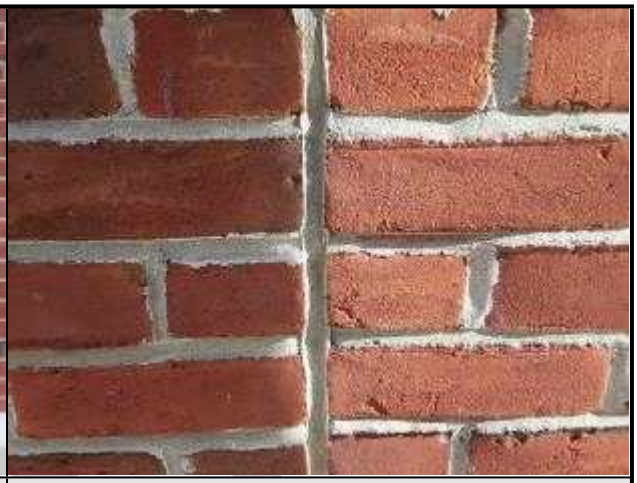


Cracked and bowed brick at vent lintel, at A-Wing/PAC



Cracked and bowed brick at vent lintel, at A-Wing/PAC

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Discolored brick with worn mortar at main entrance	Worn and cracked control joint sealant

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Repair bowed and cracked brick**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Control joint sealant renewal**

Please see Table 2 for the recommended Capital Needs listed below:

- **Control joint sealant renewal**

4.3 WINDOWS AND DOORS

DESCRIPTION

Aluminum-framed double-hung and fixed punched windows with insulated glazing are located along most all elevations of the building on each floor level. The area of the building with the PAC does not include exterior windows.

The exterior doors consist of average-quality, commercial-grade, aluminum-framed, dual-leaf, aluminum and glass doors accessing the lobby spaces at the building. Secondary entrances and service doors are both single and dual leaf metal units set in metal frames. The doors are furnished with standard hardware, and panic hardware was observed at emergency exit doors. There is one loading area at the north side of B-Wing with a roll-up door.

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Representative double hung window



Representative windows and service door



Representative double-hung and fixed windows



Representative storefront entrance



Representative service door



Roll up door at B Wing

OBSERVATIONS

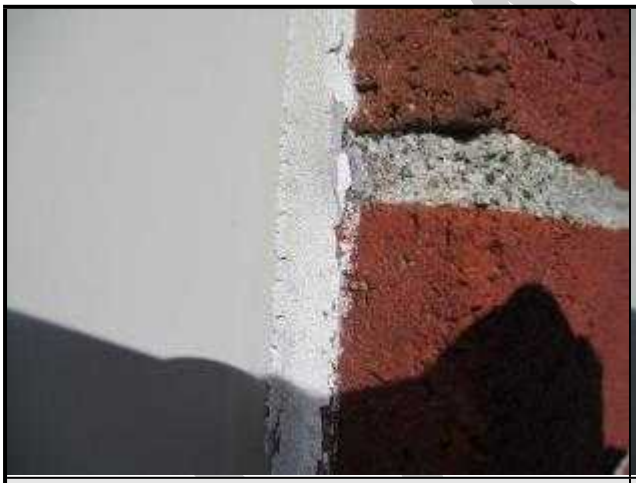
The observed windows appeared to be weather-tight and in good overall condition. The facilities team noted the windows were all replaced during the 2004 renovation. Based on the reported age, current condition, and expected useful life, sealant renewal around doors is recommended as a Capital Need during the analysis term.

The observed storefront entry systems appeared to be weather-tight and in good overall condition.

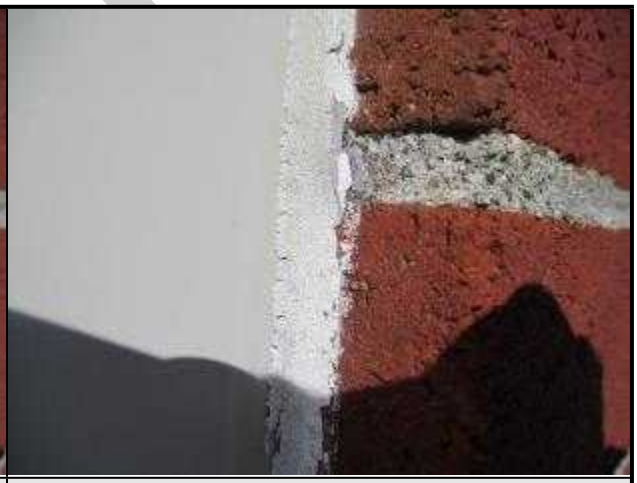
The observed sealants along the windows and doors appear to be in fair condition overall, with weathered and cracked sealant noted in several locations around the building. Based on observed and reported conditions Non-Critical Repairs are recommended for sealant and control joint renewal at windows and doors.

Aside from normal wear, the observed doors appear to be in good condition.

Aside from normal wear, the observed roll-up door appears to be in good condition. Based on the reported age, current condition, and expected useful life, garage door replacement is recommended as a Capital Need during the analysis term.



Representative worn and cracked window sealant



Representative worn and cracked window sealant

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Renewal of the sealants around the windows and doors**

Please see Table 2 for the recommended Capital Needs listed below:

- **Window replacement**
- **Replace roll-up door**

5.0 BUILDING INTERIORS

5.1 BASEMENTS/ATTICS/PENTHOUSES

DESCRIPTION

The Subject Property has a partial, unfinished basement accessed by multiple stairwells. The basement contains mechanical and storage areas. No attic spaces are present at the property.



C-Wing basement



A-Wing basement

OBSERVATIONS

The basements were generally in good condition. Concrete cracks were observed in the floor slab and wall of the A-Wing basement. The observed cracking is not considered to represent a significant structural issue. However, they should be properly sealed to avoid water infiltration. Based on observed conditions, Critical Repairs are recommended for the repair of basement concrete cracking.

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Concrete floor slab crack in A-Wing basement	Vertical wall crack in A-Wing basement
	
Vertical wall crack in A-Wing basement	Vertical wall crack in A-Wing basement

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Seal concrete cracks at A-Wing basement**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

5.2 INTERIOR FINISHES & COMPONENTS

DESCRIPTION

The interior areas into which entry was made possible by the site contact are finished with average quality materials consistent with similar property use types. The finishes generally consist of the materials listed in the table below.

TYPICAL INTERIOR FINISHES

AREA OR ROOM	FLOOR	WALLS	CEILING
Lobby	Vinyl tile	Painted GWB	Suspended acoustic tile
Administrative offices	Carpet / Vinyl tile	Painted GWB	Suspended acoustic tile
Corridors	Vinyl tile	Painted GWB, Polished block	Suspended acoustic tile
Auditorium	Carpet	Painted GWB, Wood paneling	Painted GWB
Library	Carpet	Painted GWB	Painted GWB
Classrooms	Vinyl tile	Painted GWB	Suspended acoustic tile
Cafeteria	Vinyl tile	Painted GWB	Suspended acoustic tile
Gymnasium	Hardwood	Painted GWB	Exposed structure
Kitchen	Vinyl & ceramic tile	Painted GWB, Ceramic tile	Suspended acoustic tile
Restrooms	Ceramic mosaic tile	Ceramic tile, Painted GWB	Suspended acoustic tile
Stairs	Rubber floor tile	Painted GWB, Polished block	Exposed stair structure

The lobby area of the building has vinyl tile, painted GWB walls, and suspended acoustic tile ceilings. Classrooms and cafeteria spaces typically include vinyl tile floors, painted GWB walls, and acoustic tile ceilings. Corridor walls include some polished block walls. The auditorium space includes stadium style seating, a stage, and dressing rooms adjacent to the stage.

The cafeteria and kitchen are located in the C-Wing of the building. The cafeteria and kitchen is provided with vinyl tile floors. Kitchen equipment includes gas ranges, warming ovens, food preparation tables and mixing centers, refrigerators, walk-in coolers, commercial dishwasher and associated equipment.

Stairways are included in each wing. Stairs are typically constructed with steel stringers and steel pipe railings. The treads and risers are rubber tile.



Representative corridor



Auditorium (“PAC”) space

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Library



Representative classroom



Cafeteria



Gymnasium



Kitchen



Representative stairwell

OBSERVATIONS

A representative sampling of the middle school areas were surveyed. The interior spaces are in good overall condition. Ceiling stains were observed in the auditorium from prior, fixed, roof leaks. Based on observed conditions, Non-Critical Repairs are recommended for repairing the stained ceilings in the auditorium.

The corridors were generally in good condition. At the joints between building wings there was cracking in the floor tile. This was noted as a common and consistent problem. Some areas appeared to be trip hazards. Based on the observed conditions, Critical Repairs are recommended to replace the deteriorated vinyl floor tile with flooring that includes an expansion joint. Based on their reported age and estimated remaining useful life and current condition, corridor refurbishment, including painting the walls and trim, and flooring replacement is recommended as a Capital Need item.

The administrative offices, auditorium, gymnasium, and classrooms were all found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The kitchen finishes were found to be in good condition. Based on their reported age and estimated remaining useful life and current condition, kitchen refurbishment is recommended as a Capital Need during the analysis term.

The observed restroom finishes were found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The interior stairs and stair finishes appear to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.



Representative cracked vinyl flooring between wings



Representative cracked vinyl flooring between wings

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Ceiling stains in auditorium	Ceiling stains in auditorium

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Repair vinyl flooring/trip hazards**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Repairing stained ceiling in auditorium**

Please see Table 2 for the recommended Capital Needs listed below:

- **Corridor refurbishment**
- **Kitchen refurbishment**

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6.0 ACCESSIBILITY

DESCRIPTION

The *Americans with Disabilities Act (ADA)*, *Title III*, *28 CFR Part 36*, enacted July 26, 1990 and effective January 26, 1992, governs public accommodation and commercial properties. *Title III* of the *ADA* divides facilities into two basic categories: places of *public accommodation* and *commercial facilities*, with different obligations for each facility type. The provisions of *Title III* provide that persons with disabilities should have accommodations and access to public facilities that are equal, or similar, to those available to the general public. Assessment of any other *Titles*, or their provisions of the *ADA*, including those that govern employer and/or tenant responsibilities, is specifically excluded from this Scope of Work and *Report*. Since tenants and employers at properties are usually responsible for making their leased areas *ADAAG*-compliant, assessment for *ADAAG* compliance in these areas was not completed.

Regardless of a property's age, these areas and facilities must be maintained and operated to comply with the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)*. Facilities initially occupied after the effective date are required to fully comply with the *ADAAG*. Existing facilities constructed prior to this date are held to the lesser standard of compliance as *Title III* calls for owners of buildings occupied prior to the effective date to expend "reasonable" sums, and make "reasonable efforts", to make "practicable" or "readily achievable" modifications to remove barriers, unless said modification would create an undue financial burden on the property or is structurally infeasible. When renovating buildings occupied prior to the effective date, the area renovated, and the path of travel accessing the renovated area, must comply with the *ADAAG*. As an alternative, a *reasonable accommodation* pertaining to the deficiency must be made. The definitions of "reasonable," "reasonable efforts," "practicable." and "readily achievable," are site dependent and vary based on the owner's financial status.

Due to the unique nature of each property, the extent of analysis required, and the many variables of compliance with the *ADAAG* guidelines, the evaluation of costs for full *ADAAG* compliance is beyond the scope of this *Report*. A separate *ADAAG Compliance Audit* may be ordered and may reveal aspects of the property that are not in compliance.

For the purposes of this *Report* the survey is limited to visual observations of only a representative sample of areas readily observable or easily accessible, and to those areas set forth in *EBI's Modified Accessibility Compliance Checklist and Costs* included in Appendix C of this *Report*. The survey is limited to identifying potential routine maintenance or renovation actions that can increase accessibility over time and may or may not, achieve full *ADAAG* compliance. Places of *public accommodation* at the Subject Property were visually observed for general compliance with the major requirements of the ADA, taking into consideration the current use of the property, its age and renovation history. No actual measurements were taken to verify compliance.

Questions concerning the *ADA* and the *ADAAG* may be addressed to the *United States Department of Justice (USDOJ) ADA Hotline* at (800) 514-0301 followed by touching "7" on the touch tone keypad. Additional information is available online at the ADA.gov website.

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Representative accessible parking	Representative ramp
	
Representative accessible bathroom	Representative accessible bathroom

OBSERVATIONS

The Subject Property falls into the *public accommodation* category. Therefore, the Americans with Disabilities Act (ADA), Title III, 28 CFR Part 36, is applicable.

A visual review of the property completed in conformance with *EBI's Modified Accessibility Compliance Checklist and Costs*, identified issues of non-compliance with the *ADAAG.* Modifications to correct observed *ADAAG* deficiencies for the Subject Property and their associated estimated costs are detailed in *EBI's Modified Accessibility Compliance Checklist and Costs* immediately following.

Modifications to correct observed *ADA* deficiencies for the Subject Property and their associated estimated cost are beyond the scope of this assessment. The client should engage an accessibility specialist to determine what modifications, if necessary, are required to bring the property into compliance with *ADA* guidelines.

	
Ramp at D-Wing does not have railing on each side	Only 4 handicap spots observed north of D-Wing

RECOMMENDATIONS

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Complete ADA compliance upgrades**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Veterans Middle School
Facility Address: 217 Pleasant St
Marblehead, Massachusetts
Property Age: 117 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

A. SCOPE OF THE ASSESSMENT

1.0 ADA - Parking and Exterior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
1.1	Does there appear to be sufficient handicapped-accessible parking spaces with respect to the total number of reported spaces?		✔		ADA 208.2	5 handicap spaces are required and 4 were observed	Provide accessible parking spaces for ADA compliance.	1	$200	each	$200
1.2	At least on in every six accessible spaces is required required to be van-accessible.	✔			ADA 208.2.4						
1.3	Are accessible car parking spaces 96 inches wide minimum? (Measure from the centerline of the markings.) (NOTE: In Florida accessible spaces must be 144 inches wide minimum)	✔			ADA 502.2						
1.4	Are accessible van parking spaces 132 inches wide minimum? (Exception: Van parking spaces can be 96 inches wide minimum when the access aisle is 96 inches wide minimum.) (Measure from the centerline of the markings.)	✔			ADA 502.2						
1.5	Are there access aisles adjacent to each accessible space, and if present, are they at least 60 inches wide? (Two spaces may share an access aisle that is between them. Exception: Angled van accessible parking spaces must have the access aisle on the passenger side of the accessible space.)	✔			ADA 502.3						
1.6	Do the access aisles adjoin an accessible route? (NOTE: Compliant curb ramps present at head of access aisle, or access aisles flush with sidewalks.)	✔			ADA 502.3						
1.7	Do the **existing** ADA spaces appear to be marked with the International Symbol of Accessibility on a vertically-mounted sign?	✔			ADA 502.6						
1.8	Do the **existing** van-accessible spaces appear to be marked with a sign reading "Van-Accessible"?	✔			ADA 502.6						
1.9	Is the bottom edge of the ISA sign at least 60 inches above the finish grade of the parking space? (NOTE: "VAN ACCESSIBLE" sign can be lower than 60 inches.)	✔			ADA 502.6						
1.10	Are the clear widths of the walking surface of the accessible routes 36 inches minimum?	✔			ADA 403.5.1						
1.11	Are accessible routes free from barriers, such as stairs, steps, or vertical changes greater than 1/4"? (NOTE: a vertical change up to 1/2" is allowable if beveled with a slope no steeper than 1:2. This does not include ramps.)	✔			ADA 303.2, 303.3						
1.12	Do all protruding objects located between 27 inches above the floor and 80 inches above the floor protrude no greater than 4 inches into the circulation path if they do not have protection via a guardrail or other barrier with a bottom edge 27 inches above	✔			ADA 307.2						
1.113	Is the clear opening width of the accessible entrance door at least 32", between the face of the door and the stop, when door is open 90 degrees?	✔			ADA 404.2.3						
1.14	Is the door hardware on exterior access doors to *areas of public accommodation* operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 402.7						
1.15	At accessible entrances, is the door threshold height less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
1.16	Does the accessible route feature a stable, firm, and slip-resistant walking surface?	✔			ADA 502.4						
1.17	If not all entrances are accessible, is there a sign at the accessible entrance with the International Symbol of Accessibility?			✔	ADA 216.6						
1.18	Do all ramps on accessible pathways serving *areas of public accommodation* (including curb ramps) appear to have a slope not exceeding 1:12?	✔			ADA 405.2						
1.19	Do depressed curb ramps on accessible pathways serving *areas of public accommodation* have flared sides with a slope not exceeding 1:10?	✔			ADA 406.3						
1.20	If a ramp has a rise higher than 6", are there handrails on both sides?		✔		ADA 405.8	Ramp at north D wing entrance does not have railings on both sides	Provide railings at both sides of ramps.	40	$40	per linear foot	$1,600
1.21	Does the width between railings for ramps on accessible pathways serving *areas of public accommodation* appear to be at least 36 inches?	✔			ADA 405.5						
1.22	Is there a level landing at least 60" x 60" at the top and bottom of each ramp run?	✔			ADA 405.7						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Veterans Middle School
Facility Address: 217 Pleasant St
Marblehead, Massachusetts
Property Age: 117 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

2.0 ADA - Interior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
2.1	Are all accessible routes at least 36" wide (32" wide through doorways)?	✔			ADA 403.5.1						
2.2	Do floor surfaces appear to be firm, stable, and slip resistant ?	✔			ADA 40.2, 302.1						
2.3	If carpeting is present, is it securely fastened, with a maximum pile height of 1/2 inch?	✔			ADA 302.2						
2.4	Do all objects on circulation paths through public areas, e.g. fire extinguishers, drinking fountains, signs, etc., protrude no more than 4" into the path, **or** if object protrudes more than 4", is the bottom leading edge at 27 inches or lower above the floor, or 80 inches or higher above the floor?	✔			ADA 307.4						
2.5	Is the door hardware on interior doors serving areas of public accommodation operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
2.6	Are the door threshold heights less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
2.7	**For elevators in areas of public accommodation only:** Is the interior at least 54" deep by at least 36" wide?	✔			ADA 407.4.1						
2.8	**For elevators in areas of public accommodation only:** Are in-car controls no less than 15" and no greater than 48" above the floor, **or** up to 54 inches above the floor for a parallel approach?	✔			ADA 408.4.6, 407.6.1						
2.9	**For elevators in areas of public accommodation only:** Do elevator control buttons appear to be designated by both Braille and by raised standard alphabet characters (mounted to the left of the	✔			ADA 407.4.1.1, 703.2						
2.10	**For elevators in areas of public accommodation only:** Are there audible signals which sound as the car passes or is about to stop at a floor?	✔			ADA 407.4.8						
2.11	**For elevators in areas of public accommodation only:** Is there a two-way emergency communication system within the elevator cab that is push-button activated, and does it provide visual indication that a rescue is on the way?	✔			ADA 407.4.9, 308						
3.0 ADA - Public Restrooms		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
3.1	Is the door hardware on accessible restroom doors operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
3.2	Do accessible restroom entry doors have a 32" minimum clear width when the door is opened 90 degrees?	✔			ADA 404.2.3						
3.3	Do public restrooms feature an unobstructed wheelchair turnaround (60" turning diameter)?	✔			ADA 306.2.1						
3.4	**Floor-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 59"-deep?	✔			ADA 604.8						
3.5	**Wall-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 56"-deep?	✔			ADA 604.8						
3.6	Is the centerline of the toilet 16 inches minimum to 18 inches maximum from the side wall or partition?	✔			ADA 604.2						
3.7	Is the height of the toilet seat 17 inches minimum to 19 inches maximum above finish floor?	✔			ADA 604.4						
3.8	Do sink/toilet handles appear to be operable with one hand without grasping, pinching or twisting?	✔			ADA 606.4						
3.9	Do the sinks appear to be provided with clearance for a wheelchair to roll under (minimum 27" clearance)?	✔			ADA 606.2, 606.3						
3.10	Is the height of the lavatory rim or counter 34 high maximum above the finished floor?	✔			ADA 606.3						
3.11	Are water supply, drain, and primer pipes, as well as sharp or abrasive surfaces under lavatories insulated or otherwise shielded to protect against contact?	✔			ADEA 606.5						
3.12	Do soap dispensers, towel dispensers and other accessories that are not over an obstruction (i.e., a sink) mounted no higher than 48" above the floor?	✔			ADA 308.2						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: **Veterans Middle School**
Facility Address: **217 Pleasant St**
Marblehead, Massachusetts
Property Age: **117 Years**

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

3.13	Are mirrors that are located above lavatories or countertops installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor?	✔			ADA 603.3						
3.14	Are compliant toilet grab bars provided in toilet **rooms** (minimum 36" rear and 42" side)?	✔			ADA 604.5						
							Total Estimated Cost of Handicapped-Accessibility Compliance Recommendations:				**$1,600**

7.0 BUILDING SYSTEMS

7.1 PLUMBING

DESCRIPTION

Domestic water service to the building consists of a 2 inch diameter water line which enters from under the slab on the southwest side of the building. Domestic water pressure at the Subject Property is provided by the incoming municipal service.

The observed supply domestic water piping is copper. Sanitary sewer drain and vent lines were reported as hub and spigot cast iron.

Backflow devices are furnished for the potable water and fire sprinkler systems at the site. The backflow preventers are located in the boiler room adjacent to the water service entrance.

A main gas meter and 2 inch service is located in the center courtyard of the building. Welded and threaded black iron pipe is used for main gas piping throughout the Subject Property. The maintenance Service lines from the main line are coated stainless steel to the heating equipment. The split system refrigerant lines are insulated and exit the roof via metal sleeves which minimize water infiltration from the elements.

Domestic hot water is provided by one 40-gallon *Rheem* water heater, located in the A002 storage room and two *PVI Conquest* 100-gallon water heaters located in the boiler room. The water heaters are approximately five years old.

The Subject Property domestic hot water systems are reported as follows:

SUBJECT PROPERTY DOMESTIC WATER HEATERS

MANUFACTURER	FUEL TYPE	CAPACITY	APPROX. AGE	LOCATION
Rheem	electric	40-gallon	5	A002 storage room
PVI Conquest	gas	100-gallon	5	Boiler room
PVI conquest	gas	100-gallon	5	Boiler room

The domestic hot water service has a circulating system to provide the hot water fixtures with readily available hot water. The circulating pump system consists of two, 5-hp pumps manufactured by *Taco* with capacities of 65 gpm each.

The plumbing fixtures are vitreous china with chrome fittings. The building restrooms contain *American Standard* 1.2 gallons-per-flush (GPF) vitreous china water closets with manual flush valves. The building contains vitreous china urinals with manual flush valves. Janitor closets contain a cultured stone floor-mounted mop sink. There are six (boy/girl) student restrooms and three staff restrooms in the Subject Property building. The buildings contain stainless steel drinking fountains throughout the common areas.

	
Typical backflow device	*PVI Conquest* 100-gallon water heaters
	
Rheem 40 gallon water heater	Hot water centrifugal circulation pumps

	
Two *Little Giant* 4/10 horsepower sewage pump	Sprinkler system pump with main shut off valve

OBSERVATIONS

The water closets and urinals were reportedly installed during renovation in 2004. The manual flush valves for the water closets appear to be in good working order. Based on the reported age, current condition, and expected useful life, water closet and urinal replacement is not anticipated during the analysis term.

The bathroom fixtures observed appeared to be in good overall condition and in working order. Ongoing maintenance as part of the property's maintenance program is recommended during the analysis term.

The water heaters are approximately four years old and in working order. Based on their reported age, current condition, and expected useful life, Capital Needs are recommended during the analysis term.

The hot water circulating pumps are approximately 17 years old and appear to be in good condition and operating. Based on their low cost, replacement, when necessary, can be accomplished as part of routine maintenance operations.

The Subject Property domestic water piping where observable appears to be in good condition, with no reported problems noted. Based on the reported age, current condition, and expected useful life, piping replacement is not anticipated during the analysis term.

The sewage pumps were reported to be 17 years old. The average useful life of packaged units of this size and type is approximately 30 years, depending upon their location, maintenance and use type. Based on the reported age, current condition, and expected useful life, sewage pump replacement is not anticipated during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

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- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Water heater replacement**

7.2 HVAC

DESCRIPTION

A summary of the HVAC equipment at the Subject Property is presented in the table below, followed by a detailed system description.

HVAC COMPONENTS

AREA SERVED	NO. OF UNITS	MFR., MODEL #	TONS OR BTUS	TYPE OF EQUIPMENT	AGE (YEARS)
Office areas	1	*Trane,* TTA090	7.5-ton	Split-system cooling condenser	13
Office areas	5	*McQuay,* RPS040CLW	90-ton	Rooftop Unit	13
Common areas	1	*Trenton,* TEHA009	N/A	Condensing unit	13
Classrooms	3	*Scott Springfield,* HQ-230-AHU	42-ton	Heat-recovery ventilators	13
D-wing	2	*McQuay,* OAH010	2500 CFM	Make-up unit	13
Throughout building	Approx 55	*N/A*	N/A	Variable air volume units	13
Throughout building	2	*Burnham*, Series 4FH	1,289 MBH	Hot Water Boiler	13
Boiler rooms	4	*Reznor,* N/A	N/A	Hanging unit heaters	13

The two boilers provide hydronic heat to the radiators throughout the Subject Property building.

The four rooftop-mounted packaged units provide gas-fired heating and DX cooling to the library, Nurses suite and select classrooms.

Due to the mandated higher efficiencies for the HVAC equipment, any replacement HVAC unit is now required to be at or above 14 SEER which has increased the cost of new equipment. For residential split systems, and the phase-out of R-22, the indoor and outdoor equipment may both need to be replaced to meet the requirements. For now, there are available HVAC components to keep these systems operational. Currently, the new refrigerant used for the equipment is R-410a which operates at a higher pressure and is not compatible with R-22, nor is it as harmful to the environment.

Additional heating and cooling for select office areas is provided by split-systems comprised of condenser and air handlers. Condenser units are rooftop-mounted and use R410a refrigerant.

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Three heat recovery ventilators using hydronic heating coils service the classroom areas, The ventilation is constant.

Hot water for the heating system is provided by two *Burnham,* 1289 MBH central boilers that are fueled by natural gas.

Supplemental heating is provided by VAV boxes spread throughout the C-Wing classroom and office area. Heating in the warehouse spaces is provided by ceiling-mounted, hydronic *Reznor* unit heaters.

Supply and return air is provided above the suspended ceilings.

The makeup air units are located on the roof and provide fresh air for the shop area and select classrooms that utilize rooftop equipment.

The Subject Property building is furnished with gravity and electric-powered ventilation and exhaust fans of various sizes ranging in capacity from 200 to 1,250 CFM.

Temperature control for each space is provided by wall-mounted digital thermostats**.**

Also part of the complete heating and cooling system are various pumps, valves, piping, sensors, etc.; all of which are controlled by a computer-operated building automation system.

The Subject Property utilizes water treatment for the closed-loop boilers. All of the water loops are chemically treated to prolong the life of the individual components.

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Make up unit example



Mcquay rooftop unit example



Make up unit example



Split system cooling condenser example



Updraft ventilation unit example



Boiler room view with two *Burnham* boilers



Hot water radiator example



Hydronic unit heater example

OBSERVATIONS

The heated water loop piping appear to be serviceable. The insulation, where observed, appears to be serviceable and is intended to deter condensation on the chilled water piping and heat loss from the hot water lines. Based on the reported age, current condition, and expected useful life, replacement of the heated water loop piping is anticipated after the analysis term.

The gas service lines were noted and reported to be in good condition. The gas service piping will be maintained at the subject property as part of operational maintenance during the analysis term.

The split-systems appear to be in good overall condition. The average useful life of split-system units of this size and type is approximately 13 years, depending upon their location, maintenance and use type. Based on observed and reported conditions, Capital Needs are recommended for split-system replacement.

The rooftop-mounted HVAC units appear to be in good to fair overall condition. The average useful life of packaged units of this size and type is approximately 14 to 18 years, depending upon their location, maintenance and use type. The HVAC units are reportedly serviced on a regular basis. Based on their average effective useful life, current condition and reported maintenance program, Capital Needs for the rooftop-mounted HVAC units is recommended during the analysis term.

The make-up units appear to be in good overall condition. The average useful life of a make-up unit is approximately 20 years, depending upon their location, maintenance and use type. The make-up units are reportedly serviced on a regular basis. Based on their average expected useful life, current condition and reported maintenance program, Capital Needs for the make up units are recommended during the analysis time

The boilers appear to be in good to fair overall condition. The average useful life of boilers of this size and type is approximately 25 to 30 years, depending upon their location, maintenance and use type, but can be extended with proper maintenance and/or refurbishment to 35 to 40 years. The boilers are reportedly serviced on a regular basis. Capital Needs for replacement of the boilers are not recommended during the analysis term.

The VAV boxes were reported to be in good overall condition. The average useful life of a VAV box is 25 years. Based on their average expected useful life , current condition in reporting maintenance program, Capital Needs for the VAV boxes are not recommended during the analysis term.

The ventilation units were operating at the time of the assessment. The maintenance representative noted no problems with the units. Replacement of the ventilation units is not anticipated during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **HVAC unit replacement**

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- **Make-up unit replacement**
- **Split-system unit replacement**

7.3 ELECTRICAL

DESCRIPTION

The main electrical service entrance is rated as a 2,000-Amp, three-phase, four-wire 120/208-volt main, feeding the main distribution panels (MDPs). The MDP is located in the electrical room, the main electric room. The observed services are protected by circuit breakers. Beyond standard ground rods or grounded connections to major piping systems, additional lightning protection was not observed.

The electrical equipment is made by *Square D*. The equipment was installed in during major renovation work in 2008. There are separate switches for the one main buss riser. The buss riser feed power to the electrical room on each floor. The electrical room has a minimum of two, 120/208-volt panels. A copy of the one-line diagram was not provided to *EBI*.

The Subject Property was observed with copper branch wiring and copper feeder cables. Standard electrical devices, switches, and fixtures consistent with the Subject Property use type were also observed through the building. GFCI fixtures were observed during the survey in the restrooms areas.

From a review of the electrical system, it appears that the Subject Property has a network distribution system to the main electrical switchboard. The utility company distribution system powers one liquid filled transformer located near the southeast corner of the site. *EBI* requested information on ownership of the transformers from the site contact and was told the transformers are owned and maintained by the utility company, *Marblehead Municipal Light Department*.

The transformers fall into two basic categories, dry and liquid-filled, with the most widely used type being liquid-filled containing mineral oil. Prior to 1979, many liquid-filled transformers contained oils with Polychlorinated Biphenyls or PCBs. A conversation *Marblehead Municipal Light Department* stated the municipality owned transformer was installed in 2010 indicating the transformer containing PCBs may not be a factor. The liquid-filled transformers are typically located outside due to the potential of fire hazard from oil leaks.

A 150-kVA, diesel-fueled emergency generator serves the Subject Property. The diesel fuel is stored in a 1,000-gallon underground storage tank located underneath the generator.

Lighting in the office areas is mixed with fluorescent and LED fixtures. The fixtures typically are two feet by four feet with T-12 lamps. Mechanical and support area lighting includes fluorescent tube fixtures of varying length (typically 4 feet and 8 feet).

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Main distribution panel



Electrical room equipment



Generator



Representative lighting

OBSERVATIONS

There were no reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type. Discussions with the maintenance representative indicate that building management is responsible for interior electric repairs and replacement.

Management reported that an infrared (IR) survey of the building has not been performed in at least five years. Based on to the age of the building and electrical components, Critical Repairs are recommended for an IR survey and periodically as a Capital Need item during the analysis term.

Infrared (IR) surveys are done by either electricians or testing firms specializing in this work using an infrared camera (thermal imaging) to detect relative "hot spots" in switchgear panels and breaker panels. The "hot spots" indicate higher resistance in wires, normally at connection points, and thus indicate areas that may not have proper connections between wires and termination points. The normal

course of action if a "hot spot" is detected is to check the torque on the screws/bolts that hold the wire to the panel connection, as well as clean off any oxidation on the wire. Once a firm completes their survey, they typically affix inspection tags to the switchgear and breaker panels, noting the firm name and the date of testing, as well as supplying a written report to the property owner documenting their findings and the corrective action taken.

GFCI receptacles were observed consistently in the adjacent to the water sources in the restrooms, kitchen and breakroom sinks.

The emergency generator is approximately eleven years old. Generators of this size and type have an average expected useful life of approximately 25 to 30 years, depending on their maintenance and amount of regular testing and usage, but can be extended with refurbishment/overhaul of the unit. The emergency generator was not operated during our on-site assessment. According to maintenance personnel, the generator is exercised at regular intervals during the year and was last tested in January 2021. Management provided information concerning the maintenance and fuel records, and from this information, it appears the emergency generator system is compliant and in good overall condition. Based on its reported age, current condition, and expected useful life, Capital Needs are not recommended for the emergency generator during the analysis term.

There were no other reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Perform IR survey**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Perform IR survey**

7.4 BUILDING & SITE FIRE & LIFE SAFETY

DESCRIPTION

The fire sprinkler water service is supplied to the building underground via Schedule 40 steel four (4)-inch line where it is fed through a backflow preventer; both located in the fire pump room. Sprinkler water distribution is via a steel fire rated piping system throughout the building.

Observed fire and life safety systems serving the building include a *Simplex* 4100U multiple-zone, fire alarm control panel that has an auto-dialer reportedly tying the system to the fire department, an addressable master fire control panel with interface from remote panels. The fire panel has a fireman command center with network display units located in the control room.

The Subject Property also has hardwired with battery-backup smoke detectors, pull stations at entrances to building entrances, illuminated exit lights with battery-backup along exit paths, horn/light

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annunciators in common area restrooms and corridors, and fire extinguishers spread throughout the building and security system with closed circuit TV cameras.

The Subject Property is equipped with an eye wash station in the boiler room.

A 500-gallon per minute *A-C* fire pump augments the sprinkler system in the basement. Standpipes with hose connections are throughout the building.

	
Fire alarm control panel	Pull station example
	
Fire extinguisher with valid inspection tag	Backflow shut off valve

	
Fire department inspection valve	Inspected valid sprinkler heads

OBSERVATIONS

The fire sprinkler water service lines were noted and reported to be in good condition. The fire alarm control panel, alarm system, sprinkler systems are reportedly tested annually, were last tested July 22, 2019, and appear to be in serviceable condition. Based on the current condition and the expected useful life, Critical Repair is recommended for backflow device inspection.

There were no reported or observed problems with the life safety system or configuration. Based on observed and reported conditions, Critical Repairs are recommended for updating the expired inspection tags.

The fire alarm control panel is thirteen years old and appears to be in serviceable condition. Based on its reported age, current condition, and expected useful life of approximately 20 to 25 years, Capital Needs are recommended for fire alarm control panel replacement during the analysis term. The facilities staff noted that they have a current bid for the replacement of the fire alarm control panel and CO detectors throughout the building. The existing bid is for replacement services is $105,000.

The fire extinguishers are reportedly inspected annually, were last inspected August 2020, and appear to be in serviceable condition

The Subject Property has fire hoses cabinets throughout the building and appear to be in serviceable condition. Fire hoses tend not to be checked and maintained in good condition on a regular basis. Their presence also tends to encourage occupants, who are not properly equipped or trained in fighting fires, to attempt and engage in fighting fires instead of evacuating the building. For these reasons, many jurisdictions and fire marshal offices recommend either removal or inspection of the hoses on a yearly basis to ensure they are in good condition and can be relied on if needed.

NFPA 25, the standard that sets the inspection, testing and maintenance requirements for sprinkler systems, is used fairly universally across the U.S. Some municipalities also add their own requirements. As part of the standard, sprinkler systems are to be service tested every five years. The site contact, Mr.

Bloodgood, was unaware of the last system test. Based on observed and reported conditions, Critical Repairs are recommended to perform the 5-year sprinkler system test.

The system demand is approximately 1,650 GPM discharge and approximately 70 PSI residual pressure at the base of the riser.

The *U.S. Consumer Product Safety Commission* has recalled approximately 35 million sprinkler heads manufactured by *Central Sprinkler Co*. A complete list of the recalled sprinklers can be found at http://www.sprinklerreplacement.com or by calling (866) 505-8553. The recall involves mostly "wet" sprinkler heads manufactured from 1989-2000, and "dry" sprinkler heads manufactured from the mid-1970s to 2001. No recalled heads were reported or observed to be at the property.

The emergency exit doors and panic hardware appear to be in serviceable condition. The doors are to swing-open into the direction of emergency egress.

Illuminated exit signs are located at the entry doors to the emergency exits and appear to be in serviceable condition. The exit signs are recommended for annual inspection, and inoperative lamps replaced as required as part of routine maintenance operations.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Complete NFPA 5-year sprinkler test**
- **Provide current inspection tags for fire sprinkler and alarm systems**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace fire alarm control panel**

7.5 ELEVATORS AND CONVEYING SYSTEMS

DESCRIPTION

The Subject Property is provided with two, 3500-pound capacity, *Otis* hydraulic elevators. The passenger elevators have a rated speed of 150 feet-per-minute (FPM). The elevators serve all three above-grade floors of the building. The elevator machinery and controls are located in an equipment room adjacent to the lower level. There is an accessible lift located in the A-Wing adjacent to the auditorium. An elevator summary is described as follows:

SUBJECT PROPERTY ELEVATORS					
LOCATION / QTY.	MFR.	TYPE	CAPACITY	FLOORS SERVED	APPROX. AGE / RENOV. DATE
C-Wing (North)	*Otis*	Hydraulic / Passenger	3,500 lbs.	1 - 3	~17
C-Wing (South)	*Otis*	Hydraulic / Passenger	3,500 lbs.	1 – 3	~17
A-Wing	*Savaria Inc.*	Accessible Lift	750 lbs.	B-1	~17

The elevator cabs are finished with vinyl flooring, laminate-paneled walls, and paneled ceilings. The elevator cab interiors include double car operating panels. The front returns and car doors have a stainless steel finish. There is a flat stainless steel handrail on rear and side walls. The ceiling has florescent lighting.



Representative elevator interior



Elevator machine room



Elevator exterior doors



Passenger lift at A-Wing

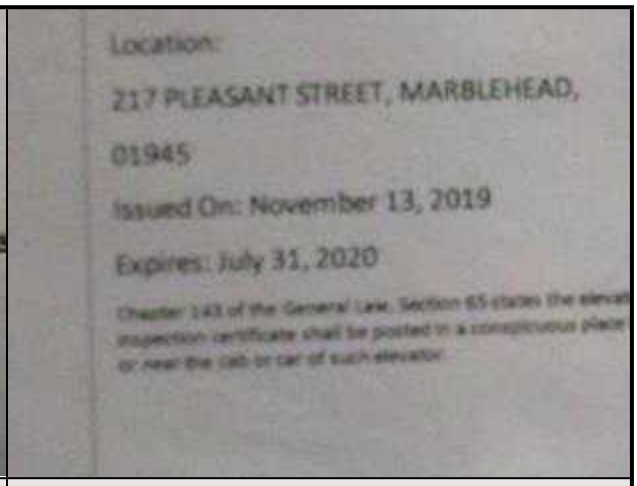
OBSERVATIONS

The elevator machinery and controls were reported, and appear to be in good condition. The elevators are covered under an annual maintenance and service agreement that includes regular inspections, repairs, and limited parts replacement. Based on their reported age, current condition, and expected useful life, modernization is recommended as a Capital Need during the analysis term.

The inspection certificates were posted and are not current noting an expiration on July 31, 2020. Based on observed and reported conditions, Critical Repairs are recommended to obtain a current elevator inspection certificate.

The elevator equipment room was clean and well maintained. The equipment room is recommended to be cleaned as part of Routine Maintenance operations.

The passenger elevator cab and interiors appear to be in good condition.

	
Expire inspection certificate	Expire inspection certificate

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Provide current elevator inspection certificates**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Elevator modernization program**

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8.0 MUNICIPAL RESEARCH

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed, and state, county or local municipal departments consulted. Documentation applicable to the Subject Property in those departments was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

MUNICIPAL REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Town of Marblehead Assessor	online	Property ownership & size information	https://www.marblehead.org/assessors-office	1.17.2021
Town of Marblehead Building/Inspections Department	online	Code compliance & violations	https://www.marblehead.org/building-inspection-department	1.24.2021
Town of Marblehead Planning & Zoning	online	Zoning information	https://www.marblehead.org/zoning-board-appeals/pages/zoning-laws-regulations	1.24.2021
Town of Marblehead Fire Department	online	Fire history & code violations	https://www.marblehead.org/fire-department	1.24.2021

8.1 MUNICIPAL INFORMATION & ZONING

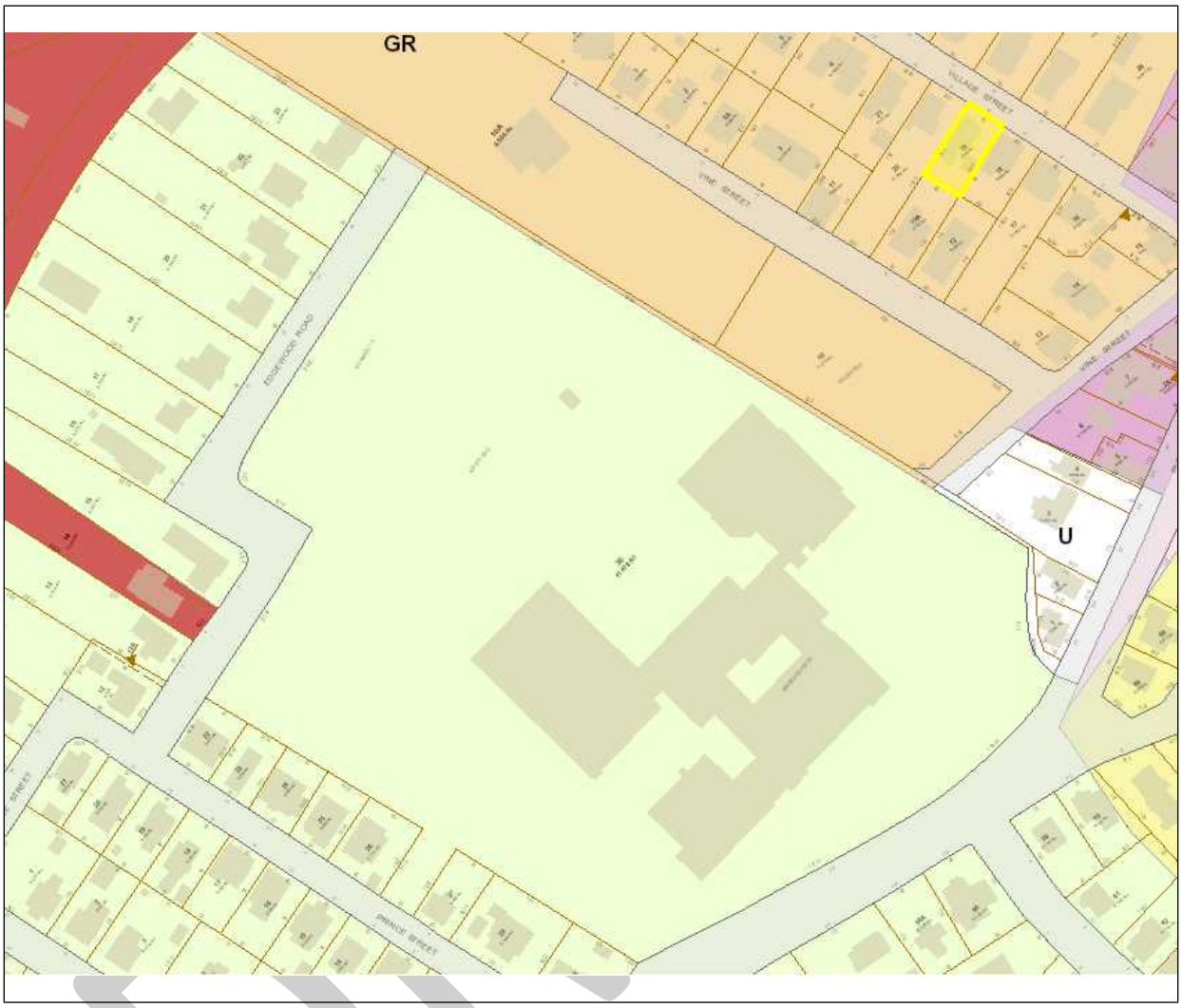
MUNICIPAL INFORMATION

Readily available, reasonably ascertainable and *publicly viewable* municipal records at *Town of Marblehead* were reviewed on-line.

ZONING

The municipal zoning office personnel were consulted, the zoning office files were reviewed, and/or the zoning ordinance was reviewed to determine the zoning of the Subject Property. According to the information provided, the Subject Property is currently located within a *SR, Single Residence* district and appears to be a conforming use.

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Zoning Map

8.2 BUILDING & PLANNING DEPARTMENT

DESCRIPTION

The municipal Building and Planning Departments were consulted for open material violations, and to obtain, *readily available*, *reasonably ascertainable* and *publicly viewable* documents regarding the Subject Property.

CONCLUSION

The department interviews and/or file reviews do not show open material violations on the Subject Property.

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material

violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, our *Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

8.3 FIRE DEPARTMENT

DESCRIPTION

The local fire department was consulted for open material violations.

CONCLUSION

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, *EBI's Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

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9.0 HAZARDS

9.1 NATURAL HAZARDS

DESCRIPTIONS

9.1.1 Seismic

Chapter 16 of the 1997 edition of the Uniform Building Code (UBC) was reviewed to determine the Seismic Zone of the Subject Property. Chapter 16 includes calculations for and mapping of earthquake (seismic) loads on structures. Figure 16-2, Seismic Zone Map of the United States delineates differing ratings of seismic load and shows the United States having seismic Zones ranging from 0 to 4. These ratings indicate the severity of how horizontal ground motion and sub-surface soil types affect a structure.

9.1.2 Flood Zone

The Federal Emergency Management Agency (FEMA) maps and rates flood hazard zones throughout the United States. These zones are depicted on a Flood Insurance Rate Map (FIRM), designated by Community Map and Panel numbers. The flood hazard zones range from Zone A or AE (A1 – A130), with Base Flood Elevations (BFE) determined, to Zone X, unshaded areas outside the 500-year floodplain. EBI utilizes *CoreLogic's* FloodInsights mapping system, which searches the FEMA FIRM map and panel, to obtain the Flood Zone Determination of the Subject Property.

9.1.3 Wind Zone

FEMA maps and rates wind hazard zones, Special Wind Regions and Hurricane-Susceptible Regions throughout the United States. These zones are depicted on a Map of Wind Zones in the United States on FEMA's website – www.fema.gov/fima/tsfs13.shtm and http://www.fema.gov/graphics/library/wmap.gif.

CONCLUSIONS

9.1.1 Seismic

According to Figure 16-2 in the *UBC*, the Subject Property appears to be located in Zone 2A, with a low to moderate probability of damaging ground motion.

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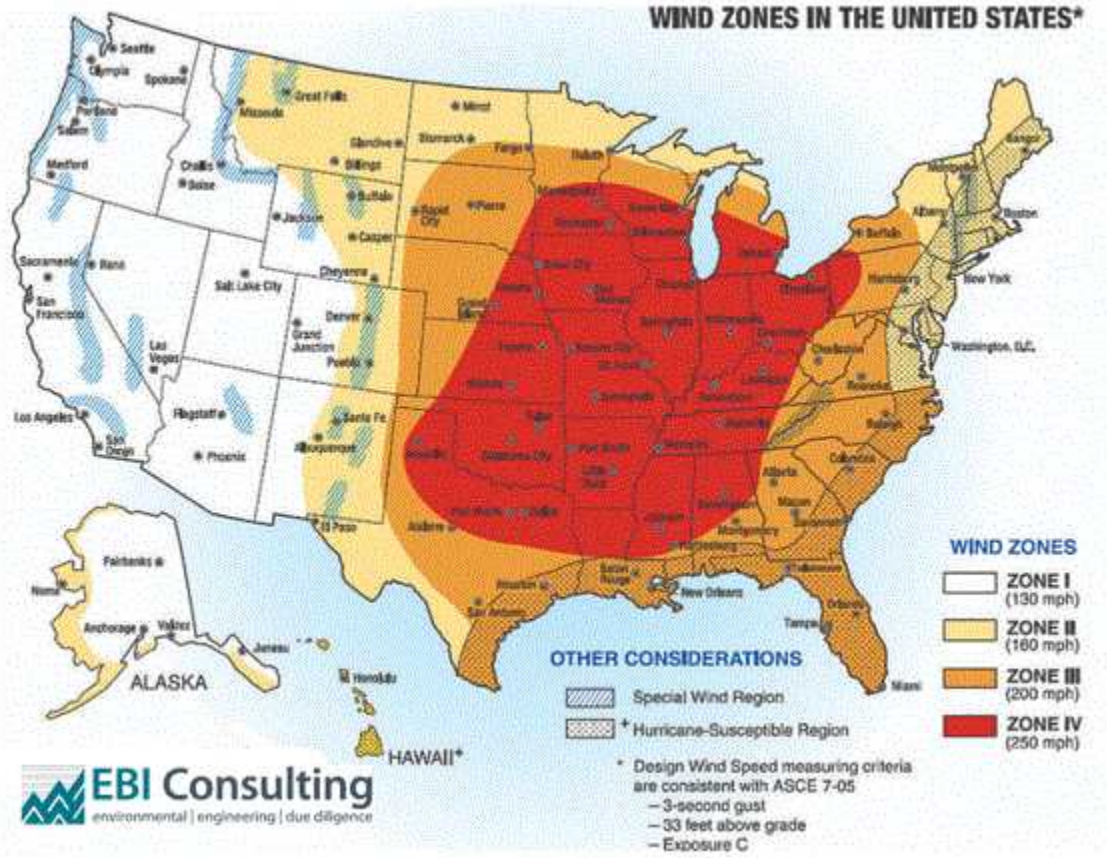


9.1.2 Flood Zone

The Subject Property Flood Zone Determination appears to be Zone X, defined as an area outside the 100- and 500-year floodplains, as shown on First American Flood Data Services' Flood Hazard Certification, Community Map #250091, Panel #0551G, dated July 16, 2014.

9.1.3 Wind Zone

Based on FEMA's Map of Wind Zones in the United States, the Subject Property appears to be located in Zone II, up to 160 mph winds. The Subject Property appears to be located in a Hurricane Susceptible or a Special Wind Region. However, the Subject Property is not located in a Special Wind Region.



9.2 SUSPECT MOLD AND MOISTURE

Interior areas of the Subject Property buildings to which access was provided, and in which building elements were readily observable, were reviewed for the presence of moisture and visible or olfactory evidence of microbial development (suspect mold). No observations were conducted within concealed locations (construction elements behind wall and ceiling finishes, and other building components, etc.). No sampling or testing was performed to confirm the presence of invisible airborne microbial elements. In addition to *EBI's* observation efforts, property personnel did not indicate the presence of moisture or suspect mold during the survey, or in *EBI*'s Pre-Survey Questionnaire.

Representative Subject Property observations and interviews revealed no obvious visual or olfactory indications of the presence of active moisture or suspect mold activity. No recommendations concerning moisture or mold are made at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

10.0 REFERENCES

10.1 CONTACTS

DESCRIPTION

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed for information concerning the Subject Property. Documentation applicable to the Subject Property was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Director of School Facilities, *Town of Marblehead*	Todd Bloodgood	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.10.2021
Electrician - Facilities, *Town of Marblehead*	Mike Ellconus	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.10.2021

10.2 PERTINENT INFORMATION PROVIDED OR OBTAINED

EBI's Pre-Survey Questionnaire was forwarded to the designated property contact. The information requested in the questionnaire assists in *EBI's* research of the property to obtain pertinent property data; discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs; and pending repairs and improvements. The Pre-Survey Questionnaire was completed on site with escorts.

The following information was provided and reviewed on a cursory basis as background information of this report:

EXHIBITS RECEIVED AND REVIEWED	YES	NO	DESCRIPTION/COMMENTS
1. A.L.T.A. Survey		X	Not provided
2. Legal Description of the Property	X		Obtained by EBI
3. Location Maps	X		Obtained by EBI
4. Project Specifications		X	Not provided
5. Soils Report		X	Not provided
6. Local Building Code Compliance		X	Request submitted by EBI
7. Date of Permits and Cert. of Occupancy for Each Building		X	Request submitted by EBI
8. Building Plans:			
a. Architectural		X	Not provided
b. Structural		X	Not provided

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c. Mechanical		X	Not provided
d. Electrical		X	Not provided
e. Plumbing		X	Not provided
9. Owner's Repair List and Cost Breakdown		X	Not provided
10. Other			

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APPENDIX A - FIGURES, DRAWINGS AND PLANS

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EBI GIS, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

Date: 2/8/2021

Figure 1: Site Location Map

NULL VETERANS MIDDLE SCHOOL
217 PLEASANT ST
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000048

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Legend

★ Project Site

Site Radius at 250', 500', 1000', ½, ¾ & 1 mile

USGS 24K Quad: Marblehead South, MA 1986, Marblehead North, MA 1986

Date: 2/8/2021

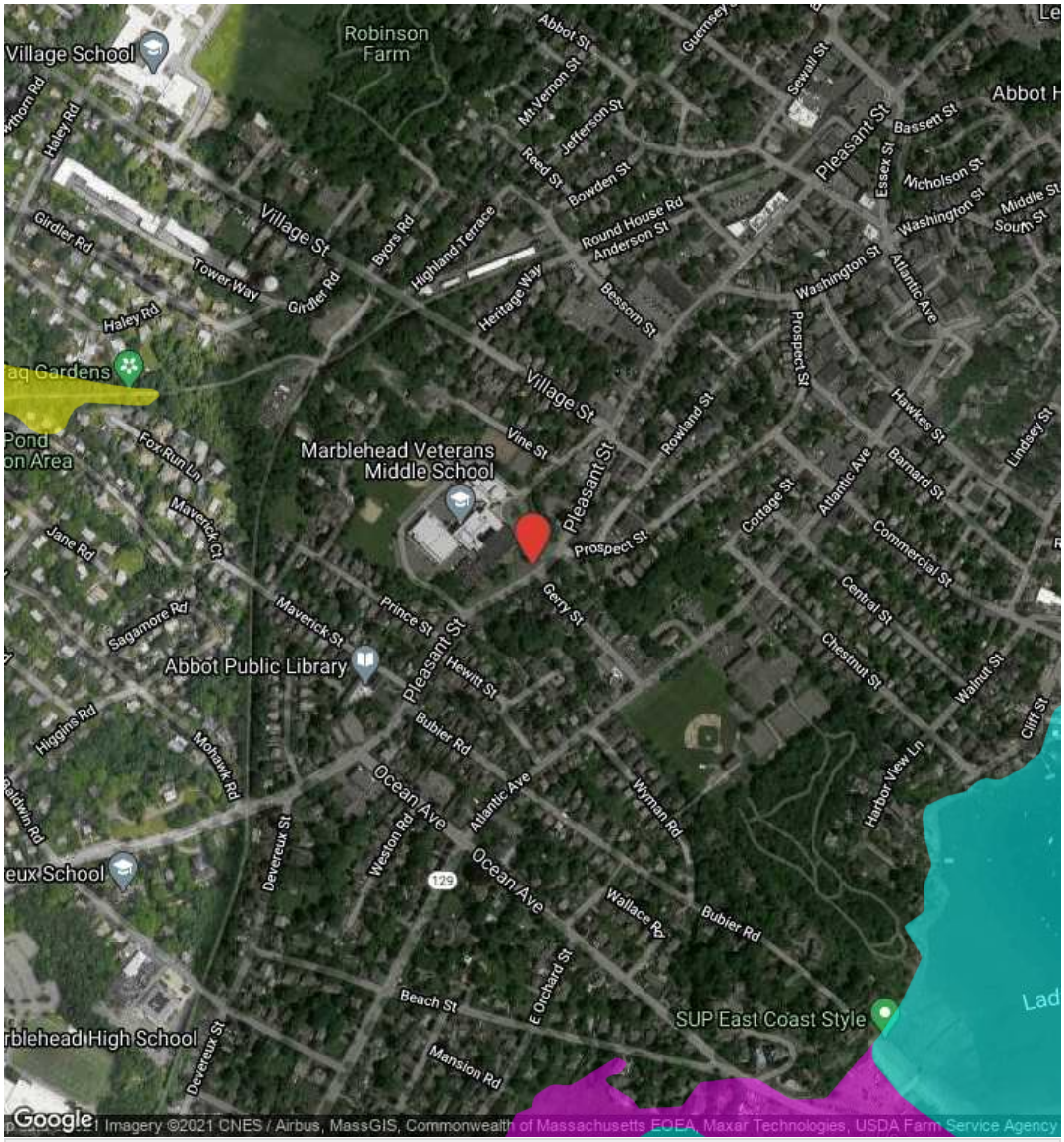
Figure 2 - Topographic Map

NULL VETERANS MIDDLE SCHOOL
217 PLEASANT ST
MARBLEHEAD, MASSACHUSETTS NULL

PN: 1321000048

EBI Consulting
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Overview Map



Flood Zones: X500 or B Zone | A Zone | V Zone | D Zone | Floodway | CBRA

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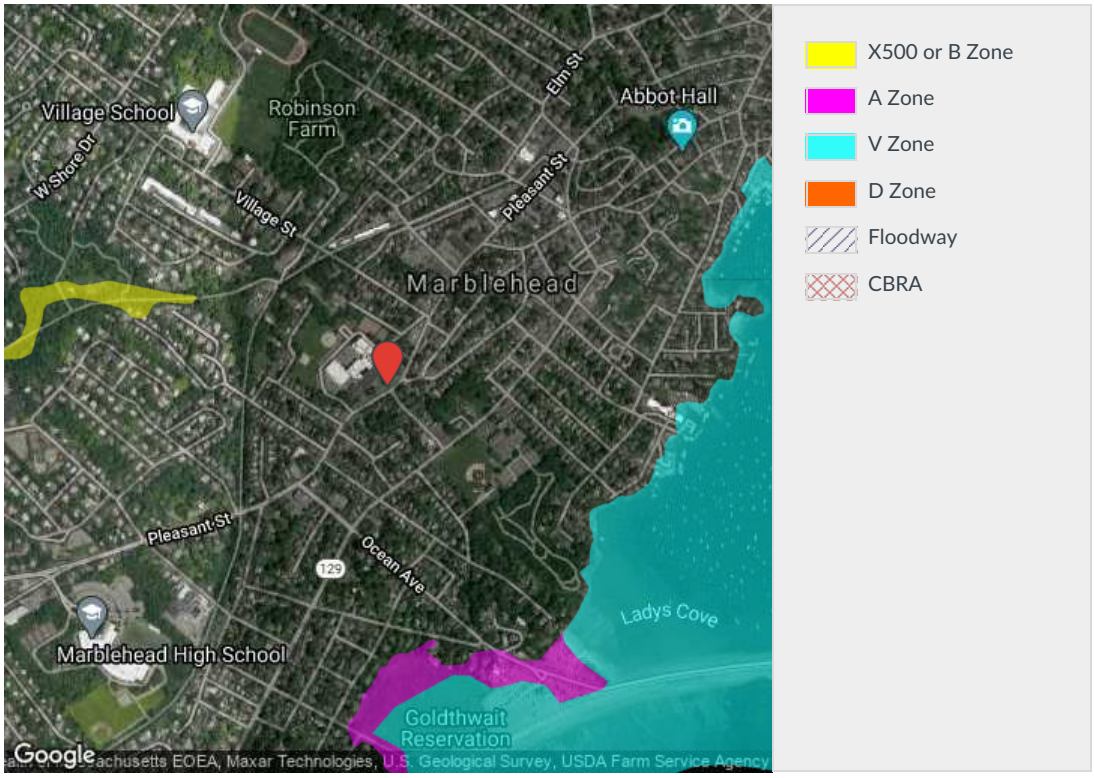
LATITUDE: 42.497721, LONGITUDE: -70.860757

LOCATION ACCURACY: *User-defined location* **LATITUDE:** 42.497721 **LONGITUDE:** -70.860757 **MATCH CODE:** **SOURCE:** **CENSUS BLOCK ID:** 250092032004011

Flood Zone Determinations Report

Flood Zone Determinations: OUT

SFHA (FLOOD ZONE)	OUT	**WITHIN 250 FEET OF FLOOD ZONE**	NO
FLOOD ZONE	X	**COMMUNITY**	250091
COMMUNITY NAME	MARBLEHEAD, TOWN OF	**PANEL**	0551G
PANEL DATE	July 16, 2014	**COBRA**	OUT
MAP NUMBER	25009C0551G	**FIPS CODE**	25009



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APPENDIX B - OTHER RELEVANT DOCUMENTS

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MIDDLE SCHOOL - VETERANS.

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Please fill out and sign this questionnaire for the site visit. Email to Samantha Spano at sspano@ebiconsulting.com for our report files, and keep the original to provide to the Site Assessor.

Subject Property Name: Marblehead **EBI Project #:** 1321000050

Address: 217 PLEASANT ST

Subject Property Owner: MARBLEHEAD **Purchase Date:**

On-Site Property Contact: TODD. BLODGOOD **Telephone:**

Fax: **Email:**

Name and title of Individual Completing Form **Signature** 2/10/21 **Date**

Additional plans and documentation (see page 2) must be forwarded to the site for the Engineer during the survey. For questions not applicable please respond "N/A." Attach additional pages if necessary. This questionnaire and your responses will be included as an exhibit in the Report. Accurate and full completion is critical to a timely completion of our reports, and timely deal closing.

LOCAL JURISDICTIONAL INFORMATION

1. What is the Subject Property ID #, Lot and Block, or Township/Range ID #?
2. What is the legal Municipality or County that has jurisdiction over the Subject Property? ESSEX.
3. What are the Subject Property tax assessors file ID number and tax file ID number if available?

SUBJECT PROPERTY INFORMATION

4. What is the size of the Subject Property lot or lots, in acres?
5. How many parking spaces (and HCP parking spaces) are present at the Subject Property?
6. How many buildings comprise the Subject Property? 1
   a. If the Subject Property is a mall or large retail center, please confirm and list ownership of each building, i.e., out pads, etc.
7. What is the gross and net rentable square footage of the building(s)?
8. What is the date of construction of the building(s)? When was the building(s) first occupied? renovated 2004
9. How many tenant spaces or apartments are at the Subject Property? 1
   a. If the Subject Property is apartments, provide a unit and type count by bedroom and square feet.
10. Please list all deficiencies or problems with the site, parking area, amenities or utilities.
11. Please list all structural, façade, water infiltration, mold, roof, plumbing, HVAC, electrical, elevator, or fire alarm system(s) deficiencies or problems.

BUSES CANT FIT AROUND FRONT ^ CIRCLE THAT WAS DESIGNED.

MILDEW SMELL IN PRINCIPALS OFFICE, BRICK MIGHT NEED REPOINTED (BELOW GRADE).
SOME ROOF LEAKS CURRENT.
BOILER REPLACED 2020., FIRE ALARM NEEDS REPLACEMENT

12. During the last five years, have any major capital improvements been made to the site or building(s)? If so, please explain, with the approximate cost.
Carpet replacement. (library), added bathroom.

Does the Subject Property have	Y or N	Does the Subject Property have	Y or N
Polybutylene piping	N	Compressed wood or composite board siding	N
Galvanized steel water lines	↓	EIFS exterior finishes	↓
ABS sanitary lines	↓	Fire Retardant Treated plywood	unsure.
Aluminum branch wiring	↓	Cadet/Encore electric heaters installed 1982-99	
Omega (Central or CSC) brand sprinkler heads	unsure	GE or Hotpoint dishwashers installed 1983-89	

* has mastic asbestos

13. Please list any deficiencies noted during any Building, Fire or Health Department inspections in the last three years.
NO.

14. When the fire alarm systems and/or sprinkler systems (if any) were last tested?
Aug. 2020.

15. Please list the following utility providers:
Electricity: MARBLEHEAD
Water: MARBLEHEAD
Storm Drainage: MARBLEHEAD
Sanitary Sewer: MARBLEHEAD.
Natural Gas or Oil: NATIONAL GRID.
Trash Hauler: MARBLEHEAD. and, Frequency of Pick-ups:

16. If you are performing or planning any repairs or replacement work to the Subject Property that will exceed an aggregate cost of $2,000 please explain, with the approximate cost.
FIRE ALARM PANEL (105k) GYM FLOORS ~~(TWO BIDS)~~ (36k)

17. Please list the responsible party for tenant improvements and maintenance of major systems (if applicable).

18. Please attach a brief history of the Subject Property. This information helps us properly assess, evaluate and understand the Subject Property, and will assist in the financial analysis. The information should include:

- The date of approvals and construction, the contractor who built the Subject Property
- History of major capital improvements, repairs, additions or modifications
- History of fires or violations
- A list of any ongoing maintenance issues
- Tenant history, approximate turnover rate

DOCUMENT AND INFORMATION CHECKLIST

Please provide the following information (as much as possible in electronic format) so EBI can proceed with the survey. Asterisk (*) items are critical to report completion. The documents will become exhibits in the Consultant's report.

A. Plans	B. Municipal Documents	C. Additional Information
▪ ALTA Survey or Site Plan* ▪ Architectural Building Plans* - plans, elevations, wall section, foundation, HVAC & elec. schedules ▪ Reduced scale Site and Building Plans ▪ ***Extremely critical for properties in seismically active zones 3 and 4**** *STRUCTURAL PLANS – **Seismic Assessments***	▪ Certificate of Occupancy* ▪ Building Permit* ▪ Façade inspection compliance* ▪ Copy of tax cards ▪ Copy of violations ▪ Facade Reports or Certification	▪ Capital expense report for 1 to 3 years* ▪ Tenant Rent Roll* ▪ Roof warranty ▪ History of recent improvements ▪ Schedule of Floor Area Measurements - Gross and Rentable Square Feet

APPENDIX C - PROFESSIONAL QUALIFICATIONS

DRAFT

EBI Consulting
environmental | engineering | design

Jennifer Flanders, PE, LEED AP BD+C
Project Engineer
Westwood, MA 02090
Office/Mobile: 978.660.0227

Summary of Experience

Mrs. Flanders is a structural engineer with over 9 years of experience in the building industry. She has provided management on a wide variety of projects including renovations and new construction of commercial, institutional, and municipal facilities. She has a broad knowledge of structural design, condition assessments, forensic investigation, litigation support, property loss consulting, and construction administration.

Relevant Project Experience

Prior to her employment at EBI, Mrs. Flanders contributed to the following representative assignments:

Alewife Parking Garage Investigation, Cambridge MA
Investigation of a 1,000,000 sq. ft. precast concrete garage structure supported by structural steel columns. The ongoing structural investigation process consisted of a visual survey and non-destructive testing (NDT) of a representative portion of the garage to determine an approximate estimate of damage. A cost estimate was provided with recommended priority levels of repair.

University of Massachusetts Boston Calf Pasture Pump Facility, Boston MA
Condition assessment of three buildings originally constructed in 1887. Provided repair program to structurally stabilize, secure, and weather-protect the facility for future use.

Two Drydock Avenue, Boston MA
Project manager of the structural design and construction administration of a new thirteen-story 298,700 sq. ft. office building with ground floor retail, above-ground parking, and a roof terrace.

Hurricane Irma Response, Florida
Investigation of flooding and wind damage caused by Hurricane Irma. Findings reports along with recommended repairs were generated for a variety of commercial and residential properties.

Westfield Mall Garage Floor Investigation, Bethesda MD
Forensic investigation of a double-tee concrete floor panel that collapsed during a renovation project. Assisted with document review and analysis to opine on the cause of collapse.

Silo Investigation, Tallahassee FL
Forensic investigation of a collapsed, steel cylindrical silo at a manufacturing facility. Provided document review and analysis to opine on the cause of collapse and provide repair recommendations.

Canterbury Earthquake Sequence Portfolios, Christchurch New Zealand
Structural evaluation of several commercial, hotel, multi-family, and educational buildings that sustained damage following a series of earthquakes in 2010 and 2011. The scope included condition assessments of post-earthquake damages, evaluation of remaining seismic capacities, and development of conceptual repairs and seismic upgrades.

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Jennifer Flanders, PE, LEED AP BD+C
Project Engineer
Westwood, MA 02090
Office/Mobile: 978.660.0227

Liberty Mutual Storm Damage Portfolio, Various Locations
Assisted with the investigation of flooding, wind damage, and the most likely cause of electrical service interruptions, caused by the CAT-90 Sandy storm. Findings reports were generated for more than 500 property locations throughout the east coast of the United States.

Armed Forces Retirement Home, Washington DC
Structural evaluation and emergency stabilization at the Sherman Building after the Central Virginia Earthquake. Work involved immediate emergency assessment of the structure and stabilization of the bell tower. The project included a thorough visual evaluation, documentation of the damage, and recommendations for further remedial action.

NAVFAC Embassy Security Facilities, Quantico VA
Structural design of a new two-story, steel-framed headquarters building, a warehouse, and two entry control facilities totaling 36,000 sq. ft.

Verizon Chesapeake Office Complex, Silver Spring MD
Investigation of a deteriorated masonry façade. Identified the extent of damage caused by corrosion of a steel structure supporting the exterior wall of a seven-story office building.

Social Security Administration National Computer Center, Urbana MD
Structural design of a 400,000 sq. ft. data center with an attached office building.

Additional Projects
Past experience includes design, assessment, and recommendations on commercial, institutional, and municipal properties of various sizes located primarily throughout the eastern seaboard of the United States and abroad.

Education

Master of Engineering in Civil Engineering, Cornell University, Ithaca, NY
Bachelor of Science in Civil Engineering, Worcester Polytechnic Institute, Worcester, MA

Professional Affiliations

CREW Network, Boston

Professional Registrations

Registered Professional Engineer (Civil-Structural) in Massachusetts (#54309) and Virginia (#402052253)
LEED Accredited Professional, Building Design + Construction (AP BD+C)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

SUMMARY OF EXPERIENCE

Mr. Davis has in excess of 37 years experience in real estate development and due diligence. He has performed a wide range of inspections including Physical Needs Assessments per Fannie Mae, Freddie Mac & HUD protocols, Property Condition Assessments to ASTM and custom protocols and Property Condition Equity Evaluations for acquisition. In addition, he has performed and managed a variety of detailed engineering investigations including infra-red roof studies, façade investigations, structural studies, MEP and fire and life safety studies. In total over the past ten years, Mr. Davis has performed more than 500 site surveys and detailed investigations and directed more than 7,500 due diligence assessments for clients.

As senior technical lead on over 50 portfolios, both nationwide and international, he has worked closely with clients to provide timely analysis and critical insight as they make their business decisions on each project. With portfolios ranging in size from 20 locations to over 600 sites, and property types including hospitality, restaurant, retail, office, industrial, and skilled nursing, Mr. Davis has successfully provided progress information on issues and each portfolio was completed on or ahead of schedule.

Mr. Davis' background includes managing design, construction, and engineering projects in over twenty states and five provinces in Canada. His experience as a consultant, owner's representative, contractor and code official brings a unique perspective to each project.

RELEVANT PROJECT EXPERIENCE

Projects on which Mr. Davis has been involved include Assessments for:

- The World Trade Center, Long Beach, California
- Anaheim Garden Walk Mall, Anaheim, California
- Boca Raton Resort and Corporate Center, Boca Raton, Florida
- Inter-Continental Hotel, New Orleans, Louisiana
- Bethesda Hotel & Conference Center, Bethesda, Maryland
- Westin Resort Properties, Puerto Vallarta, Mexico
- The Cosmopolitan, Las Vegas, Nevada (2,900 room resort)
- University Mall, North Carolina (BOMA Lease Study)
- 900 North Michigan Avenue, Chicago, IL (Constrcution Monitoring)
- Numerous large-scale retail, office, multi-family residential, hospitality, healthcare and other commercial facilities

Several large property portfolios, including:

- 8 hospitality property portfolios (ea. 75 to 600 sites)
- 10 retail/office/industrial property portfolios (ea. 100 to 335 sites)
- 3 restaurant property portfolios (ea. 150 to 530 sites)
- 7 assisted living, skilled nursing, and full nursing home property portfolios (ea. 50 to 140 sites)

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

- Miscellaneous portfolios including gas service station, self-storage, resort, manufactured home and other portfolios in the US and Canada (ea. 25 to 125 sites)

EDUCATION

Bachelor of Science in Building Sciences, Rensselaer Polytechnic Institute, Troy, NY (1976)
Graduate Coursework, Architectural Design – Drexel University, Philadelphia, PA (1980)

CAPITAL NEEDS ASSESSMENT



Prepared for:

Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945



Marblehead High School

2 Humphrey St
Marblehead, Massachusetts

EBI Project No. 1320000049

March 29, 2020

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EBI Consulting
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21 B Street
Burlington, MA 01803
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www.ebiconsulting.com

March 29, 2020

Ms. Michelle L. Cresta
Michelle L. Cresta
Director of Finance
Marblehead Public Schools
9 Widger Road
Marblehead, MA 01945

Subject: Capital Needs Assessment, Marblehead High School
2 Humphrey St, Marblehead, Massachusetts
EBI Project #1320000049

Dear Ms. Cresta:

Attached please find our *Capital Needs Assessment*, (the *Report*) for the above-mentioned asset (the Subject Property). During the property survey and research, our property surveyor met with agents representing the Subject Property, or agents of the owner, and reviewed the property and its history. The *Report* was completed according to the terms and conditions authorized by you. The gathering of data and information for this *Report* has been completed in general conformance with ASTM E 2018 – 15.

The exclusive purpose of the *Report* is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools* in its Due Diligence effort in evaluating the Property.

This *Report* was performed utilizing methods and procedures consistent with established commercial practices and in conformance with industry standards. The suggestions represent *EBI's* opinion based on written, graphic or verbal information, the property condition and data available to us at the time of the survey. Factual information regarding operations, conditions or data provided by the Client, occupants, owner or their representative has been assumed to be correct and complete.

The *Report* speaks only as of its date in the absence of a specific written update of the *Report* signed and delivered by *EBI Consulting*.

EBI Consulting is an independent contractor, not an employee of either party to this transaction, and its compensation was not based on the findings or recommendations made in the *Report* or on the closing of any business transaction.

Thank you for the opportunity to prepare this *Report* and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully submitted,

Samantha Spano
Author/Engineer

Dennis L. Davis 918.924.1642
Reviewer/Equity Services, National Program Director
ddavis@ebiconsulting.com

DRAFT

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DRAFT

EXECUTIVE SUMMARY TABLE

Property Name:	**Marblehead High School**	*Property Type:*	**School**
Address:	**2 Humphrey Street**	*Property Age:*	**19**
City and State:	**Marblehead, Massachusetts**	*No. of Units or Tenants:*	**1**
Site Survey Date:	**February 10, 2021**	*Square Feet:*	**215,000**
Report Date:	**March 29, 2021**	*Analysis Term (Yrs.):*	**20**
EBI Project #:	**1320000049**		

Section #	Section Name	Critical Repairs	Non-Critical Repairs	Capital Needs
2.0	**SITE CONDITIONS**			
2.1	Site Features			
2.2	Landscaping & Site Improvements		$506	$270,714
2.3	Pavement and Parking		$3,934	$408,135
2.4	Site Amenities			$1,640
2.5	Utilities		$1,200	
3.0	**STRUCTURE**			
3.1	Substructure			
3.2	Superstructure			
4.0	**BUILDING ENVELOPE**			
4.1	Roofing	$768,029		$908,885
4.2	Facades			$8,447
4.3	Windows & Doors	$3,600	$3,760	$577,067
5.0	**BUILDING INTERIORS**			
5.1	Basements/Attics/Penthouses			
5.2	Interior Finishes & Components		$339	$2,501,208
6.0	**ACCESSIBILITY**			
6.1	Accessibility Compliance	$2,760		
7.0	**BUILDING SYSTEMS**			
7.1	Building Plumbing			$230,926
7.2	HVAC			$1,572,363
7.3	Building Electrical	$0		$88,097
7.4	Building & Site Fire/Life Safety	$9,500		$95,153
7.5	Elevators & Conveying Systems	$8,201		$656,064
8.0	**MUNICIPAL RESEARCH**			
8.1	Municipal Information & Zoning			
8.2	Building & Planning Department			
8.3	Fire Department			
9.0	**HAZARDS**			
9.1.1	Seismic			
9.1.2	Flood Zone			
9.1.3	Wind Zone			
9.2	Suspect Mold and Moisture			
	TOTALS:	**$792,090**	**$9,739**	**$7,318,698**

	Dollars per sf/yr	Dollars per unit/yr	
Present Value of Capital Needs Cost Estimate	$1.70	$365,934.92	$7,318,698
Inflated Value of Capital Needs Cost Estimate	*$2.12*	*$455,855.19*	*$9,117,104*
Critical Repairs Cost Estimate	$792,090		
Non-Critical Repairs Cost Estimate		$9,739	
Total Deferred Maintenance Cost Estimate, After Multiplier	$801,829		

EXECUTIVE SUMMARY

PROPERTY DESCRIPTION

The Subject Property, known as Marblehead High School, is located in Marblehead, Massachusetts at 2 Humphrey St in Essex County. The Subject Property was reportedly constructed in 2002. The Subject Property consists of a three-story approximately 215,000-gross square foot[1] high school building located on an 18.74-acre lot.

The school building is irregular-shaped with four sections radiating off of a central area where the auditorium is located. The sections are referred to as A, B, C and D/E (where D and E differentiate between the west side (D) and the east side € of the same building section. The building sections have rough dimensions outlined in the table below:

SUBJECT PROPERTY BUILDING SUMMARY

SECTION NAME	NO. FLOORS	APPROX. DIMENSIONS
Section A (A Wing)	2	180’ x 75’
Section B (B Wing)	2	225’ x 75’
Section C (C Wing)	2	135’ x 110’
Section D/E (D Wing and Gymnasium)	2 / 1	400’ x 200’

The interior of the property is laid out with the main lobby at the central north entrance and common corridors providing access to classroom, auditorium, library, and cafeteria spaces.

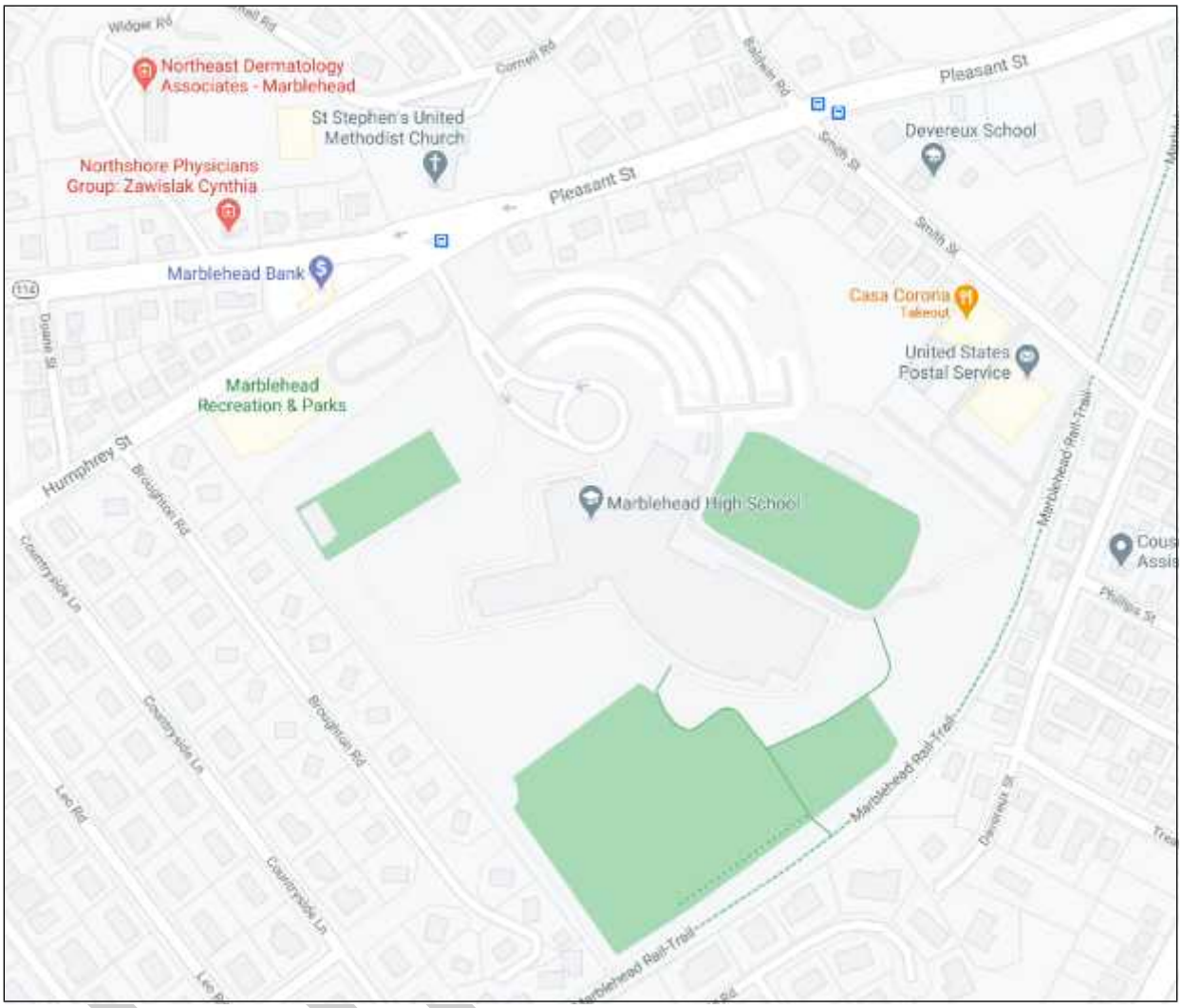
LOCATION

The Subject Property is located between Broughton Road and Smith Street with an entrance to the property provided along Humphrey Street approximately 735 feet east of Broughton Road.

The Subject Property is bounded on all with the exception of approximately 160 feet of frontage along Humphrey Street where the main entrance is located.

Local surface arteries, Interstate, and state highway systems provide access to the property. The Subject Property is located approximately 6.2 miles southeast of MA-114.

1 **Gross square footage** obtained from the tax assessor's records.



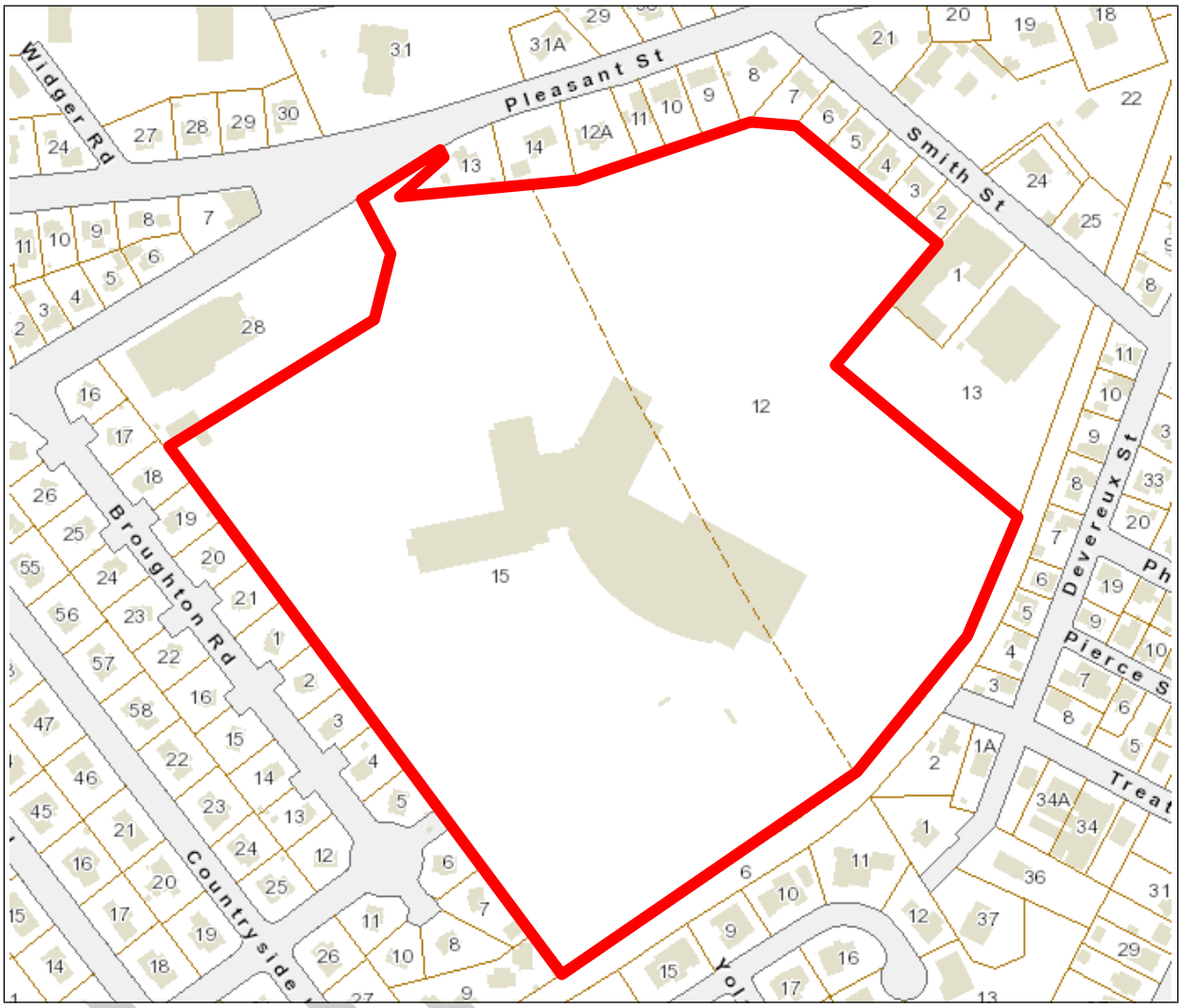
Location Map

A single entry drive provides access to the Subject Property from the adjacent road. The property is improved with asphalt-paved vehicle parking areas and drive lanes located along all sides side of the building.

The site is gently rolling, with moderate slopes to the north toward Humphrey Street and the south toward the athletic fields. Wooded areas are located along all property lines.

Property use in the vicinity of the Subject Property is primarily characterized by residential and commercial development.

According to the *Marblehead, MA Assessor* website, the Subject Property is currently owned by *The Town of Marblehead*. The Subject Property includes two irregular-shaped parcels cumulatively totaling 18.74 acres of land. *Marblehead, MA Assessor* records indicate that the Subject Property assessor parcel numbers are 61-15-0 and 70-12-0.



Tax Map

SITE OBSERVATION & OBSERVATION SUMMARY

Samantha Spano and Don Gerardi of *EBI* surveyed the property on February 10, 2021 and were accompanied by and interviewed. Todd Bloodgood, Director of School Facilities and Mr. Mike Ellconus, Electrician both with the *Town of Marblehead*. At the time of the survey, the weather was partly cloudy and approximately 18º Fahrenheit. During the survey, representative areas of the site, interior areas, mechanical spaces, mechanical equipment and building components were observed.

Overall, the Subject Property appears to be in good condition with a limited level of deficiencies observed. This *Report* recommends certain actions, repairs, and replacements as Critical Repairs, Non-Critical Repairs and Capital Needs, commensurate with our observations. Additional less notable issues may be present that require attention as part of routine maintenance. Please refer to each specific report sections for details.

CAPITAL, MAINTENANCE & OWNER/TENANT RESPONSIBILITY

Maintenance, repair, and replacement of the roof, facades, landscaping, pavement and parking, interior finishes, plumbing, mechanical, electrical, HVAC, elevator and conveying, life safety systems and components at the property is reportedly the responsibility of the Subject Property owner.

General day-to-day maintenance is reportedly handled by the school facilities department. The maintenance technicians are reportedly qualified to handle general repairs. Repair and maintenance of specialty and large-scale equipment, i.e., central HVAC plant equipment, elevators, roofing, fire and smoke detection and alarm systems, etc., are subcontracted to outside vendors. The level and quality of on-site maintenance repairs reviewed while at the site were of good workmanship and materials. In general, the Subject Property appears to have been constructed within industry standards and has been well maintained.

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CRITICAL REPAIRS AND CAPITAL NEEDS

Itemized Critical and Non-Critical repairs, as well as Capital Needs are provided as part of this *Report*. The cost estimates shown on the tables are based on data obtained from the Owner for items already planned, quotes from contractors, *EBI's* in-house Acquisition database costs and our experience with costs and estimates for similar issues, property and building types, city cost indexes, and assumptions regarding future economic conditions. These projected costs are augmented by cost estimate resource documents such as the *National Construction Estimator*, *Means Building Construction Cost Data*, or *Means Facilities Maintenance and Repair Cost Data Publications*.

CRITICAL REPAIRS & NON-CRITICAL REPAIRS - TABLE 1

Each of the Critical Repair items noted during the survey are listed on the following page on Table 1, and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at a Subject Property.

Each of the Non-Critical Repair items noted during the survey are listed on the following page on Table 1, and compiled on the Executive Summary Table. Items are grouped and cross-referenced by Report section. Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Non-Critical Repair, and/or that cannot be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

CAPITAL NEEDS - TABLE 2

Each of the Capital Needs items noted during the survey are listed on the following pages on Table 2, and compiled on the Executive Summary Table. Items are grouped and cross-referenced by *Report* section. Routine or customary annual maintenance items are not reported or included in this *Report* unless otherwise noted.

DEFICIENCY PRIORITIES #1 TO #4

Each of the deficiencies and costs noted during the survey are prioritized in the following manner:

Priority 1: Current Critical, Conditions in this category require immediate action to:

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility to operation
- Correct an environmental hazard

Priority 2: Potentially Critical, Conditions in this category, if not corrected expeditiously will become critical within a year. Situations within this category include:

- Intermittent operations

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- Rapid deterioration
- Potential life safety hazards
- Environmental non-compliance

Priority 3: Recommended, conditions in this category require appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further. These are not required for the most basic function of the facility; however, Priority 3 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 4: Does not meet current codes/standards, "Grandfathered" conditions in this category include items that do not conform to existing codes, but are "grandfathered" in their condition. No action is required at this time, but should be considered as an upgrade or if substantial work is to be undertaken in contiguous areas, certain existing conditions may require correction

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Table 1 - Critical and Non-Critical Repairs

Marblehead High School
2 Humphrey Street
Marblehead, Massachusetts
EBI Project # **1320000049**

Site Survey Date: 2/10/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 215,000
Number of Units: 1
Property Age: 19
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	*PRIORITY*	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
2.0	**SITE CONDITIONS**											
2.1	Site Features		None			20.0%						
2.2	Landscaping / Improvements	**#2**	Repair areas of deteriorated/damaged concrete sidewalk	20	$21.07	20.0%	$25.29	per square foot		✔	$505.72	Sections of cracked and damaged concrete sidewalks were observed along the east side of the gymnasium.
2.3	Pavement/ Parking	**#2**	Patching, crack sealing, sealing and striping of asphalt pavement	8,995	$0.36	20.0%	$0.44	per square foot		✔	$3,934.20	Sections of damaged asphalt were observed throughout the perimeter fire lanes and parking lot areas.
2.4	Amenities		None			20.0%						
2.5	Utilities	**#2**	Prepare, prime, and paint transformer housing	1	$1,000.00	20.0%	$1,200.00	allowance		✔	$1,200.00	Peeling paint, rusting sections, and graffiti were observed at the transformer adjacent to the gymnasium.
3.0	**STRUCTURE**											
3.1	Substructure		None			20.0%						
3.2	Superstructure		None			20.0%						
4.0	**BUILDING ENVELOPE**											
4.1	Roof	**#1**	Secure all loose lightning protection	1	$5,000.00	20.0%	$6,000.00	allowance	$6,000.00			Several locations of loose and hanging lightning protection was observed along the roof perimeter, especially at the gymnasium roof.
4.1	Roof	**#1**	TPO 60 mil roof replacement - low rise	116,000	$5.40	20.0%	$6.48	square foot	$751,521.31			Numerous roof leaks reported and observed.
4.1	Roof	**#1**	Asphalt shingle roof replacement	6,380	$1.37	20.0%	$1.65	square foot	$10,507.82			Numerous roof leaks reported and observed.
4.2	Facades		None			20.0%						
4.3	Windows and Doors	**#2**	Prepare, prime, and paint gymnasium doors	4	$100.00	20.0%	$120.00	each		✔	$480.00	Peeling paint and rusted metal sections were observed at the doors provided at the east side of the gymnasium.
4.3	Windows and Doors	**#2**	Repair insulated windows with failed seals	30	$91.12	20.0%	$109.34	each		✔	$3,280.32	Several of the insulating windows exhibit failure of the seals between panes resulting in condensation build-up, and require painting and renewal of the sealants.
4.3	Windows and Doors	**#2**	Repair all areas of water infiltration at gymnasium windows	1	$3,000.00	20.0%	$3,600.00	allowance	$3,600.00			Signs of water infiltration were observed at the glass block windows provided at the east gym area.

Table 1 - Critical and Non-Critical Repairs

Marblehead High School
2 Humphrey Street
Marblehead, Massachusetts
EBI Project # **1320000049**

Site Survey Date: 2/10/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 215,000
Number of Units: 1
Property Age: 19
Analysis Term: 20

SECTION NUMBER	*SECTION NAME*	*PRIORITY*	*RECOMMENDED WORK*	*QUANTITY*	*UNIT COST*	*Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.*	*UNIT COST (Including Markup)*	*UNIT DESCRIPTION*	*ESTIMATED CRITICAL REPAIR COST*	*Non-Critical Repair?*	*ESTIMATED NON-CRITICAL REPAIR COST*	COMMENTS OR ADDITIONAL DESCRIPTION
5.0	**BUILDING INTERIORS**											
5.1	Bsmt/Attic		None			20.0%						
5.2	Interior F & C	**#2**	Acoustical ceiling tile	150	$1.63	20.0%	$1.95	square foot		✔	$293.18	Damaged and stained ceiling tiles and drywall ceilings were observed throughout the upper floors.
5.2	Interior F & C	**#2**	Vinyl flooring - common area	25	$1.51	20.0%	$1.82	square foot		✔	$45.45	Damaged floor tiles were observed within the corridors at several door thresholds and floor utility covers.
6.0	**ACCESSIBILITY**											
6.1	Accessibility	**#4**	Complete accessibility compliance upgrades	1	$2,300.00	20.0%	$2,760.00	allowance	$2,760.00			Refer to accessibility checklist
7.0	**BUILDING SYSTEMS**											
7.1	Plumbing		None			20.0%						
7.2	HVAC		None			20.0%						
7.3	Electric	**#2**	Perform IR survey	1	$0.00	20.0%	$0.00	Action Item	$0.00			No IR Survey information provided to *EBI*.
7.4	F/L Safety	**#1**	Annual Fire Alarm Inspection	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050.20			Provide current inspection tags for fire sprinkler and alarm systems
7.4	F/L Safety	**#1**	Annual Fire Sprinkler Inspection	1	$1,708.50	20.0%	$2,050.20	allowance	$2,050.20			Provide current inspection tags for fire sprinkler and alarm systems
7.4	F/L Safety	**#1**	Sprinkler system 5 year test	1	$4,500.00	20.0%	$5,400.00	Allowance	$5,400.00			Complete NFPA 5-year sprinkler test
7.5	Elevators	**#1**	Annual elevator inspection	4	$1,708.50	20.0%	$2,050.20	allowance	$8,200.80			Missing and expired elevator inspection certs posted.
8.0	**MUNICIPAL RESEARCH**											
8.1	Municipal Information & Zoning		None			20.0%						
8.2	Building & Planning		None			20.0%						
8.3	Fire Department		None			20.0%						
9.0	**NATURAL HAZARDS**											
9.1.1	Seismic		None			20.0%						
9.1.2	Flood Zone		None			20.0%						
9.1.3	Wind Zone		None			20.0%						
9.2	Suspect Mold & Moisture		None			20.0%						
								DEFERRED MAINTENANCE:	**CRITICAL**		**NON-CRITICAL**	Note:
									$792,090		**$9,739**	Priority 1: Current Critical Priority 2: Potential Critical
								TOTAL:	**$801,829**			Priority 3: Recommended Priority 4: Non-Compliant with current standards

TABLE 2 - CAPITAL NEEDS OVER TERM

Marblehead High School
2 Humphrey Street
Marblehead, Massachusetts
EBI Project # **1320000049**

Site Survey Date: 2/10/2021
Report Date: 3/29/2021
Property Type: School
Number of Buildings: 1
Number of Floors: 2

Building Area: 215,000
Number of Units: 1
Property Age: 19
Analysis Term: 20

SECTION NUMBER	SECTION NAME	PRIORITY	RECOMMENDED WORK	AVERAGE EFFECTIVE USEFUL LIFE	EFFECTIVE AGE	REMAINING USEFUL LIFE	TOTAL QUANTITY OVER TERM	APPROXIMATE QUANTITY PER YEAR	UNIT COST (adjusted by location factor)	Markup for Contingency, Permits, Overhead/Profit, General Conditions, etc.	UNIT COST (including Markup)	UNIT DESCRIPTION	ESTIMATED COST PER YEAR	Annual Costs 2021 YEAR 1	2022 YEAR 2	2023 YEAR 3	2024 YEAR 4	2025 YEAR 5	2026 YEAR 6	2027 YEAR 7	2028 YEAR 8	2029 YEAR 9	2030 YEAR 10	2031 YEAR 11	2032 YEAR 12	2033 YEAR 13	2034 YEAR 14	2035 YEAR 15	2036 YEAR 16	2037 YEAR 17	2038 YEAR 18	2039 YEAR 19	2040 YEAR 20	RECOMMENDED TOTAL OVER THE TERM
2.0	**SITE CONDITIONS**																																
2.1	Site Features		None	-						20.0%																							
2.2	Landscaping / Improvements	#3	Signage, Entrance/Monument	25	19	6	3	3	$6,606.20	20.0%	$7,927.44	allowance	$23,782						23,782															$23,782
2.2	Landscaping / Improvements	#3	Routine concrete sidewalk repairs (linear foot allowance)	5	2	3	3,000	750	$9.11	20.0%	$10.93	linear foot	$8,201			8,201					8,201					8,201						8,201			$32,803
2.2	Landscaping / Improvements	#3	Routine asphalt sidewalk repairs (LF)	5	2	3	9,000	2,250	$7.40	20.0%	$8.88	per linear foot	$19,989			19,989					19,989					19,989						19,989			$79,958
2.2	Landscaping / Improvements	#3	Replacement of exterior light fixtures	15	7	8	50	50	$2,000.00	20.0%	$2,400.00	each	$120,000								120,000														$120,000
2.2	Landscaping / Improvements	#3	Replace interlocking block retaining wall	25	19	6	600	600	$19.68	20.0%	$23.62	per square foot	$14,171						14,171																$14,171
2.3	Pavement/ Parking	#3	New asphalt overlay, repair, and restriping	25	19	6	152,350	152,350	$1.14	20.0%	$1.37	per square foot	$208,232						208,232																$208,232
2.3	Pavement/ Parking	#3	Patching, crack sealing, sealing and striping of asphalt pavement	6		6	457,050	152,350	$0.36	20.0%	$0.44	per square foot	$66,634						66,634						66,634						66,634			$199,903
2.4	Amenities	#3	Replace wood dumpster enclosure	20	5	15	1	1	$1,366.80	20.0%	$1,640.16	allowance	$1,640																1,640					$1,640
2.5	Utilities		None	-						20.0%																							
3.0	**STRUCTURE**																																
3.1	Substructure		None	-						20.0%																							
3.2	Superstructure		None	-						20.0%																							
4.0	**BUILDING ENVELOPE**																																
4.1	Roof	#3	PMP Ongoing roof maintenance, psf	-			2,447,600	122,380	$0.05	20.0%	$0.06	per square foot	$7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	7,343	$146,856
4.1	Roof	#3	TPO 60 mil roof replacement - low rise	20		20	116,000	116,000	$5.40	20.0%	$6.48	square foot	$751,521																				751,521	$751,521
4.1	Roof	#3	Asphalt shingle roof replacement	20		20	6,380	6,380	$1.37	20.0%	$1.65	square foot	$10,508																				10,508	$10,508
4.2	Facades	#3	Renew/recaulk expansion & control joints	15	5	10	6,000	6,000	$1.17	20.0%	$1.41	linear foot	$8,447										8,447											$8,447
4.3	Windows and Doors	#3	Replace exterior common/service doors, aluminum and glass	30	19	11	20	20	$346.50	20.0%	$415.80	each	$8,316											8,316										$8,316
4.3	Windows and Doors	#3	Replace exterior metal insulated common doors	25	19	6	10	10	$386.00	20.0%	$463.20	each	$4,632						4,632																$4,632
4.3	Windows and Doors	#3	Overhead service door replacement 12' x 16'	15	11	4	6	3	$3,251.85	20.0%	$3,902.21	each	$11,707				11,707															11,707		$23,413
4.3	Windows and Doors	#3	Renew/recaulk windows and doors	15	7	8	20,000	20,000	$1.17	20.0%	$1.41	linear foot	$28,156								28,156													$28,156
4.3	Windows and Doors	#3	Commercial window replacement	25	19	6	500	500	$854.25	20.0%	$1,025.10	each	$512,550						512,550															$512,550
5.0	**BUILDING INTERIORS**																																
5.1	Bsmt/Attic		None	-						20.0%																							
5.2	Interior F & C	#3	Corridor finish refurbishment	8	4	4	201,600	67,200	$10.00	20.0%	$12.00	per square foot	$806,400				806,400								806,400								806,400	$2,419,200
5.2	Interior F & C	#3	Kitchen refurbishment (commercial)	8	4	4	6,000	2,000	$11.39	20.0%	$13.67	per square foot	$27,336				27,336								27,336								27,336	$82,008
6.0	**ACCESSIBILITY**																																
6.1	Accessibility		None	-						20.0%																							
7.0	**BUILDING SYSTEMS**																																
7.1	Plumbing	#3	Replace commercial gas-fired water heater (500 - 725 MBH)	15	var		8	2	$24,054.77	20.0%	$28,865.72	each	$57,731		57,731	57,731															57,731	57,731		$230,926
7.2	HVAC	#3	Through wall packaged or split unit replacement 2-ton	12	8	4	4	2	$2,957.98	20.0%	$3,549.58	each	$7,099				7,099													7,099				$14,198
7.2	HVAC	#3	Replace R-410a air cooled condensing unit (5.0 - 7.0 tons)	18	15	3	8	8	$5,499.32	20.0%	$6,599.18	each	$52,793			52,793																		$52,793
7.2	HVAC	#3	Replace rooftop package unit (25-ton) - 100% OA, Single Zone	20	17	3	6	6	$49,695.14	20.0%	$59,634.17	each	$357,805			357,805																		$357,805
7.2	HVAC	#3	Replace rooftop package unit (8.5-ton) - 100% OA, Single Zone	20	17	3	2	2	$22,872.83	20.0%	$27,447.39	each	$54,895			54,895																		$54,895
7.2	HVAC	#3	Replace AHU (3000 CFM) - Built Up Indoor Unit, Single Zone, Constant Volume	20	18	2	1	1	$13,633.83	20.0%	$16,360.60	each	$16,361		16,361																				$16,361
7.2	HVAC	#3	Heat Recovery Ventilator	25	19	6	5	5	$74,000.00	20.0%	$88,800.00	each	$444,000						444,000																$444,000
7.2	HVAC	#3	Replace MAU (400 MBH input) - Heating Only, Gas Fired	20	16	4	1	1	$27,432.82	20.0%	$32,919.38	each	$32,919				32,919																		$32,919
7.2	HVAC	#3	Replace Condensing Boiler (194 MBH)	30	19	11	4	4	$54,436.23	20.0%	$65,323.47	each	$261,294											261,294										$261,294
7.2	HVAC	#3	Replace Compressor/Condenser Unit (2.5 ton) - Air Cooled	25	19	6	3	3	$18,962.07	20.0%	$22,754.49	each	$68,263						68,263																$68,263
7.2	HVAC	#3	Replace VAV Boxes	25	var		140	10	$1,500.00	20.0%	$1,800.00	each	$18,000							18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	$252,000
7.2	HVAC	#3	Replace VFD (10 HP motor)	25	19	6	4	4	$3,715.42	20.0%	$4,458.50	each	$17,834						17,834																$17,834
7.3	Electric	#3	Diesel-Fired Emergency Generator (200 kW)	25	19	6	1	1	$63,413.83	20.0%	$76,096.59	each	$76,097						76,097																$76,097
7.3	Electric	#3	Perform IR survey	5	1	4	4	1	$2,500.00	20.0%	$3,000.00	allowance	$3,000				3,000					3,000					3,000				3,000		$12,000
7.4	F/L Safety	#3	Replace fire alarm control panel with addressable w/o voice, up to 400 points type (medium size)	20	18	2	1	1	$25,000.00	20.0%	$30,000.00	each	$30,000		30,000																				$30,000
7.4	F/L Safety	#3	Replace fire pump (500 GPM)	35	19	16	1	1	$54,293.85	20.0%	$65,152.62	each	$65,153																	65,153				$65,153
7.5	Elevators	#3	Renovations to elevator cab Standard Finishes	20	18	2	4	4	$11,390.00	20.0%	$13,668.00	per cab	$54,672		54,672																				$54,672
7.5	Elevators	#3	Elevator modernization - 3-story Hydraulic	20	18	2	4	4	$125,290.00	20.0%	$150,348.00	per elevator	$601,392		601,392																				$601,392
8.0	**MUNICIPAL RESEARCH**																																
8.1	Municipal Information & Zoning		None	-						20.0%																							
8.2	Building & Planning		None	-						20.0%																							
8.3	Fire Department		None	-						20.0%																							
9.0	**NATURAL HAZARDS**																																
9.1.1	Seismic		None	-						20.0%																							
9.1.2	Flood Zone		None	-						20.0%																							
9.1.3	Wind Zone		None	-						20.0%																							
9.2	Suspect Mold & Moisture		None	-						20.0%																							
												ANNUAL RECOMMENDATIONS, UNINFLATED		7,343	767,499	558,758	895,804	7,343	1,443,538	25,343	201,689	28,343	33,790	294,953	925,713	53,533	28,343	26,983	97,595	25,343	177,899	97,781	1,621,108	**$7,318,698**
												INFLATION FACTOR, IN PERCENTAGE 1.030		100.00%	103.00%	106.09%	109.27%	112.55%	115.93%	119.41%	122.99%	126.68%	130.48%	134.39%	138.42%	142.58%	146.85%	151.26%	155.80%	160.47%	165.28%	170.24%	175.35%	
												ANNUAL RECOMMENDATIONS, INFLATED @ 3.00% AFTER YEAR ONE		**$7,343**	**$790,524**	**$592,786**	**$950,358**	**$7,790**	**$1,531,450**	**$26,886**	**$213,972**	**$30,069**	**$35,847**	**$312,915**	**$982,089**	**$56,793**	**$41,622**	**$40,814**	**$152,049**	**$40,668**	**$294,039**	**$166,465**	**$2,842,623**	**$9,117,104**

Note:
Priority 1: Current Critical
Priority 2: Potential Critical
Priority 3: Recommended
Priority 4: Non-Compliant with current standards

PRESENT VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR **$1.70**

INFLATED VALUE OF RECOMMENDED TOTAL ANNUAL CAPITAL NEEDS PER SF PER YEAR ***$2.12***

1.0 PURPOSE & LIMITATIONS

The exclusive purpose of this *Capital Needs Assessment* (the *Report*) is to observe the general physical condition and maintenance status of the property, to suggest repair or maintenance items considered customary for the property to continue in its current operation compared to properties of similar age and condition, and to assist *Marblehead Public Schools*, in its Due Diligence effort in evaluating the Property. Amendments to EBI's limitations as stated herein that may occur after issuance of the Re*port* are considered to be included in this *Report. EBI's* liability to the client wishing to use this *Report* is limited to the cost of the *Report*. By accepting draft and final Reports, *Marblehead Public Schools* agrees to these terms and limitations.

The information reported was obtained through sources deemed reliable, a visual site survey of areas readily observable, easily accessible or made accessible by the property contact and interviews with owners, agents, occupants, or other appropriate persons involved with the Subject Property. Municipal information was obtained through file reviews of reasonably ascertainable standard government record sources, and interviews with the authorities having jurisdiction over the property. Findings, conclusions and recommendations included in the *Report* are based on our visual observations in the field, the municipal information reasonably obtained, information provided by the Client, and/or a review of readily available and supplied drawings and documents. No disassembly of systems or building components or physical or invasive testing was performed. EBI renders no opinion as to the property condition at un-surveyed and/or inaccessible portions of the Subject Property. EBI relies completely on the information provided during the site survey or provided or obtained during the writing of the draft *Report*, whether written, graphic or verbal, provided by the property contact, owner or agent, or municipal source, or as shown on any documents reviewed or received from the property contact, owner or agent, or municipal source, and assumes that information to be true and correct. EBI assumes no responsibility for property information or prior reports withheld or not provided during preparation of the *Report* for any reason whatsoever. The observations in this *Report* are valid on the date of the survey. EBI uses the date of first occupancy to establish the Subject Property age.

The contents of the *Report* may not represent a detailed analysis by individual consultants of the Subject Property façades, roof, paving, mechanical, electric, plumbing, elevator, sprinkler, or fire and life safety systems depending on the scope of work selected by *Marblehead Public Schools.* The extent of the physical survey for the production of this Report has been limited, by contract and agreed upon Scope of Work, (consistent with the guidelines of the ASTM E 2018 – 15 Scope of Work, as referenced below) to visual observations and a walk through of the property. Assumptions regarding the overall condition of the property have been developed based upon a survey of representative areas of the Subject Property. As such, no representation of *all* aspects of *all* areas or components is made.

Critical Repairs as may be identified during the survey are typically limited to life, safety, health, building code violation or building or property stabilization issues observed at the Subject Property. Routine, normal or customary annual maintenance or preventative maintenance items are not reported or included in this *Report*.

Non-Critical Repairs as may be identified during the survey are typically repairs that are not life, safety, stabilization or code issues, but deferred maintenance or repairs necessary or of significant cost so to warrant them as a Short Term Repair, and/or that can't be completed within a short timeframe due to the magnitude of the issue, the scope of work or weather.

This assessment is based on the evaluator's opinion of the physical condition of the improvements and the estimated expected remaining useful life of those improvements, based on his observations in the field at the time of the survey, and the written or verbal information received. The conclusions presented are based on the evaluator's professional judgment. The actual performance of individual components or systems may vary from a reasonably expected standard and may be affected by circumstances that are not readily ascertainable or viewable, or that occur after the date of the survey.

Where quantities cannot be determined from information provided or physical takeoffs, lump sum estimates or allowances are used. The costs shown are based on professional judgment and the apparent or actual extent of the observed defect, including the cost to design, procure, construct and manage the repair or replacement. Where property-unique or specialty equipment is present, EBI relies solely on data regarding maintenance and/or replacement costs provided by the designated site contact or on-site individuals with first-hand knowledge of the specific equipment.

EBI provides Pre-Survey Questionnaires for completion by the designated site or property contact, as provided by *Marblehead Public Schools* or their agent. The information requested in the questionnaire assists in our research of the Subject Property to obtain pertinent property data, discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs, and pending repairs and improvements. If the completed Pre-Survey Questionnaire is not returned as of this *Report*, this is a limiting factor in our analysis. If the questionnaire is returned at a later date showing a material difference from information provided in the Report, we will forward the questionnaire to you under separate cover. If no response is received, or no material difference is noted in the questionnaire, our Report will not be modified.

EBI may not have been provided with roof design or installation details and may not have been provided with warranty information (see Section 3.4). EBI has relied on general industry performance of similar type roofs and general observations of the surface covering of the roof to determine if roof replacement is warranted during the analysis term. EBI is not responsible for roof failure that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

EBI may not have been provided with façade reports and cannot opine on costs to repair façades of buildings five stories or more without receipt of current façade reports (see *Section 3.3*). EBI has relied on general industry performance of similar façade systems and general observations of the surfaces of the façades to determine if repair or replacement is warranted during the analysis term. EBI is not responsible for façade failures that may occur earlier than estimated due to hidden conditions or defects that cannot be readily ascertainable by general observation.

If the municipality in which the Subject Property is located has governing ordinances requiring façade studies, and a copy is not provided to EBI, this is a limiting factor in our assessment and analysis. Prudent property management will have had façade reports completed on their high-rise property, and if a copy of the report is not provided to EBI, this too, is a limiting factor in our assessment and analysis.

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The gathering of data and information for this *Report* was completed in general conformance with ASTM E 2018 – 15 Standard Guide for Property Condition Assessment: Property Condition Assessment Process, and with the scope of services approved by the client.

The survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession, and in accordance with generally accepted practices of other consultants currently practicing in the same locality under similar conditions. The level of care and skill exercised is also commensurate with the fees charged for EBI's services. No other representation, expressed or implied, and no warranty or guarantee is included or intended. The *Report* speaks only as of its date, in the absence of a specific written update of the *Report*, signed and delivered by EBI.

Limiting factors

Any additional information that becomes available after *EBI's* survey and draft submission concerning the Subject Property should be provided to *EBI* so that *EBI's* conclusions may be revised and modified, if necessary, at additional cost. This *Report* has been prepared in accordance with *EBI's Standard Conditions for Engagement*, which is an integral part of this *Report.*

DEVIATIONS FROM THE GUIDE

EBI includes an analysis of estimated Capital Needs in this *Report*. *EBI* uses an approximate threshold of $1,000 in aggregate for reporting Critical & Non-Critical Repair or Capital Needs items. Material life, safety, health, fire or building code violation or building or property stabilization issues observed at the Subject Property will be reported regardless of cost.

CONDITION

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

Excellent	The component or system is in new or like new condition and no deferred maintenance is recommended.
Good	The component or system is sound and performing its function, and/or scheduled maintenance can be accomplished through routine maintenance. 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 at a capacity that is considered to be acceptably sufficient but may be obsolete or is approaching the end of its expected useful life. The component or system may exhibit evidence of deferred maintenance, previous repairs, or workmanship not in compliance with commonly accepted standards. Repair or replacement may be recommended in the near-term of the loan to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its expected useful life.
Poor	The component or system has either failed or cannot be relied upon to continue performing its original function as a result of having exceeded its typical expected useful life, excessive deferred maintenance or state of disrepair. Present condition could contribute to, or cause, the deterioration of other adjoining elements or systems. Repair or replacement is recommended.

ABBREVIATIONS

EBI may use various abbreviations to describe various site, building or system components or legal descriptions. Not all abbreviations may be applicable to all *Reports.* The abbreviations most often utilized are defined below.

ACT	Acoustic Ceiling Tile
ABS	Acrylonitrile-Butadiene-Styrene
ADA	Americans with Disabilities Act
AHU	Air Handling Unit
APA	American Plywood Association
BTU	British Thermal Unit (a measurement of heat)
BTUH	British Thermal Units per Hour
BUR	Built Up Roof
CFM	Cubic Feet per Minute
CMU	Concrete Masonry Unit
CPVC	Chlorinated Poly Vinyl Chloride
DWH	Domestic Water Heater
EIFS	Exterior Insulating Finishing System
EPDM	Ethylene Propylene Diene Monomer
EUL	Expected Useful Life, Effective Useful Life
FF&E	Furniture, Fixtures & Equipment
FCU	Fan Coil Unit
HCP	Handicapped Person
FEMA	Federal Emergency Management Agency
FHA	Forced Hot Air
FHW	Forced Hot Water
FIRM	Flood Insurance Rate Map
FOIA	Freedom Of Information Act
FOIA	Freedom Of Information Act
FRT	Fire retardant treated plywood
GFI	Ground Fault Interrupt (circuit)
GWB	Gypsum Wall Board
HCP	Handicapped Person
HID	High Intensity Discharge (lighting)
HVAC	Heating, Ventilating and Air Conditioning
KW	Kilowatt
KVA	Kilovolt Ampere
MBH	Thousand BTUs per Hour
MDP	Main Distribution Panel
OSB	Oriented Strand Board
PEX	Polyethylene Cross-Linked Tubing
PTAC	Packaged Terminal Air Conditioning (Unit)
PVC	Poly Vinyl Chloride
RTU	Roof Top Unit
RUL	Remaining Useful Life
TPO	Thermoplastic polyolefin
SEER	Seasonal Energy Efficiency Rating
UBC	Uniform Building Code
VAV	Variable Air Volume box
VCT	Vinyl Composition Tile
VWC	Vinyl Wall Covering

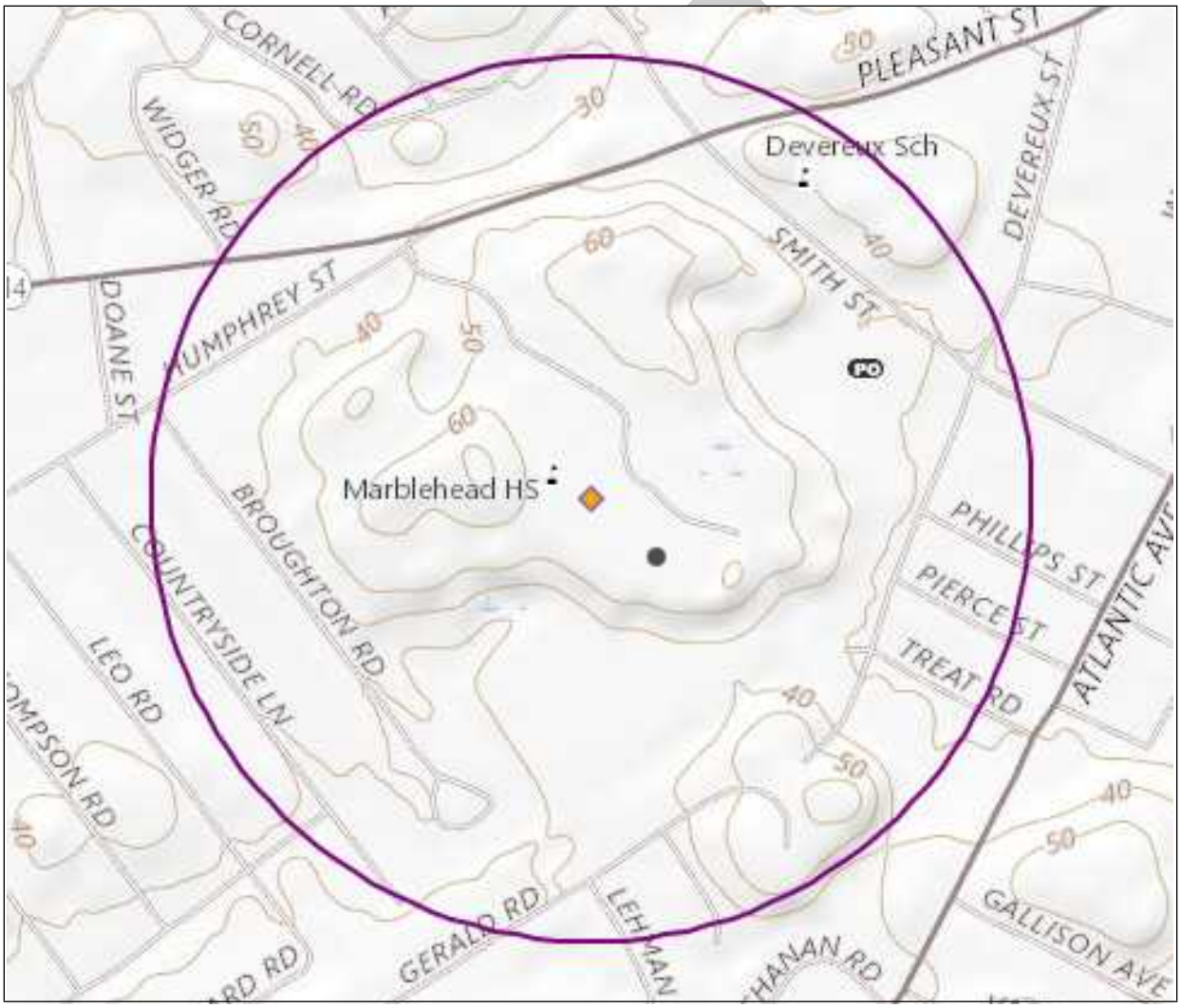
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2.0 SITE

2.1 TOPOGRAPHY & DRAINAGE

DESCRIPTION

The Subject Property is located at an elevation of approximately 40-70 feet above mean sea level (msl). The topography of the Subject Property is tiered and slopes moderately approximately 30 feet to the north and south (see Topo Map below).



Topographic Map

	
Topography at the west side of the Subject.	Topography at the south side of the Subject.
	
Topography at the rear side of the Subject.	Topography at the south athletic fields
	
Topography at the east athletic fields	Topography at the north side of the Subject.

OBSERVATIONS

No topography problems were reported or observed. Slopes pitching drainage away from the building appear to be adequate. Detriments or problems such as ground fractures, settlement areas, or evidence of erosion or chronically standing water were not observed. Slopes within parking areas appeared to be adequate for storm water control

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

2.2 LANDSCAPING & SITE IMPROVEMENTS

DESCRIPTION

The property has municipally-owned, extensive, mature landscaping at the front of the site, the entrances to the property, around the buildings, and in islands throughout the parking areas. Landscaping includes deciduous and evergreen trees, shrubs, ground cover, and lawns.

An automatic irrigation system is present in the landscaped areas. Irrigation controllers are located in sub-surface utility boxes.

Monument signage is located at the main entrance and smaller signage is located throughout the drive lane areas. The pylon signs are supported by fiberglass posts. The monument sign is constructed with cast-in-place concrete, brick, and stone.

Cast-in-place concrete and asphalt sidewalks are provided for pedestrian traffic throughout the Subject Property. Interlocking brick paver walkways are located near the main entrance and the rear entrance area. The concrete sidewalks are assumed be approximately 4-inches in thickness and with steel reinforcement. Stairs provide access to the athletic fields at the south side of the Subject Property and are reportedly constructed with cast-in-place concrete and steel pipe railings. The stairs were concealed by snow at the time of our site visit.

Lighting is provided by pole-mounted fixtures on aluminum poles, approximately 15 feet in height and spaced around the site, parking areas, and along the main entrance drive. Building-mounted flood lights and decorative fixtures provide exterior building lighting at the perimeter of the building.

The Subject Property has chain link fencing around the tennis courts and the athletic fields along the east and south sides of the property.

The Subject Property has retaining walls constructed with split-faced concrete block to make height changes around the site at select locations throughout the Subject Property.

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Monument signage.	Pylon signage.
	
Concrete sidewalks.	Interlocking brick pavers.
	
Asphalt sidewalks.	Stairs to southern athletic fields.

	
Typical site lighting.	Typical retaining wall.

OBSERVATIONS

The property landscaping is reported to be in good condition. At the time of our site visit snow concealed most of the landscaped areas. The irrigation system appears to be in good condition. Landscape maintenance is handled by the municipality as part of routine maintenance.

The monument sign at the main entrance is in good condition, and the pylon signage located throughout the drive lanes is also in good condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for refurbishment of the signs during the analysis term.

The sidewalks appear to be in overall good condition. Sections of cracked and damaged concrete sidewalks were observed along the east side of the gymnasium. Based on the observed conditions, Non-Critical Repairs are recommended to repair all damaged concrete sidewalks. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for routine concrete sidewalk repairs during the analysis term. Additionally, based on its reported age, current condition, and expected useful life, Capital Needs are recommended for routine asphalt sidewalk repairs during the analysis term.

The concrete steps and accompanying railings are reported to be in good condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for refurbishment of the steps and railings beyond the analysis term.

The parking area lighting and exterior light fixtures appear to be in good condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for exterior light fixture replacement during the analysis term.

The fencing provided for the tennis courts and athletic fields is in good condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for fencing replacement beyond the analysis term.

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The retaining walls appear to be in good overall condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for retaining wall repair allowance during the analysis term.

	
Cracked and damaged concrete sidewalks were observed along the east side of the gymnasium.	Cracked and damaged concrete sidewalks were observed along the east side of the gymnasium.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Repair concrete sidewalks**

Please see Table 2 for the recommended Capital Needs listed below:

- **Signage, Entrance/Monument**
- **Repair concrete sidewalks**
- **Repair asphalt sidewalks**
- **Replacement of exterior light fixtures**
- **Replace interlocking block retaining wall**

2.3 PAVEMENT AND PARKING

DESCRIPTION

According to a count in the field, the property is improved with parking areas for 257 cars, including 7 accessible spaces. See *Section 3.6 Americans with Disabilities Act Accessibility Guidelines (ADAAG)* for additional accessible parking information for people with physical disabilities.

The property has approximately 5,500 feet of drive lanes and roadways running through the site. The parking is configured in a central lot toward the northeast side of the Subject Property.

A single entry drive provides access to the Subject Property from the adjacent road frontages. Traffic signals are provided at intersection entering the property.

The parking areas have asphalt pavement, and the drive lanes also have asphalt pavement.

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The parking area and drive lanes have cast-in-place concrete curbing.



Entrance to the Subject Property.



Typical drive lanes.



Typical parking lot area.



Typical parking lot area.

OBSERVATIONS

No problems were reported regarding the adequacy of the parking areas.

The asphalt paved areas are in good to fair condition. Minor cracking, settlement, alligator cracking and patches in the pavement were noted at a number of locations throughout the perimeter fire lanes and parking lot areas. Based on observed and reported conditions, Non-Critical Repairs are recommended for patching, crack sealing, sealing and striping of asphalt pavement at select locations. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended asphalt overlay, repair, and restriping during the analysis term.

The parking area sealant and striping is in good condition, with indications of average wear. Based on the observed condition of the parking and drive areas and the average effective useful life of pavement

and pavement sealants and striping, the application of sealants and striping of the parking and/or lane markings are recommended as Capital Need during the analysis term.

The curbs are in good condition. The curbs will be maintained at the property as part of operational expenses during the analysis term.

	
Sections of damaged asphalt at the perimeter fire lanes.	Sections of damaged asphalt at the parking lot areas.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Patching, crack sealing, sealing and striping of asphalt pavement**

Please see Table 2 for the recommended Capital Needs listed below:

- **New asphalt overlay, repair, and restriping**
- **Patching, crack sealing, sealing and striping of asphalt pavement**

2.4 SITE AMENITIES

DESCRIPTION

A "Snack Shack" maintained by the Booster Club is located on the east side of the building adjacent to the football field.

The Subject Property is provided with a trash dumpster enclosure constructed with painted wood walls and no gates and is located on the east side of the building near the gymnasium.

	
Snack Shack.	Dumpster enclosure.

OBSERVATIONS

The Snack Shack was observed to be in good condition. Reportedly, the Snack Shack is maintained by the Booster Club.

The trash dumpster enclosure appears to be in good condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for dumpster enclosure replacement during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace wood dumpster enclosure**

2.5 UTILITIES

2.5.1 Water & Sewer

DESCRIPTION

Town of Marblehead water and sewer department provides water and sewer service to the Subject Property site. The sewer is discharged into the municipal lines beneath the abutting street.

2.5.2 Gas/Oil

DESCRIPTION

National Grid provides propane service to the Subject Property. No oil service is provided to the Subject Property.

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Diesel fuel service is provided to the Subject Property for the emergency generator. Various vendors deliver diesel to the Subject Property based on their market price. Diesel fuels the emergency generator and is stored in a belly tank below the generator.

2.5.3 Electrical

DESCRIPTION

Marblehead Municipal Light Department (MMLD) provides electric service to the site. The service enters the property overhead from a pole at the front of the site, then runs underground to a pad-mounted transformer feeding secondary runs to the main switchgear. The utility reportedly owns and maintains the lines up to the transformers. The secondary feeds to the switchgear are the responsibility of the Subject Property owner.

2.5.4 Storm Drainage

DESCRIPTION

The storm water flow from the site is controlled via on-site structures discharging into the municipal system. The building's internal roof drains are tied to catch basins in the Subject Property parking areas. The parking lots are configured with slopes toward curbs and catch basins controlling storm water flow. The drainage system is the responsibility of the Subject Property owner.

	
Incoming water service	Incoming gas service

	
Main distribution panel	Emergency generator with belly tank.

OBSERVATIONS

There were no reported or observed problems with the Subject Property water, sewer, gas, diesel, electric, or storm water drainage systems. The utilities appeared to be configured and operating in a manner consistent with their intended use and reportedly adequate to meet the needs of the Subject Property.

There is one pad-mounted electrical transformer on site. The on-site contact stated that they are reportedly owned and maintained by the utility company. Peeling paint, rusting sections, and graffiti were observed at the transformer adjacent to the gymnasium. Based on the observed conditions, Non-Critical Repairs are recommended for preparing, priming, and painting of the electrical transformer housing.

	
Peeling paint, rusting sections, and graffiti at the transformer adjacent to the gymnasium.	Peeling paint, rusting sections, and graffiti at the transformer adjacent to the gymnasium.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Prepare, prime, and paint transformer housing**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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3.0 STRUCTURE

3.1 GENERAL INFORMATION

GEOTECHNICAL REPORT

Design information was not obtained or provided to *EBI* for review.

3.2 SUBSTRUCTURE

DESCRIPTION

Concrete slabs-on-grade of underdetermined thickness are provided throughout the building. The design and construction of the foundation footings is intended to properly spread out the building's vertical loads without exceeding the bearing capacity of the underlying soil.

The concrete floor slabs are typically reinforced with welded wire mesh or steel reinforcement bars or fiber mesh for added flexural strength and to minimize cracking. The concrete slabs are generally constructed over a compacted gravel or sand base and vapor barrier to aid in preventing water migration from the bearing soil to the slab.

In cold climates the footings are constructed below the prescribed frost level to minimize movement due to freeze-thaw conditions. Varying sizes of steel reinforcing bars typically exist in the foundation walls and footings for tensile and bending strength.

In cold climates the slabs and/or foundation walls are often insulated around the perimeter of the building. Foundation walls servings as retaining walls for basement areas of the building generally are constructed with waterproofing and drainage systems to prevent moisture infiltration.



Typical slab condition.



Typical slab condition.

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OBSERVATIONS

The majority of the Subject Property substructure was not visible due to the surrounding grade. The substructure appears to be sound and in good condition. No indications of problems with the substructure were reported or observed. Unless visible, EBI's assessment of substructure condition is primarily based on obvious irregularities with the superstructures (including limited observations of exterior and interior construction and finishes) and the condition of the slab-on-grade when present. The condition of substructure hidden construction elements, or defects not readily observable, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the substructures appear to be in good overall condition and are performing as designed. No obvious indications of irregularities, including differential settlement, sloped floors, significant cracks, out of plumb building elevations, or other perceived movement, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

3.3 SUPERSTRUCTURE

DESCRIPTION

Based on *EBI's* visual survey and experience with similar structures, the Subject Property's superstructure consists of steel columns and steel girders supporting steel floor and roof beams or open-web steel floor and roof joists. Typical floor to floor height is approximately 10 feet. Upper floor structures consist of concrete on steel decking, supported by the steel beams or open-web steel floor joists. The roof structure consists of rigid insulation and concrete on steel decking, supported by steel beams or open-web steel roof joists. Lateral resistance is provided by a combination of floor and roof diaphragms, and moment-resisting frames.

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Steel beams supporting concrete on metal decking.	OWJ supporting concrete on metal decking.

OBSERVATIONS

The superstructures are partially obscured from view by interior and exterior finishes. Unless visible, EBI's assessment of superstructure condition is predominantly based on obvious irregularities with exterior and interior construction and finishes. Concealed and/or obscured structural systems or connections were not viewed. The condition of the hidden structural defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this project.

Based on limited observations, the superstructures appear to be in good overall condition and appear to be performing as designed. No obvious indications of irregularities, including significant floor and/or roof deflections, significant cracks, noticeably out-of-plumb building elevations, or other perceived structural defects, were reported or observed.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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4.0 BUILDING ENVELOPE

4.1 ROOFING

DESCRIPTION

During the site survey, the roofs were accessed through walk-out doorway and representative areas of the roofs were observed. Pitched roofs were visually assessed and are not walked on due to safety concerns. *EBI* was not provided with roof design or installation details. Reportedly, no warranty is in place.

The Subject Property has low-slope, TPO-membrane roofs.

Low-slope roof membranes terminate at vertical interfaces with metal flashings. Roof penetrations are flashed with TPO-membrane boots.

Roof slope and crickets direct rainwater to internal roof drains and leaders.

The Subject Property has a gabled roof with asphalt shingles at the library section of the building, also referred to as the C Wing. The roof is flashed with metal flashing.

Pitched roofs terminate at vertical interfaces and roof edges, and vent and pipe penetrations are flashed with metal flashings.

The roof pitches toward perimeter gutters and downspouts where rainwater is discharged underground.

Rooftop features include curb-mounted HVAC units and equipment, electrical conduit, traction pads, safety railings at select locations, perimeter lightning protection, and natural gas pipe and exhaust penetrations.



Typical roof condition.



Exposed TPO roof section.

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Typical internal roof drain.	Typical perimeter gutter.
	
Pitched roof at library area.	Asphalt shingles.

OBSERVATIONS

In estimating the condition and effective useful life of roofs, *EBI* has relied on general industry performance of similar type roofs and general observations of the surface covering to determine if replacement is warranted during the analysis term.

The TPO roofs appear to be in fair to poor condition. The roofs are original and approximately 19 years old. Roofs of this type typically have an average effective useful life of approximately 15 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. Evidence of presumably active roof leaks in the form of stained ceiling tiles were observed during the survey throughout the Subject Property. Todd Bloodgood also reported on-going roof leaks. Based on the reported age, current condition, and expected useful life, Critical Repairs are recommended for roof replacement during the analysis term.

The asphalt-shingle roof appear to be in fair condition. The roof is approximately 19 years old. Roofs of this type typically have an average effective useful life of approximately 20 years, depending on the property's location, material type and quality, quality of installation, roof maintenance and exposure, amount of roof traffic, and regional climatic conditions. Evidence of presumably active roof leaks in the form of stained ceiling tiles were observed during the survey throughout the Subject Property. Todd Bloodgood also reported on-going roof leaks. Based on the reported age, current condition, and expected useful life, Critical Repairs are recommended for roof replacement during the analysis term.

The slope and drainage design of the building roofs appeared to be generally adequate.

Several locations of loose and hanging lightning protection was observed along the roof perimeter, especially at the gymnasium roof. Based on the observed conditions, Critical Repairs are recommended to secure all loose lightning protection systems.



Stained ceiling tiles at reported roof leak locations.



Stained ceiling tiles at reported roof leak locations.



Stained ceiling tiles at reported roof leak locations.



Detached lightning protection.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Secure all loose lightning protection**
- **TPO 60 mil roof replacement - low rise**
- **Asphalt shingle roof replacement**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 – Capital Needs for the recommended items listed below:

- **Ongoing roof repairs & maintenance, after roof replacement**

4.2 FAÇADES

DESCRIPTION

Primary exterior materials red brick, red brick veneer with decorative stone elements.

The façades have soldier-coursed, brick trim and decorative stone elements around the windows and entrances, and windows. Punched, ribbon, and curtainwall windows are provided in various locations on all elevations. The main entrance area along the north elevation is provided with decorative metal panels.

The exterior of the building has unique attributes, with a decorative tower at the C Wing.

A three-story, glazed, stair tower element is also located adjacent to the entry on the southwest side of the building. Each tenant has a glazed storefront system with display windows and entries.



The main entrance along the north elevation.



Typical brick and curtain wall systems.

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The partial south elevation.	The partial south elevation.
	
The C Wing with punched and ribbon windows.	Decorative tower structure.

OBSERVATIONS

The estimate of the façade condition is based on limited observation of representative observed areas of the exterior walls and the age of the improvements. Façade observations for a multi-story building are limited to exterior finishes of the ground level façades and those portions of the façades observable from adjacent roof areas or adjacent buildings. This does not represent a comprehensive or in-depth façade survey. Therefore, observations in this *Report* cannot be the sole source of façade analysis. Concealed and/or obscured façade material attachment systems were not viewed. Hidden defects, if any, or defects not readily observable from the viewing areas mentioned above, cannot be opined on, and is beyond the standard scope of work for this assessment.

The observed areas of the brick and concrete veneer appear to be in good overall condition. Based on the age and the condition of the brick masonry exterior walls, it is recommended that a dedicated repair program be instituted for anticipated degradation of the mortar joints and overall exterior wall performance. Walls should be routinely checked for fractured, spalling, or missing mortar joints, and

cleaning or tuck pointing of the brick and joints should be performed where necessary as part of routine maintenance.

The observed sealants along the control and panel joints appear to be in good condition overall. Based on the reported age, current condition, and expected useful life, sealant and control joint renewal is recommended as a Capital Need during the analysis term.

The metal panels at the main entrance appear to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The tower structure appears to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Control joint sealant renewal**

4.3 WINDOWS AND DOORS

DESCRIPTION

Aluminum-framed fixed and tilt/turn punched windows and fixed, ribbon and vertical strip windows with insulated glazing are located along all elevations of the building and on each floor level. Glass block windows are provided at the gymnasium and other select locations. Spandrel panels provided at the ribbon and vertical strip windows are aluminum.

The exterior doors consist of average-quality, commercial-grade, dual-leaf, aluminum, and glass doors accessing the lobby areas. Secondary entrances and service doors are dual-leaf aluminum and glass units. Service and access doors are metal. The doors are furnished with standard hardware, and panic hardware was observed at emergency exit doors.

The Subject Property has three receiving doors at the east side of the building that directly access the wood shop and custodial areas. The receiving doors are overhead sectional metal doors. Two are electrically-operated and one is manually-operated.

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Windows and doors at the main entrance along north facade.	Windows at south façade.
	
Typical punched and vertical strip windows.	Glass block windows at the gymnasium.
	
Typical service doors.	Typical overhead metal door.

OBSERVATIONS

Aside from normal wear, the observed doors appear to be in good overall condition. Door replacement is not anticipated during analysis term. Peeling paint and rusted metal sections were observed at the doors provided at the east side of the gymnasium. Based on the observed conditions, Non-Critical Repairs are recommended for preparing, priming, and painting of the doors. Based on their observed condition, reported age and average effective useful life, Capital Needs are recommended for door replacement during the analysis term.

Aside from normal wear, the observed overhead service doors appear to be in good condition. Based on the reported age, current condition, and expected useful life, Capital Needs are recommended for overhead service door replacement during the analysis term.

The observed windows appeared to be in good to fair overall condition. Several of the insulating windows exhibit failure of the seals between panes resulting in condensation build-up, and require painting and renewal of the sealants. Based on observed and reported conditions Non-Critical Repairs are recommended to repair insulated windows with failed seals. Signs of water infiltration were observed at the glass block windows provided at the east gym area. Based on the observed conditions, Critical Repairs are recommended to repair all areas of water infiltration. Based on the reported age, current condition, and expected useful life, sealant renewal around the windows is recommended as a Capital Need during the analysis term. Additionally, based on the reported age, current condition, and expected useful life, window replacement is recommended as a Capital Need during the analysis term.



Peeling paint and rusted metal sections d at the doors provided at the east side of the gymnasium.



Typical windows with to have failed seals and condensation.

	
Signs of water infiltration were observed at the glass block windows provided at the east gym area.	Signs of water infiltration were observed at the glass block windows provided at the east gym area.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Repair all areas of water infiltration at gymnasium windows**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Prepare, prime, and paint gymnasium doors**
- **Repair insulated windows with failed seals**

Please see Table 2 for the recommended Capital Needs listed below:

- **Replace exterior common/service doors, aluminum and glass**
- **Replace exterior metal insulated common doors**
- **Overhead service door replacement**
- **Renewal of the sealants around the windows and doors**
- **Window replacement**

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5.0 BUILDING INTERIORS

5.1 BASEMENTS/ATTICS/PENTHOUSES

DESCRIPTION

The Subject Property has no basement, attic or penthouse spaces.

OBSERVATIONS

Not applicable.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

5.2 INTERIOR FINISHES & COMPONENTS

DESCRIPTION

The interior areas into which entry was made possible by the site contact are finished with average quality materials consistent with similar property use types. The finishes generally consist of the materials listed in the table below.

TYPICAL INTERIOR FINISHES

AREA OR ROOM	FLOOR	WALLS	CEILING
Lobby	Ceramic tile	Painted GWB, brick, wood paneling, ceramic tile	Painted GWB
Administrative offices	Carpet / Vinyl tile	Painted GWB	Suspended acoustic tile
Corridors	Vinyl tile	Painted GWB, brick, wood paneling, ceramic tile	Suspended acoustic tile
Auditorium	Carpet, vinyl tile	Painted GWB, Wood paneling	Suspended acoustic tile
Classrooms	Vinyl tile	Painted GWB	Suspended acoustic tile
Cafeteria	Ceramic tile	Painted GWB	Suspended acoustic tile
Kitchen	Ceramic tile	Painted GWB, Ceramic tile	Suspended acoustic tile
Restrooms	Ceramic mosaic tile	Ceramic tile, painted GWB	Suspended acoustic tile
Stairs	Rubber floor tile	Painted GWB, ceramic tile	Exposed stair structure

The lobby area of the building ceramic tile floors and a combination of painted GWB, brick, wood paneling, and ceramic tile walls, and painted GWB ceilings. Classrooms and cafeteria spaces typically

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include vinyl tile floors, painted GWB walls, and acoustic tile ceilings. Corridor walls include painted GWB and ceramic tile walls.

The cafeteria and kitchen are located at the rear (south) end of the building. The cafeteria is provided with vinyl tile floors and the kitchen is provided with ceramic tile floors. Kitchen equipment includes gas ranges, warming ovens, food preparation tables and mixing centers, refrigerators, walk-in coolers, commercial dishwasher, and associated equipment.

Stairs are constructed with steel stringers and steel pipe railings. The treads and risers are rubber tile.

<table>
<tr><td> 
</td><td>  </td></tr>
<tr><td>Lobby</td><td>Representative corridor</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Auditorium</td><td>Representative classroom</td></tr>
</table>

	
Cafeteria	Kitchen
	
Representative bathroom	Representative stairway

OBSERVATIONS

A representative sampling of the High School areas were surveyed. The interior spaces are in good overall condition. Stained ceiling tiles were observed throughout the building. See Section 4.1 for further details. Based on the observed conditions, Non-Critical Repairs are recommended for replacement of all stained ceiling tiles.

The corridors were generally in good condition. Damaged floor tiles were observed within the corridors at several door thresholds and floor utility covers. Based on the observed conditions, Non-Critical Repairs are recommended for repairs to the tile floors at these locations Based on their reported age and estimated remaining useful life and current condition, corridor refurbishment, including painting the walls and trim, and flooring replacement is recommended as a Critical Need item.

The administrative offices, auditorium, and classrooms were all found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The kitchen finishes were found to be in good condition. Based on their reported age and estimated remaining useful life and current condition, kitchen refurbishment is recommended as a Capital Need during the analysis term.

The observed restroom finishes were found to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

The interior stairs and stair finishes appear to be in good condition and will be maintained at the property as part of operational expenses during the analysis term.

	
Stained ceiling tile at east entrance	Insert description

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Replace stained acoustical ceiling tiles**
- **Repair tile flooring in corridors**

Please see Table 2 for the recommended Capital Needs listed below:

- **Corridor refurbishment**
- **Kitchen refurbishment**

6.0 ACCESSIBILITY

DESCRIPTION

The *Americans with Disabilities Act (ADA)*, *Title III*, *28 CFR Part 36*, enacted July 26, 1990 and effective January 26, 1992, governs public accommodation and commercial properties. *Title III* of the *ADA* divides facilities into two basic categories: places of *public accommodation* and *commercial facilities*, with different obligations for each facility type. The provisions of *Title III* provide that persons with disabilities should have accommodations and access to public facilities that are equal, or similar, to those available to the general public. Assessment of any other *Titles*, or their provisions of the *ADA*, including those that govern employer and/or tenant responsibilities, is specifically excluded from this Scope of Work and *Report*. Since tenants and employers at properties are usually responsible for making their leased areas *ADAAG*-compliant, assessment for *ADAAG* compliance in these areas was not completed.

Regardless of a property's age, these areas and facilities must be maintained and operated to comply with the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)*. Facilities initially occupied after the effective date are required to fully comply with the *ADAAG*. Existing facilities constructed prior to this date are held to the lesser standard of compliance as *Title III* calls for owners of buildings occupied prior to the effective date to expend "reasonable" sums, and make "reasonable efforts", to make "practicable" or "readily achievable" modifications to remove barriers, unless said modification would create an undue financial burden on the property or is structurally infeasible. When renovating buildings occupied prior to the effective date, the area renovated, and the path of travel accessing the renovated area, must comply with the *ADAAG*. As an alternative, a *reasonable accommodation* pertaining to the deficiency must be made. The definitions of "reasonable," "reasonable efforts," "practicable." and "readily achievable," are site dependent and vary based on the owner's financial status.

Due to the unique nature of each property, the extent of analysis required, and the many variables of compliance with the *ADAAG* guidelines, the evaluation of costs for full *ADAAG* compliance is beyond the scope of this *Report*. A separate *ADAAG Compliance Audit* may be ordered and may reveal additional aspects of the property that are not in compliance.

For the purposes of this *Report* the survey is limited to visual observations of only a representative sample of areas readily observable or easily accessible, and to those areas set forth in *EBI's Modified Accessibility Compliance Checklist and Costs* included in Appendix C of this *Report*. The survey is limited to identifying potential routine maintenance or renovation actions that can increase accessibility over time and may or may not, achieve full *ADAAG* compliance. Places of *public accommodation* at the Subject Property were visually observed for general compliance with the major requirements of the ADA, taking into consideration the current use of the property, its age and renovation history. No actual measurements were taken to verify compliance.

Questions concerning the *ADA* and the *ADAAG* may be addressed to the *United States Department of Justice (USDOJ) ADA Hotline* at (800) 514-0301 followed by touching "7" on the touch tone keypad. Additional information is available online at the ADA.gov website.

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Accessible parking	Handicap bathroom stall

OBSERVATIONS

The Subject Property falls into the *public accommodation* category. Therefore, the Americans with Disabilities Act (ADA), Title III, 28 CFR Part 36, is applicable.

A visual review of the property completed in conformance with *EBI's Modified Accessibility Compliance Checklist and Costs*, identified issues of non-compliance with the *ADAAG.* Modifications to correct observed *ADAAG* deficiencies for the Subject Property and their associated estimated costs are detailed in *EBI's Modified Accessibility Compliance Checklist and Costs* immediately following.

Modifications to correct observed *ADA* deficiencies for the Subject Property and their associated estimated cost are beyond the scope of this assessment. The client should engage an accessibility specialist to determine what modifications, if necessary, are required to bring the property into compliance with *ADA* guidelines.

	
No vertical signage at ADA parking spaces.	No under sink piping insulation at ASA restrooms.

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RECOMMENDATIONS

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Complete ADA compliance upgrades**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

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LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Marblehead High School
Facility Address: 2 Humphrey Street
Marblehead, Massachusetts
Property Age: 19 Years

Legend:
ADA: Americans with Disabilities Design Standards
FHA: Fair Housing Accessibility Design Manual

1.0 ADA - Parking and Exterior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
1.1	Does there appear to be sufficient handicapped-accessible parking spaces with respect to the total number of reported spaces?	✔			ADA 208.2						
1.2	At least on in every six accessible spaces is required required to be van-accessible.		✔		ADA 208.2.4	No van-accessible signage provided.	Provide van-accessible parking spaces adjacent to areas of public accommodation.	1	$200	each	$200
1.3	Are accessible car parking spaces 96 inches wide minimum? (Measure from the centerline of the markings.) (NOTE: In Florida accessible spaces must be 144 inches wide minimum)	✔			ADA 502.2						
1.4	Are accessible van parking spaces 132 inches wide minimum? (Exception: Van parking spaces can be 96 inches wide minimum when the access aisle is 96 inches wide minimum.) (Measure from the centerline of the markings.)	✔			ADA 502.2						
1.5	Are there access aisles adjacent to each accessible space, and if present, are they at least 60 inches wide? (Two spaces may share an access aisle that is between them. Exception: Angled van accessible parking spaces must have the access aisle on the passenger side of the accessible space.)	✔			ADA 502.3						
1.6	Do the access aisles adjoin an accessible route? (NOTE: Compliant curb ramps present at head of access aisle, or access aisles flush with sidewalks.)	✔			ADA 502.3						
1.7	Do the **existing** ADA spaces appear to be marked with the International Symbol of Accessibility on a vertically-mounted sign?		✔		ADA 502.6	No vertically-mounted signage provided.	Provide compliant signage at accessible parking spaces.	7	$150	each	$1,050
1.8	Do the **existing** van-accessible spaces appear to be marked with a sign reading "Van-Accessible"?			✔	ADA 502.6						
1.9	Is the bottom edge of the ISA sign at least 60 inches above the finish grade of the parking space? (NOTE: "VAN ACCESSIBLE" sign can be lower than 60 inches.)			✔	ADA 502.6						
1.10	Are the clear widths of the walking surface of the accessible routes 36 inches minimum?	✔			ADA 403.5.1						
1.11	Are accessible routes free from barriers, such as stairs, steps, or vertical changes greater than 1/4"? (NOTE: a vertical change up to 1/2" is allowable if beveled with a slope no steeper than 1:2. This does not include ramps.)	✔			ADA 303.2, 303.3						
1.12	Do all protruding objects located between 27 inches above the floor and 80 inches above the floor protrude no greater than 4 inches into the circulation path if they do not have protection via a guardrail or other barrier with a bottom edge 27 inches above	✔			ADA 307.2						
1.113	Is the clear opening width of the accessible entrance door at least 32", between the face of the door and the stop, when door is open 90 degrees?	✔			ADA 404.2.3						
1.14	Is the door hardware on exterior access doors to *areas of public accommodation* operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 402.7						
1.15	At accessible entrances, is the door threshold height less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
1.16	Does the accessible route feature a stable, firm, and slip-resistant walking surface?	✔			ADA 502.4						
1.17	If not all entrances are accessible, is there a sign at the accessible entrance with the International Symbol of Accessibility?	✔			ADA 216.6						
1.18	Do all ramps on accessible pathways serving *areas of public accommodation* (including curb ramps) appear to have a slope not exceeding 1:12?	✔			ADA 405.2						
1.19	Do depressed curb ramps on accessible pathways serving *areas of public accommodation* have flared sides with a slope not exceeding 1:10?				ADA 406.3						
1.20	If a ramp has a rise higher than 6", are there handrails on both sides?			✔	ADA 405.8						
1.21	Does the width between railings for ramps on accessible pathways serving *areas of public accommodation* appear to be at least 36 inches?			✔	ADA 405.5						
1.22	Is there a level landing at least 60" x 60" at the top and bottom of each ramp run?			✔	ADA 405.7						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: Marblehead High School
Facility Address: 2 Humphrey Street
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Property Age: 19 Years

Legend:
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FHA: Fair Housing Accessibility Design Manual

2.0 ADA - Interior Accessible Routes		Yes	No	Not Applicable	Referenced Standard(s)	Description/Location of Deficiency	Recommended Corrective Action	Quantity	Unit Price	Units	Total Cost
2.1	Are all accessible routes at least 36" wide (32" wide through doorways)?	✔			ADA 403.5.1						
2.2	Do floor surfaces appear to be firm, stable, and slip resistant ?	✔			ADA 40.2, 302.1						
2.3	If carpeting is present, is it securely fastened, with a maximum pile height of 1/2 inch?	✔			ADA 302.2						
2.4	Do all objects on circulation paths through public areas, e.g. fire extinguishers, drinking fountains, signs, etc., protrude no more than 4" into the path, **or** if object protrudes more than 4", is the bottom leading edge at 27 inches or lower above the floor, or 80 inches or higher above the floor?	✔			ADA 307.4						
2.5	Is the door hardware on interior doors serving areas of public accommodation operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
2.6	Are the door threshold heights less than 1/4 inch high for vertical thresholds, or less than 1/2 inch high with a beveled slope of < 1:2?	✔			ADA 404.2, 303.2						
2.7	**For elevators in areas of public accommodation only:** Is the interior at least 54" deep by at least 36" wide?	✔			ADA 407.4.1						
2.8	**For elevators in areas of public accommodation only:** Are in-car controls no less than 15" and no greater than 48" above the floor, **or** up to 54 inches above the floor for a parallel approach?	✔			ADA 408.4.6, 407.6.1						
2.9	**For elevators in areas of public accommodation only:** Do elevator control buttons appear to be designated by both Braille and by raised standard alphabet characters (mounted to the left of the	✔			ADA 407.4.1.1, 703.2						
2.10	**For elevators in areas of public accommodation only:** Are there audible signals which sound as the car passes or is about to stop at a floor?	✔			ADA 407.4.8						
2.11	**For elevators in areas of public accommodation only:** Is there a two-way emergency communication system within the elevator cab that is push-button activated, and does it provide visual indication that a rescue is on the way?	✔			ADA 407.4.9, 308						
3.0 ADA - Public Restrooms		**Yes**	**No**	**Not Applicable**	**Referenced Standard(s)**	**Description/Location of Deficiency**	**Recommended Corrective Action**	**Quantity**	**Unit Price**	**Units**	**Total Cost**
3.1	Is the door hardware on accessible restroom doors operable with one hand and does not require tight grasping, pinching, or twisting of the wrist?	✔			ADA 404.2.7						
3.2	Do accessible restroom entry doors have a 32" minimum clear width when the door is opened 90 degrees?	✔			ADA 404.2.3						
3.3	Do public restrooms feature an unobstructed wheelchair turnaround (60" turning diameter)?	✔			ADA 306.2.1						
3.4	**Floor-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 59"-deep?			✔	ADA 604.8						
3.5	**Wall-mounted toilets:** Do public restrooms feature at least one toilet compartment or area a minimum of 60"-wide and 56"-deep?	✔			ADA 604.8						
3.6	Is the centerline of the toilet 16 inches minimum to 18 inches maximum from the side wall or partition?	✔			ADA 604.2						
3.7	Is the height of the toilet seat 17 inches minimum to 19 inches maximum above finish floor?	✔			ADA 604.4						
3.8	Do sink/toilet handles appear to be operable with one hand without grasping, pinching or twisting?	✔			ADA 606.4						
3.9	Do the sinks appear to be provided with clearance for a wheelchair to roll under (minimum 27" clearance)?	✔			ADA 606.2, 606.3						
3.10	Is the height of the lavatory rim or counter 34 high maximum above the finished floor?	✔			ADA 606.3						
3.11	Are water supply, drain, and primer pipes, as well as sharp or abrasive surfaces under lavatories insulated or otherwise shielded to protect against contact?		✔		ADEA 606.5	No under sink piping insulation provided.	Provide pipes beneath sinks in common restrooms with scald/abrasion protection.	30	$35	per sink	$1,050
3.12	Do soap dispensers, towel dispensers and other accessories that are not over an obstruction (i.e., a sink) mounted no higher than 48" above the floor?	✔			ADA 308.2						

LIMITED ACCESSIBILITY COMPLIANCE CHECKLIST AND COSTS

Facility Name: **Marblehead High School**
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Marblehead, Massachusetts
Property Age: **19 Years**

Legend:
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FHA: Fair Housing Accessibility Design Manual

3.13	Are mirrors that are located above lavatories or countertops installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor?	✔			ADA 603.3						
3.14	Are compliant toilet grab bars provided in toilet **rooms** (minimum 36" rear and 42" side)?	✔			ADA 604.5						
							Total Estimated Cost of Handicapped-Accessibility Compliance Recommendations:				**$2,300**

7.0 BUILDING SYSTEMS

7.1 PLUMBING

DESCRIPTION

Domestic water service to the building consists of a 2 inch diameter water line that enters along the central part of the building. Domestic water pressure at the Subject Property is provided by the incoming municipal service.

The observed supply of domestic water piping is copper. Sanitary sewer drain and vent lines were reported as hub and spigot cast iron piping.

Backflow devices are furnished for the potable water and fire sprinkler systems at the site. The backflow preventers are located in the boiler room D115.

The main gas meter and 4 inch service is located on the south side of the building and supply natural gas throughout the property. Threaded black iron pipe is used for main gas piping throughout the Subject Property. Service lines from the mainline are coated stainless steel to the heating equipment.

Domestic hot water is provided by four 100-gallon, *PVI Conquest* water heaters located in the boiler room. The water heaters are approximately nineteen years old.

The Subject Property domestic hot water systems are reported as follows:

SUBJECT PROPERTY DOMESTIC WATER HEATERS

MANUFACTURER	FUEL TYPE	CAPACITY	APPROX. AGE	LOCATION
PVI Conquest	gas	500 MBH	19	Boiler room D115
PVI Conquest	gas	500 MBH	19	Boiler room D115
PVI Conquest	gas	500 MBH	19	Boiler room D115
PVI Conquest	gas	500 MBH	19	Boiler room D115

The domestic hot water service has a circulating system to provide the hot water fixtures with readily available hot water. The circulating pump system consists of two, 10-hp pumps manufactured by *Bell & Gossett* with capacities of 300 GPM each.

The plumbing fixtures are vitreous china with chrome fittings. The building restrooms contain *American Standard* 1.2 gallons-per-flush (GPF) vitreous china water closets with manual flush valves. The building contains vitreous china urinals with manual flush valves. Janitor closets containing cultured stone floor-mounted mop sinks. There are five (boy/girl) student restrooms and sixteen staff restrooms in the Subject Property building. The buildings contain stainless steel drinking fountains throughout the common areas.

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Typical backflow device	*PVI Conquest* 100-gallon water heaters
	
Hot water centrifugal circulation pumps	Gas supply line and meter, south side of building
	
Typical restroom fixtures	Typical sprinkler system back flow preventer

OBSERVATIONS

The water closets and urinals were reportedly installed as part of the original construction in 2002. The manual flush valves for the water closets appear to be in good working order. Based on the reported age, current condition, and expected useful life, water closet and urinal replacement are not anticipated during the analysis term.

The bathroom fixtures observed appeared to be in good overall condition and working order. Ongoing maintenance as part of the property's maintenance program is recommended during the analysis term.

The water heaters are approximately nineteen years old and in working order. Based on its reported age, current condition, and expected useful life, Capital Needs are not recommended during the analysis term.

The hot water circulating pumps are approximately 19 years old and appear to be in good condition and operating. Based on their low cost, replacement, when necessary, can be accomplished as part of Routine Maintenance operations.

The Subject Property domestic water piping where observable appears to be in good condition, with no reported problems noted. Based on the reported age, current condition, and expected useful life, piping replacement is not anticipated during the analysis term.

The observed domestic water supply piping appears to be in good condition.

Sanitary sewer lines were not observable during the site visit. No issues with the sanitary sewer lines were reported.

All of the observed potable and process piping systems at the property appear to be in good condition. No Capital Needs are anticipated for the piping systems at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Gas-fired water heater replacement**

7.2 HVAC

DESCRIPTION

A summary of the HVAC equipment at the Subject Property is presented in the table below, followed by a detailed system description.

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HVAC COMPONENTS

AREA SERVED	NO. OF UNITS	MFR., MODEL #	TONS OR BTUS	TYPE OF EQUIPMENT	AGE (YEARS)
Admin, library, Auditorium	4	*Trane,* SLHFC254	25-ton	Rooftop unit	19
Gymnasium area	2	*Trane,* TCD091D4	8-ton	Rooftop unit	19
Custodian area	1	*Trane, MCCA012*	6-ton	Air Handler	19
B303-B306	2	*Trane,* SLHFC254	25-ton	Rooftop unit	19
Throughout	5	*Greenheck,* N/A	2000, CFM	Utility exhaust blower	19
TV studio	4	*Trane,* TTA072D	5-ton	Split-system air conditioner	19
Computer rooms	4	*Trane,* TTA072D	5-ton	Split-system air conditioner	19
Health suite	2	*Sanyo,* C1251	11.8 MBH	Split-system air conditioner	19
Kitchen	1	*Trane,* GRAA50PF	500 MBH	Make-up unit	19
Classroom areas	5	*Heatex,* MUZ-D36NA,	50,000 CFM	Heat recovery ventilators	19
Kitchen area	3	*ColdZone,* TCD240B	N/A	Condensing unit	19
Shipping receiving	6	*Vulcan,* N/A	N/A	Hanging unit heaters	19
Throughout	4	*Aerco*, BMK 2000	2000MBH	Gas-fired boilers	19
Throughout	17	*Greenheck,* CUBE-360XP	1260 CFM	Mechanical exhaust Fan	19

Heating and cooling for the administration offices, library, auditorium, rooms B303 through B306 spaces are provided by rooftop-mounted packaged hydronic units. Heating and cooling for the gymnasium are provided by rooftop-mounted packaged gas-fired units. Heating for the custodian area is provided by an air handler located in the boiler room. Heating is also provided by hydronic reheat coils located in the ductwork of the VAV boxes.

Additional heating and cooling for select office areas are provided by split-systems comprised of the condenser and air handlers. Condenser units are rooftop-mounted and use R410a refrigerant.

Due to the mandated higher efficiencies for the HVAC equipment, any replacement HVAC unit is now required to be at or above 14 SEER which has increased the cost of new equipment. For residential split systems, and the phase-out of R-22, the indoor and outdoor equipment may both need to be replaced to meet the requirements. For now, there are available HVAC components to keep these systems operational. Currently, the new refrigerant used for the equipment is R-410a which operates at a higher pressure and is not compatible with R-22, nor is it as harmful to the environment.

Five heat recovery ventilators using hydronic heating coils service the classroom areas, the ventilation is constant.

Cooling for kitchen areas is typically provided by rooftop-mounted evaporative cooling units. The makeup air unit is located on the roof and provides fresh air for the kitchen area.

Hot water for the heating system is provided by four *Aerco* central boilers providing hydronic heat to the radiators throughout the Subject Property building.

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Supplemental heating is provided by VAV boxes spread throughout the classroom and office areas. Heating in the warehouse spaces is provided by ceiling-mounted, hydronic *Vulcan* unit heaters.

The Subject Property building is furnished with gravity and electric-powered ventilation and exhaust fans of various sizes ranging in capacity from 200 to 1,250 CFM.

Temperature control for each space is provided by wall-mounted digital thermostats**.**

Also part of the complete heating and cooling system are various pumps, valves, piping, sensors, etc.; all of which are controlled by a computer-operated building automation system.

Four Variable Frequency Drive (VFD) controllers, 10 HP in size, are furnished for the primary HVAC components.



Make up unit example



Trane rooftop unit example



Heatex heat recovery ventilation units



Trane split-system air conditioner



Variable frequency drive examples



Benchmark 2000 MBH boiler example



Split system kitchen cooling condenser example



Updraft ventilation unit example



Hot water radiator example



Hydronic unit heater example

OBSERVATIONS

The heated water loop piping appears to be serviceable. The insulation, where observed, appears to be serviceable and is intended to deter condensation on the chilled water piping and heat loss from the hot water lines. Based on the reported age, current condition, and expected useful life, replacement of the heated water loop piping is anticipated after the analysis term.

The gas service lines were noted and reported to be in good condition. The gas service piping will be maintained at the subject property as part of operational maintenance during the analysis term.

The split-systems appear to be in good overall condition. The average useful life of split-system units of this size and type is approximately 19 years, depending upon their location, maintenance, and use type. Based on observed and reported conditions, Capital Needs are recommended for split-system replacement.

The rooftop-mounted HVAC units appear to be in good to fair overall condition. The average useful life of packaged units of this size and type is approximately 14 to 18 years, depending upon their location, maintenance, and use type. The maintenance representative reported all of the rooftop-mounted HVAC systems are being repaired regularly. Based on their average effective useful life, current condition, and reported maintenance program, Capital Needs for the rooftop-mounted HVAC units are recommended during the analysis term.

The make-up unit appears to be in good overall condition. The average useful life of a make-up unit is approximately 20 years, depending upon its location, maintenance, and use type. The make-up units are reportedly serviced on a regular basis. Based on their average expected useful life, current condition, and reported maintenance program, Capital Needs for the makeup unit are recommended during the analysis time.

The boilers appear to be in good to fair overall condition. The average useful life of boilers of this size and type is approximately 25 to 30 years, depending upon their location, maintenance, and use type, but can be extended with proper maintenance and/or refurbishment to 35 to 40 years. The boilers are reportedly serviced on a regular basis. Critical Needs for the replacement of the boilers are recommended during the analysis term.

The VAV boxes were reported to be in good overall condition. The average useful life of a VAV box is 25 years. Based on their average expected useful life, current condition in reporting maintenance program, Capital Needs for the VAV boxes are recommended during the analysis term

The ventilation units were operating at the time of the assessment. The maintenance representative noted no problems with the units. Replacement of the ventilation units is not anticipated during the analysis term.

The rooftop kitchen cooling condensers were reportedly installed as part of the original construction in 2002. The EUL of a cooling condenser is 18 years. Based on their average expected useful life, current condition, and reported maintenance program, Capital Needs for the cooling condensers is recommended during the analysis time

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The air handler located in the boiler room appears to be in good to fair condition. The average useful life of air handlers of this size and type is approximately 14 to 18 years, depending upon their location, maintenance, and use type. The maintenance representative reported the air handler is past its EUL and therefore it is difficult to find appropriate replacement parts. Based on their average effective useful life, current condition, and reported maintenance program, Capital Needs for the air handler are recommended during the analysis term.

The HVAC equipment observed utilizes variable frequency drives (VFDs) to reduce energy consumption. The average effective useful life of VFD units is approximately 10 years for the smaller hp units and 12 to 15 years for larger units, depending upon their location, maintenance, and use type. Based on observed and reported conditions, Capital Needs for the variable frequency drives is recommended during the analysis time

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Split-system replacement**
- **HVAC condenser replacement - 5-7 ton**
- **HVAC rooftop unit replacement (25-ton)**
- **HVAC rooftop unit replacement (8.5-ton)**
- **Air handler replacement**
- **Heat recovery ventilation units**
- **Make-up unit replacement**
- **Replace boilers**
- **Replace Compressor/Condenser Unit**
- **Replace VAV Boxes**
- **Variable frequency drive**

7.3 ELECTRICAL

DESCRIPTION

The main electrical service entrance is rated as a 3,000-Amp, three-phase, four-wire 277/480-volt main, feeding the main distribution panels (MDPs) located within an electrical room E104. The observed services are protected by circuit breakers. The Subject Property has dry-type, step-down transformers that reduce the higher service voltage of 277/480-Volts down to 120/240-Volts for smaller-scale equipment, appliances, wall receptacles, and various lighting fixtures.

The electrical equipment is made by *Square D*. The equipment was installed in 2002 as part of the original construction. There are separate switches for the two main buss risers. The buss risers feed power to the electrical room on each floor. Each electrical room has a minimum of two, 120/208-volt panels. A copy of the one-line diagram was not provided to *EBI*.

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The Subject Property was observed with copper branch wiring and copper feeder cables. Standard electrical devices, switches, and fixtures consistent with the Subject Property use type were also observed through the building. Aluminum branch wiring was not reported to or observed by *EBI* during the site assessment. GFCI fixtures were observed during the survey in the restrooms and kitchen areas.

From a review of the electrical system, it appears that the Subject Property has a network distribution system to the main electrical switchboard. The utility company distribution system powers one liquid-filled transformer located near the southeast corner of the site. *EBI* requested information on ownership of the transformers from the site contact and was told the transformers are owned and maintained by the utility company, *Marblehead Municipal Light Department*.

The transformers fall into two basic categories, dry and liquid-filled, with the most widely used type being liquid-filled containing mineral oil. Prior to 1979, many liquid-filled transformers contained oils with Polychlorinated Biphenyls or PCBs. A conversation with *Marblehead Municipal Light Department* stated the municipality-owned transformer was installed in 2010 indicating the transformer containing PCBs may not be a factor. The liquid-filled transformers are typically located outside due to the potential of fire hazards from oil leaks.

A 200-kVA, diesel-fueled emergency generator serves the Subject Property. The diesel fuel is stored in a 1,000-gallon underground storage tank located underneath the generator.

SUBJECT PROPERTY EMERGENCY GENERATORS

MANUFACTURER	APPROXIMATE KVA	FUEL	HOURS	AGE
Kohler	200 KVA	Diesel fuel	128.3	19

Lighting in the office areas is mixed with fluorescent and LED fixtures. The fixtures typically are two feet by four feet with T-12 lamps. Mechanical and support area lighting includes fluorescent tube fixtures of varying lengths (typically 4 feet and 8 feet).

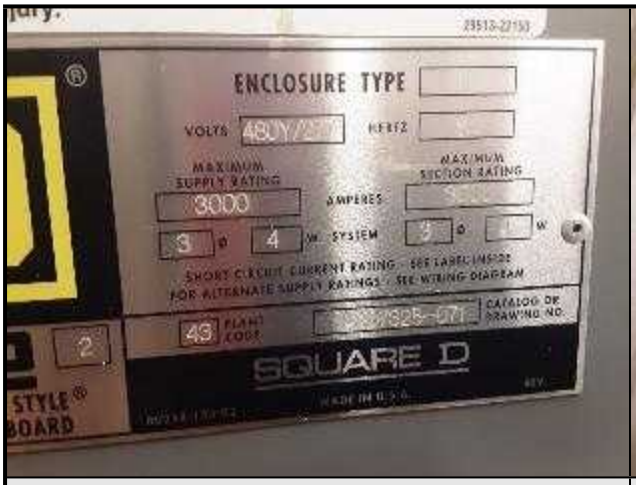


Typical circuit breaker panels



Main panel

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Main switchboard rating



Typical electrical meter



Emergency generator overview



Emergency generator example

OBSERVATIONS

There were no reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type. Discussions with the maintenance representative indicate that building management is responsible for interior electric repairs and replacement.

Management reported that an infrared (IR) survey of the building has not been performed in at least five years. Based on the age of the building and electrical components, Critical Repairs are recommended for an IR survey and periodically as a Capital Needs item during the analysis term.

Infrared (IR) surveys are done by either electricians or testing firms specializing in this work using an infrared camera (thermal imaging) to detect relative "hot spots" in switchgear panels and breaker panels. The "hot spots" indicate higher resistance in wires, normally at connection points, and thus indicate areas that may not have proper connections between wires and termination points. The normal course of action if a "hot spot" is detected is to check the torque on the screws/bolts that hold the wire

to the panel connection, as well as clean off any oxidation on the wire. Once a firm completes their survey, they typically affix inspection tags to the switchgear and breaker panels, noting the firm name and the date of testing, as well as supplying a written report to the property owner documenting their findings and the corrective action is taken.

GFCI receptacles were observed consistently adjacent to the water sources in the restrooms, kitchen, and breakroom sinks.

The emergency generator is approximately eleven years old. Generators of this size and type have an average expected useful life of approximately 25 to 30 years, depending on their maintenance and amount of regular testing and usage, but can be extended with refurbishment/overhaul of the unit. The emergency generator was not operated during our on-site assessment. According to maintenance personnel, the generator is exercised at regular intervals during the year and was last tested in January 2021. The generator has a non-resettable hour meter and indicates an approximately 128.3 hours run on the unit. Management provided information concerning the maintenance and fuel records, and from this information, it appears the emergency generator system is compliant and in good overall condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for the emergency generator during the analysis term.

There were no other reported or observed problems with the electrical system sizes or capacities. This utility appears to be configured and operated in a manner consistent with its intended use, and adequate for the use type.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Perform IR survey (Action Item)**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Replace emergency generator**

Please see Table 2 for the recommended Capital Needs listed below:

- **Perform IR survey**

7.4 BUILDING & SITE FIRE & LIFE SAFETY

DESCRIPTION

The fire sprinkler water service is supplied to the building underground via Schedule 40 steel four (4)-inch line where it is fed through a backflow preventer; both are located in the main boiler room. Sprinkler water distribution is via a steel fire-rated piping system throughout the building.

Observed fire and life safety systems serving the building include a *Simplex* multiple-zone, fire alarm control panel that has an auto-dialer reportedly tying the system to the fire department, an addressable master fire control panel with an interface from remote panels. The fire panel has a supervision interface with network display units located right outside the boiler room.

The Subject Property also has hardwired with battery-backup smoke detectors, pull stations at entrances to building entrances, illuminated exit lights with battery-backup along exit paths, horn/light

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annunciators in common area restrooms and corridors, and fire extinguishers spread throughout the building and security system with closed circuit TV cameras.

The Subject Property is equipped with an eyewash station in the boiler room. An Ansul dry chemical fire protection system protects the commercial kitchen hoods.

A 500-gallon per minute *A-C* fire pump augments the sprinkler system in the fire pump room. Standpipes with hose connections are throughout the building.

<table>
<tr><td>  </td><td> 
</td></tr>
<tr><td>Fire alarm control panel</td><td>Pull station example</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Fire extinguisher with valid inspection tag</td><td>Backflow shut off valve</td></tr>
</table>

	
Standpipe and external hose connections	Fire pump.

OBSERVATIONS

The fire sprinkler water service lines were noted and reported to be in good condition. The backflow preventers appear to be serviceable and were last tested on July 22, 2019. Based on the current condition and the expected useful life, Critical Repair is recommended for backflow device inspection.

There were no reported or observed problems with the life safety system or configuration. The fire alarm control panel is reportedly tested annually. The inspection tags observed on the control panel, alarm system, sprinkler system, and fire pump were expired, and based on observed and reported conditions, Critical Repairs are recommended for updating the expired inspection tags.

The fire alarm control panel is three years old and appears to be in serviceable condition. Based on its reported age, current condition, and expected useful life of approximately 20 to 25 years, Capital Needs are recommended for fire alarm control panel replacement during the analysis term.

The fire pump is 19 years old and appears to be in serviceable condition. Based on its reported age, current condition, and expected useful life of no less than 35 years, Capital Needs are recommended for rebuilding or replacement of the pump during the analysis term.

The fire extinguishers are reportedly inspected annually, were last inspected in August 2020, and appear to be in serviceable condition.

The 5-year system test certification was not observed on the fire riser, and the site contact was unaware of the last system test. Based on observed and reported conditions, Critical Repairs are recommended for the 5-year sprinkler system test to be performed if relevant documentation cannot be provided identifying the most recent test.

The *U.S. Consumer Product Safety Commission* has recalled approximately 35 million sprinkler heads manufactured by *Central Sprinkler Co*. A complete list of the recalled sprinklers can be found at http://www.sprinklerreplacement.com or by calling (866) 505-8553. The recall involves mostly “wet” sprinkler heads manufactured from 1989-2000, and “dry” sprinkler heads manufactured from the mid-

1970s to 2001. *Central* brand sprinkler heads are located at the Subject Property but are not of the model types subject to recall. No recalled heads were reported or observed to be at the property. *Rasco* brand pendant and wall-mounted type sprinkler heads were observed at the building and are not subject to recall.

The stairwell pressurization system is reportedly tested and inspected every five years to be in serviceable condition. Stairwell entry doors were observed to have weather-strip seals installed and fitted properly.

The emergency exit doors and panic hardware appear to be in serviceable condition. The doors are to swing-open into the direction of emergency egress.

Illuminated exit signs are located at the entry doors to the emergency exits and appear to be in serviceable condition. The exit signs are recommended for annual inspection, and inoperative lamps replaced as required as part of routine maintenance operations.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Complete NFPA 5-year sprinkler test**
- **Provide current inspection tags for fire sprinkler system**
- **Provide current inspection tags for fire alarm system**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **Replace fire alarm control panel**
- **Replace fire pump**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

7.5 ELEVATORS AND CONVEYING SYSTEMS

DESCRIPTION

The Subject Property is provided with four, hydraulic elevators ranging in capacity from 1,400-lbs to 5,000-lbs. The elevators serve all floors of the building. The elevator machinery and controls are located in equipment rooms adjacent to the lower level landings. The elevators are controlled by a microprocessor based system.

The elevator cabs are finished with vinyl tile flooring, laminate-paneled walls, and paneled ceilings. The elevator cab interior includes a single car operating panel. The front returns and car doors have a painted metal finish. There is a flat stainless steel handrail on rear and side walls. The ceiling has florescent lighting.

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Elevator interior	Hydraulic elevator equipment.

OBSERVATIONS

The elevator machinery and controls were reported and appear to be in good condition. The elevators are covered under an annual maintenance and service agreement that includes regular inspections, repairs, and limited parts replacement. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for elevator controllers and machinery modernization during the analysis term.

Elevator cabs are not all provided with current inspection certificates. Based on the observed conditions, Critical Repairs are recommended to provide current inspections certificates in each elevator cab.

The observed elevator equipment rooms were clean and well maintained. The equipment room is recommended to be cleaned as part of Routine Maintenance operations.

The passenger elevator cabs and interiors appears to be in good to fair condition. Based on its reported age, current condition, and expected useful life, Capital Needs are recommended for elevator cab refurbishment during the analysis term.

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Missing inspection certificate.	Expired inspection certificate.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **Provide current elevator inspection certificates**

Please see Table 1 for the recommended Non-Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **Elevator modernization**
- **Renovations to elevator cabs**

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8.0 MUNICIPAL RESEARCH

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed, and state, county or local municipal departments consulted. Documentation applicable to the Subject Property in those departments was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

MUNICIPAL REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Town of Marblehead Assessor	online	Property ownership & size information	https://www.marblehead.org/assessors-office	2.17.2021
Town of Marblehead Building/Inspections Department	online	Code compliance & violations	https://www.marblehead.org/building-inspection-department	2.18.2021
Town of Marblehead Planning & Zoning	online	Zoning information	https://www.marblehead.org/zoning-board-appeals/pages/zoning-laws-regulations	2.19.2021
Town of Marblehead Fire Department	online	Fire history & code violations	https://www.marblehead.org/fire-department	2.22.2021
Town of Marblehead Assessor	online	Property ownership & size information	https://www.marblehead.org/assessors-office	2.23.2021

8.1 MUNICIPAL INFORMATION & ZONING

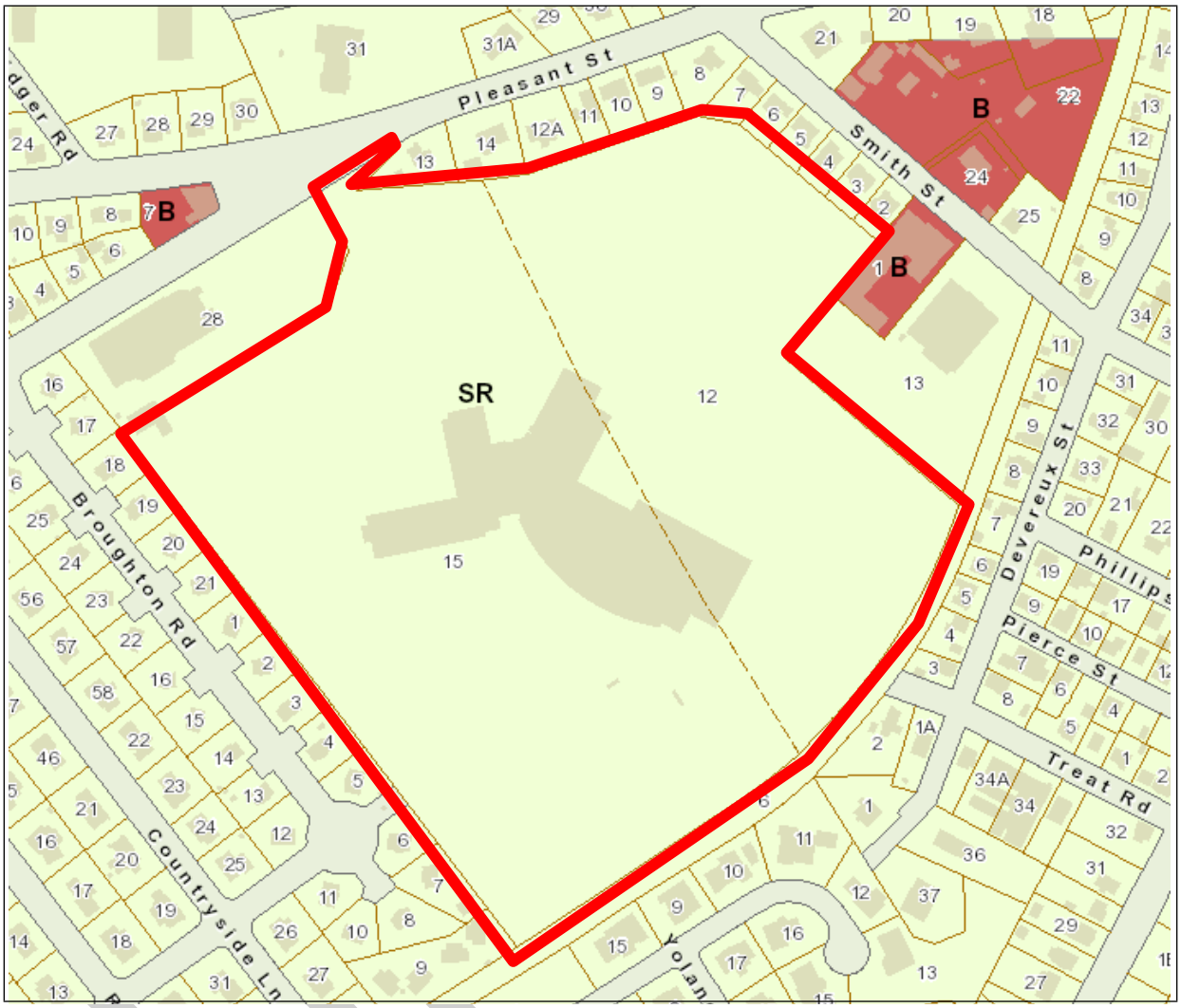
MUNICIPAL INFORMATION

Readily available, reasonably ascertainable and *publicly viewable* municipal records at *Town of Marblehead* were reviewed on-line.

ZONING

The municipal zoning office personnel were consulted, the zoning office files were reviewed, and/or the zoning ordinance was reviewed to determine the zoning of the Subject Property. According to the information provided, the Subject Property is currently located within a *SR, Single Residence* district and appears to be a conforming use.

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Zoning Map

8.2 BUILDING & PLANNING DEPARTMENT

DESCRIPTION

The municipal Building and Planning Departments were consulted for open material violations, and to obtain, *readily available*, *reasonably ascertainable* and *publicly viewable* documents regarding the Subject Property.

CONCLUSION

The department interviews and/or file reviews do not show open material violations on the Subject Property.

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the

Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, our *Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

8.3 FIRE DEPARTMENT

DESCRIPTION

The local fire department was consulted for open material violations.

CONCLUSION

This municipality provides responses to file inquiries for research purposes. The response time varies on municipal workload. *EBI* has submitted an inquiry for potential outstanding violations on file for the Subject Property. No response has been received as of this *Report*. If a response showing a material violation is provided to *EBI*, *EBI* will forward that notice under separate cover. If no response is received or no material violations are noted, *EBI's Report* will not be modified.

RECOMMENDED ACTION ITEMS

Please see Table 1 for the recommended Action Items listed below:

- **None**

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9.0 HAZARDS

9.1 NATURAL HAZARDS

DESCRIPTIONS

9.1.1 Seismic

Chapter 16 of the 1997 edition of the Uniform Building Code (UBC) was reviewed to determine the Seismic Zone of the Subject Property. Chapter 16 includes calculations for and mapping of earthquake (seismic) loads on structures. Figure 16-2, Seismic Zone Map of the United States delineates differing ratings of seismic load and shows the United States having seismic Zones ranging from 0 to 4. These ratings indicate the severity of how horizontal ground motion and sub-surface soil types affect a structure.

9.1.2 Flood Zone

The Federal Emergency Management Agency (FEMA) maps and rates flood hazard zones throughout the United States. These zones are depicted on a Flood Insurance Rate Map (FIRM), designated by Community Map and Panel numbers. The flood hazard zones range from Zone A or AE (A1 – A130), with Base Flood Elevations (BFE) determined, to Zone X, unshaded areas outside the 500-year floodplain. EBI utilizes *CoreLogic's* FloodInsights mapping system, which searches the FEMA FIRM map and panel, to obtain the Flood Zone Determination of the Subject Property.

9.1.3 Wind Zone

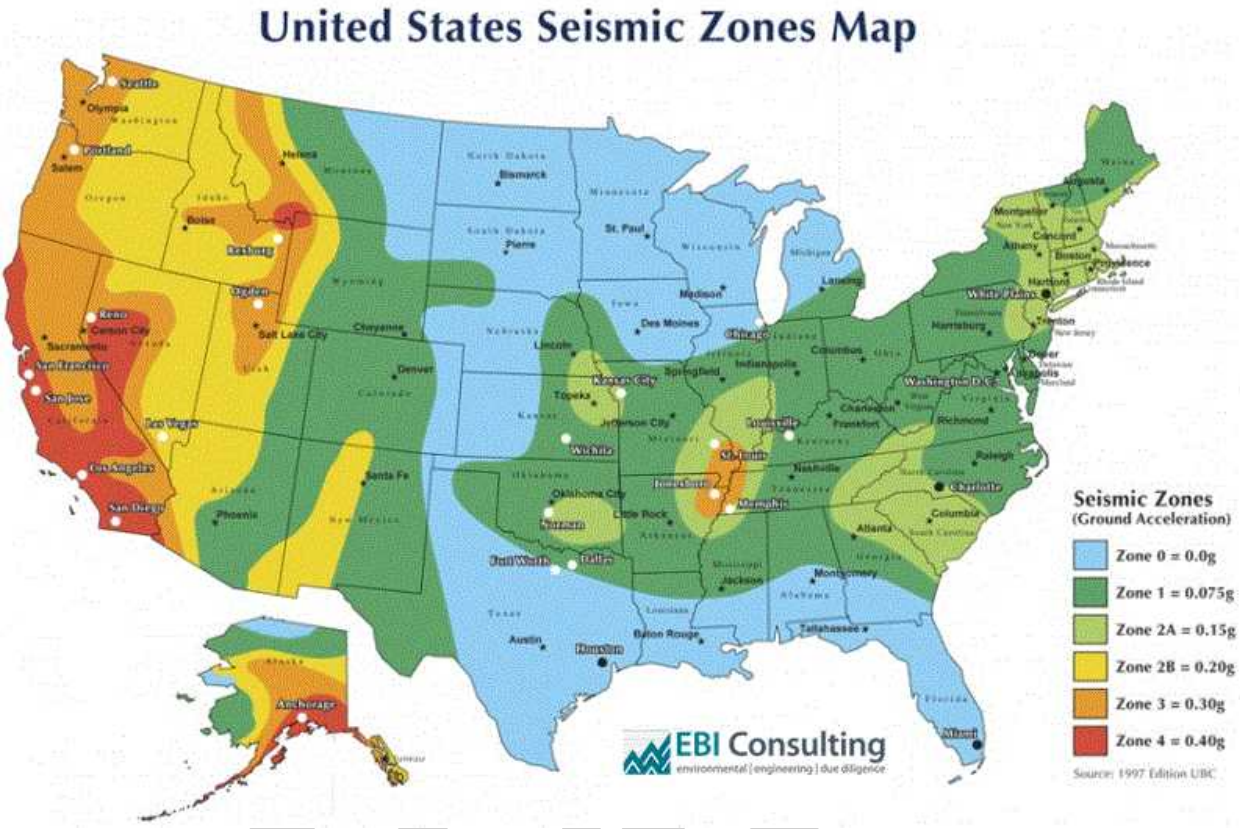
FEMA maps and rates wind hazard zones, Special Wind Regions and Hurricane-Susceptible Regions throughout the United States. These zones are depicted on a Map of Wind Zones in the United States on FEMA's website – www.fema.gov/fima/tsfs13.shtm and http://www.fema.gov/graphics/library/wmap.gif.

CONCLUSIONS

9.1.1 Seismic

According to Figure 16-2 in the *UBC*, the Subject Property appears to be located in Zone 2A, with a low to moderate probability of damaging ground motion.

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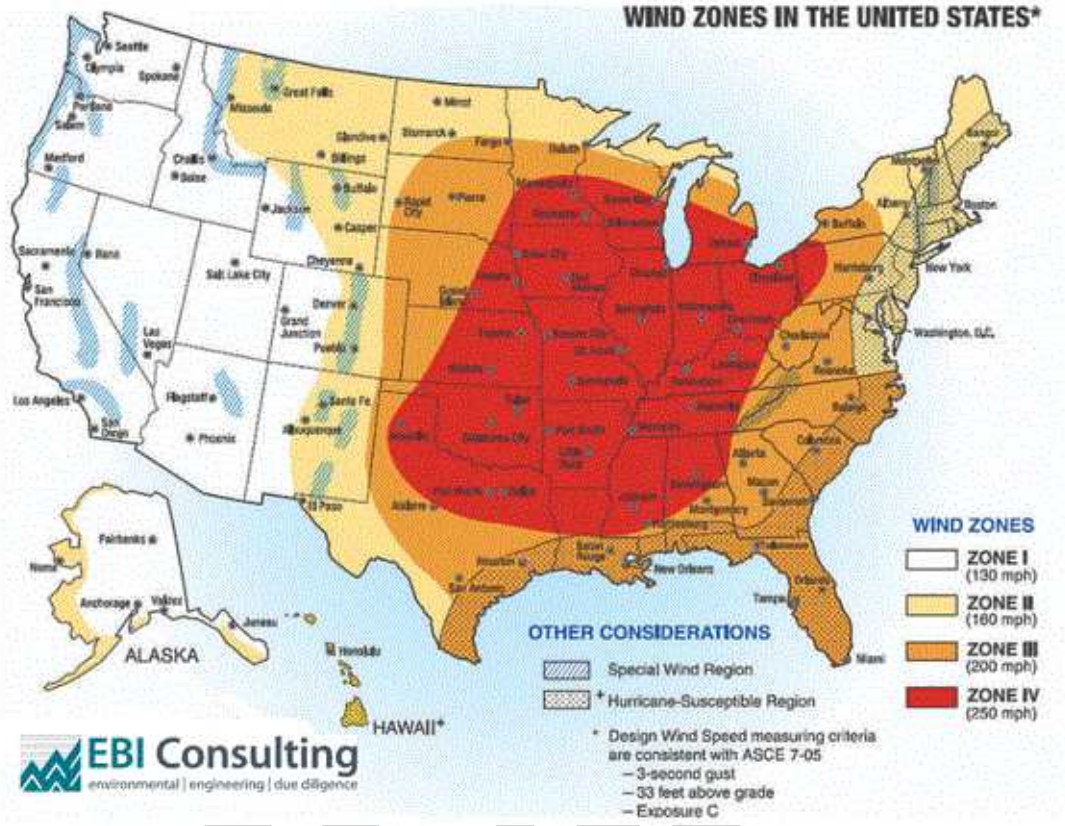


9.1.2 Flood Zone

The Subject Property Flood Zone Determination appears to be Zone X, defined as an area outside the 100- and 500-year floodplains, as shown on First American Flood Data Services' Flood Hazard Certification, Community Map #250091, Panel # 0551G, dated July 16, 2014.

9.1.3 Wind Zone

Based on FEMA's Map of Wind Zones in the United States, the Subject Property appears to be located in Zone II, up to 160 mph winds. The Subject Property appears to be located in a Hurricane Susceptible or a Special Wind Region. However, the Subject Property is not located in a Special Wind Region.



9.2 SUSPECT MOLD AND MOISTURE

Interior areas of the Subject Property buildings to which access was provided, and in which building elements were readily observable, were reviewed for the presence of moisture and visible or olfactory evidence of microbial development (suspect mold). No observations were conducted within concealed locations (construction elements behind wall and ceiling finishes, and other building components, etc.). No sampling or testing was performed to confirm the presence of invisible airborne microbial elements. In addition to *EBI's* observation efforts, property personnel did not indicate the presence of moisture or suspect mold during the survey, or in *EBI*'s Pre-Survey Questionnaire.

Representative Subject Property observations and interviews revealed no obvious visual or olfactory indications of the presence of suspect mold activity. However, indications of active moisture infiltration were noted in the areas of stained ceiling tiles. Repairs to this area to address moisture infiltration are discussed under other sections of this *Report*, which are directly related to the apparent causes of the infiltration. No additional recommendations concerning moisture are made at this time.

RECOMMENDATIONS

Please see Table 1 for the recommended Critical Repairs listed below:

- **None**

Please see Table 2 for the recommended Capital Needs listed below:

- **None**

10.0 REFERENCES

10.1 CONTACTS

DESCRIPTION

A number of sources were contacted during the preparation of this *Report*. The following individuals were interviewed for information concerning the Subject Property. Documentation applicable to the Subject Property was requested and reviewed when and where available and/or reasonably ascertainable. Individuals listed without phone numbers were contacted in person or by e-mail.

REFERENCES				
RESOURCE	**CONTACT**	**INFORMATION PROVIDED**	**PHONE OR WEB**	**DATE**
Director of School Facilities, *Town of Marblehead*	Todd Bloodgood	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.10.2021
Electrician - Facilities, *Town of Marblehead*	Mike Ellconus	Overall condition and maintenance, Deferred Maintenance items.	781.639.3140	2.10.2021

10.2 PERTINENT INFORMATION PROVIDED OR OBTAINED

EBI's Pre-Survey Questionnaire was forwarded to the designated property contact. The information requested in the questionnaire assists in *EBI's* research of the property to obtain pertinent property data; discover existing physical deficiencies, chronic problems, the extent of repairs, if any, and their costs; and pending repairs and improvements. The Pre-Survey Questionnaire was completed on site with escorts.

The following information was provided and reviewed on a cursory basis as background information of this report:

EXHIBITS RECEIVED AND REVIEWED	YES	NO	DESCRIPTION/COMMENTS
1. A.L.T.A. Survey		X	Not provided
2. Legal Description of the Property	X		Obtained by EBI
3. Location Maps	X		Obtained by EBI
4. Project Specifications		X	Not provided
5. Soils Report		X	Not provided
6. Local Building Code Compliance		X	Request submitted by EBI
7. Date of Permits and Cert. of Occupancy for Each Building		X	Request submitted by EBI
8. Building Plans:			
a. Architectural		X	Not provided
b. Structural		X	Not provided

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c. Mechanical		X	Not provided
d. Electrical		X	Not provided
e. Plumbing		X	Not provided
9. Owner's Repair List and Cost Breakdown		X	Not provided
10. Other			

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APPENDIX A - FIGURES, DRAWINGS AND PLANS

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Legend

★ Project Site

Site Radius at 250', 500', 1000' and ½ mile

Date: 2/8/2021

Figure 1: Site Location Map

NULL MARBLEHEAD HIGH SCHOOL
2 HUMPHREY ST
MARBLEHEAD, MASSACHUSETTS 01945

PN: 1321000049

EBI Consulting
environmental | engineering | design



Legend

★ Project Site

Site Radius at 250', 500', 1000' and ½ mile

USGS 24K Quad: Marblehead South, MA 1986, Lynn, MA 1986
Salem, MA 1986, Marblehead North, MA 1986

Date: 2/8/2021

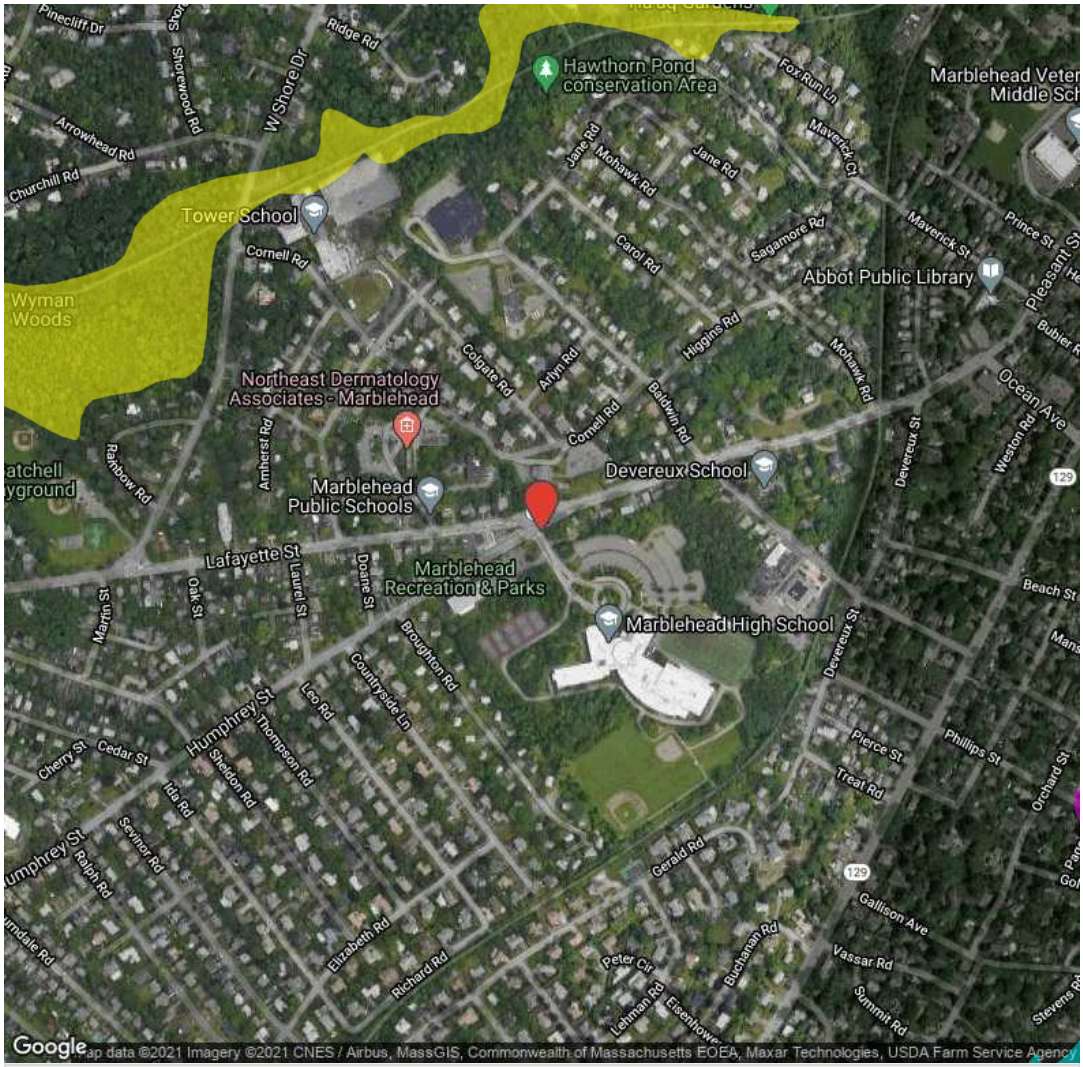
Figure 2 - Topographic Map

NULL MARBLEHEAD HIGH SCHOOL
2 HUMPHREY ST
MARBLEHEAD, MASSACHUSETTS 01945

PN: 1321000049

EBI Consulting
environmental | engineering | design

Overview Map



Flood Zones: X500 or B Zone A Zone V Zone D Zone Floodway CBRA

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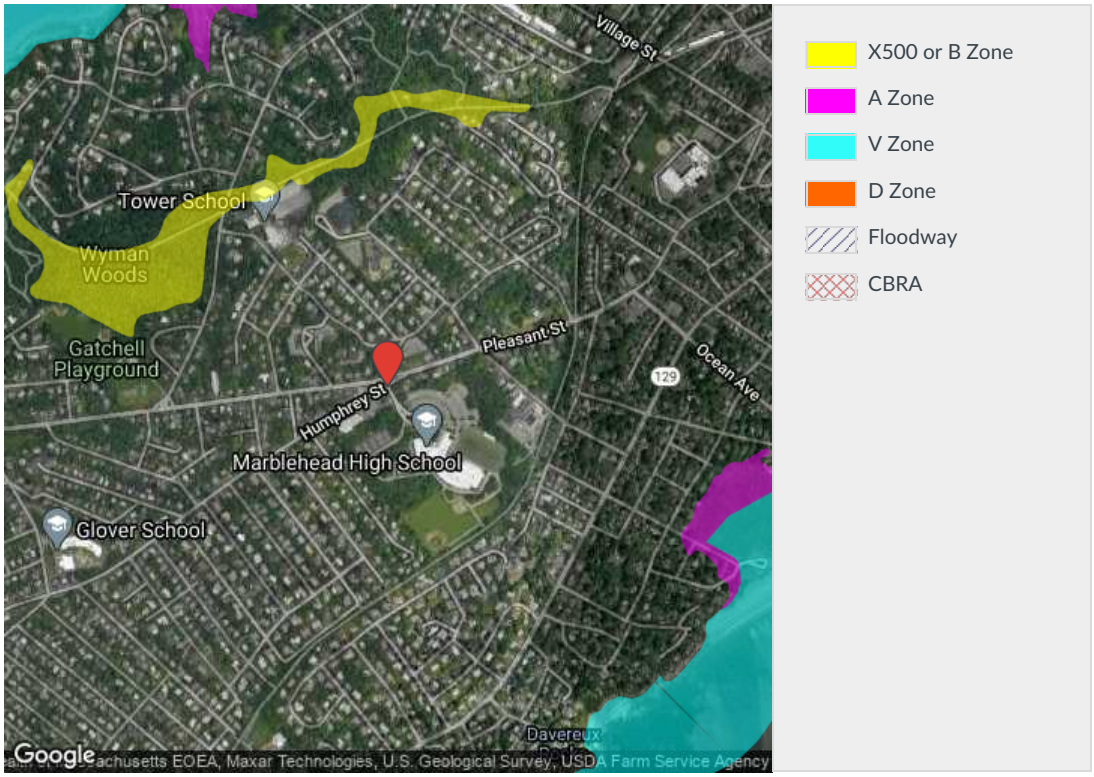
LATITUDE: 42.493691, LONGITUDE: -70.870297

LOCATION ACCURACY: *User-defined location* **LATITUDE:** 42.493691 **LONGITUDE:** -70.870297 **MATCH CODE:** **SOURCE:** **CENSUS BLOCK ID:** 250092031002001

Flood Zone Determinations Report

Flood Zone Determinations: OUT

SFHA (FLOOD ZONE)	OUT	**WITHIN 250 FEET OF FLOOD ZONE**	NO
FLOOD ZONE	X	**COMMUNITY**	250091
COMMUNITY NAME	MARBLEHEAD, TOWN OF	**PANEL**	0551G
PANEL DATE	July 16, 2014	**COBRA**	OUT
MAP NUMBER	25009C0551G	**FIPS CODE**	25009



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APPENDIX B - OTHER RELEVANT DOCUMENTS

DRAFT

APPENDIX C - PROFESSIONAL QUALIFICATIONS

DRAFT

EBI Consulting
environmental | engineering | due diligence

Samantha Spano
Acquisitions Property Condition Assessor
Glen Cove, NY 11542
Office/Mobile: 516.817.6008

Summary of Experience

Mrs. Spano has performed a wide range of inspections including Physical Needs Assessments per Fannie Mae and Freddie Mac protocols, Property Condition Assessments to ASTM and custom protocols, and Property Condition Equity Evaluations for acquisition. With over six years of experience concentrated on due diligence, she has performed a variety of detailed engineering investigations including façade investigations and structural studies, as well as structural calculations and designs for new projects and modifications of existing structures. In total, Mrs. Spano has performed more than 500 due diligence assessments.

Mrs. Spano has provided calculation packages, under the supervision of a Professional Engineer, for projects including, but not limited to, drainage design, steel calculations (sizing metal deck, lintels, rebar in concrete, etc.), bolt calculations, and retaining wall design. She has provided construction monitoring services for a variety of projects, and has experience reviewing and logging submittals, writing and organizing transmittals, and managing project meetings.

Relevant Project Experience

- The Beekman Tower Hotel, New York, New York
- 245 Fifth Avenue, New York, New York
- Ballston Quarter Redevelopment, Arlington, Virginia
- Church Park, Boston, Massachusetts
- Throggs Neck Shopping Center, Bronx, New York
- Shops at Skyview Center, Queens, New York
- New York Times Building, New York, New York
- The Lennox, Jersey City, New Jersey
- LA Corporate Centers C & D, Monterey Park, California
- 125 South 31st Street (University of Pennsylvania), Philadelphia, Pennsylvania
- Harriet Tubman Quadrangle, Washington, District of Columbia

Education

Bachelor of Science in Civil Engineering, The Pennsylvania State University, University Park, PA

Professional Affiliations

Member of the American Society of Civil Engineers

Professional Registrations

Certified Engineer in Training, Commonwealth of Pennsylvania
OSHA 10-Hour Outreach Training – Construction

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Dennis L. Davis
Senior Program Manager
6607 S New Haven Avenue
Tulsa, Oklahoma 74136
Office/Mobile: 918.924.1642

SUMMARY OF EXPERIENCE

Mr. Davis has in excess of 37 years experience in real estate development and due diligence. He has performed a wide range of inspections including Physical Needs Assessments per Fannie Mae, Freddie Mac & HUD protocols, Property Condition Assessments to ASTM and custom protocols and Property Condition Equity Evaluations for acquisition. In addition, he has performed and managed a variety of detailed engineering investigations including infra-red roof studies, façade investigations, structural studies, MEP and fire and life safety studies. In total over the past ten years, Mr. Davis has performed more than 500 site surveys and detailed investigations and directed more than 7,500 due diligence assessments for clients.

As senior technical lead on over 50 portfolios, both nationwide and international, he has worked closely with clients to provide timely analysis and critical insight as they make their business decisions on each project. With portfolios ranging in size from 20 locations to over 600 sites, and property types including hospitality, restaurant, retail, office, industrial, and skilled nursing, Mr. Davis has successfully provided progress information on issues and each portfolio was completed on or ahead of schedule.

Mr. Davis' background includes managing design, construction, and engineering projects in over twenty states and five provinces in Canada. His experience as a consultant, owner's representative, contractor and code official brings a unique perspective to each project.

RELEVANT PROJECT EXPERIENCE

Projects on which Mr. Davis has been involved include Assessments for:

- The World Trade Center, Long Beach, California
- Anaheim Garden Walk Mall, Anaheim, California
- Boca Raton Resort and Corporate Center, Boca Raton, Florida
- Inter-Continental Hotel, New Orleans, Louisiana
- Bethesda Hotel & Conference Center, Bethesda, Maryland
- Westin Resort Properties, Puerto Vallarta, Mexico
- The Cosmopolitan, Las Vegas, Nevada (2,900 room resort)
- University Mall, North Carolina (BOMA Lease Study)
- 900 North Michigan Avenue, Chicago, IL (Constrcution Monitoring)
- Numerous large-scale retail, office, multi-family residential, hospitality, healthcare and other commercial facilities

Several large property portfolios, including:

- 8 hospitality property portfolios (ea. 75 to 600 sites)
- 10 retail/office/industrial property portfolios (ea. 100 to 335 sites)
- 3 restaurant property portfolios (ea. 150 to 530 sites)
- 7 assisted living, skilled nursing, and full nursing home property portfolios (ea. 50 to 140 sites)

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Tulsa, Oklahoma 74136
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- Miscellaneous portfolios including gas service station, self-storage, resort, manufactured home and other portfolios in the US and Canada (ea. 25 to 125 sites)

EDUCATION

Bachelor of Science in Building Sciences, Rensselaer Polytechnic Institute, Troy, NY (1976)
Graduate Coursework, Architectural Design – Drexel University, Philadelphia, PA (1980)