

4.A

EVALUATION OF EXISTING CONDITIONS - SITE

Legal Title

The East Longmeadow High School is located at 180 Maple Street in East Longmeadow, Massachusetts and is shown as Parcel 17-33-10 by the Town Assessor. The property was acquired by the Town through an Order of Taking of Land for School Purposes (#6436) recorded in the Hampden County Register of Deeds, Book 2600, pages 313 and 314. Please see the property card and Order of Taking included within this section.

Historic Regulations & Development Restrictions

The High School was built in 1959 and designed by Alderman & MacNeish. An example of modern school design, its construction utilized concrete masonry units, masonry veneer ribbon windows and slab-on-grade construction. A review of the Massachusetts Historical Commission online MACRIS confirmed that the building is not currently listed on the State Register of Historic Places.

An addition-renovation or full demolition of this structure will require that a Project Notification Form be submitted to Massachusetts Historical Commission, with a prior visit to the local historical commission for their participation in the review. The Design Team anticipates submitting the PNF during the Preferred Schematic Report (PSR) phase of the project.

Geotechnical Report

Geotechnical investigations will be performed and submitted in a report in a future project phase, once a program is selected. A preliminary review of the USDA's NRCS Soil Mapping generally indicates loamy sand and gravelly sand profiles across the site.

Traffic Study

A traffic study will be performed and submitted in a later submission, once a design option is selected.

Phase 1 Environmental Assessment

A Phase 1 Environmental Assessment has been completed by OTO Associates. The Phase 1 study identified the location of a former vehicle hydraulic lift beneath the garage floor of the south end of the building in the 1973 wing that will require additional investigation to quantify the cost of removal of components and any soils impacted by its presence. Additionally, the Phase 1

identifies two known underground fuel oil tanks that serve as a backup fuel reserve for heating. These are recommended for removal as part of the project and have been accounted for in the cost estimate. Please see the report included within this section.

THE BAR REALTY COMPANY, INC., a corporation duly established under the laws of the Commonwealth of Massachusetts, having its usual place of business at East Longmeadow, Hampden County, Massachusetts, for consideration paid, grants to GERALD E. SPEAR, married, of Springfield, Hampden County, Massachusetts, with WARRANTY COVENANTS, the land in East Longmeadow, Hampden County Massachusetts, bounded and described as follows:

BEGINNING at a point in the southerly line of Maple Street at the north-westerly corner of Lot #4 (four) as shown on a Plan of Lots recorded in Hampden County Registry of Deeds in Book 48 of Plans, Page 102, and running thence along the westerly line of said Lot #4 (four) (heretofore conveyed to Bar Realty Company, Inc. by deed dated June 5, 1957 and recorded in Hampden County Registry of Deeds in Book 2556, Page 43) S 13° 56' 50" E, One Hundred Fifty (150) feet to the southwesterly corner of said Lot #4 (four); thence along the southerly line of Lots #4 (four) and #3 (three) on said Plan NORTH 76° 03' 10" EAST, Two Hundred Seven and 25/100 (207.25) feet to the southeasterly corner of said Lot #3 (three); thence along the easterly line of said Lot #3 (three) NORTH 13° 56' 50" WEST, One Hundred Twenty-five (125) feet; thence continuing along said Lot #3 (three) on a curve to the left of twenty-five (25) feet radius an arc distance of thirty-nine and 27/100 (39.27) feet to the southerly line of Maple Street; thence along said Maple Street, NORTH 76° 03' 10" EAST, One Hundred Twenty (120) feet; thence along Lot #2 (two) on said Plan on a curve to the left of twenty-five (25) feet radius an arc distance of thirty-nine and 27/100 (39.27) feet; thence continuing along said Lot #2 (two) SOUTH 13° 56' 50" EAST, One Hundred Twenty-five (125) feet to the southwest corner of said Lot #2 (two); thence continuing along the southerly line of said Lot #2 (two) and said Lot #1 (one) on said Plan, NORTH 76° 03' 10" EAST, One Hundred Seventy-nine and 70/100 (179.70) feet to land now or formerly of Robert B. Bates; thence along said land now or formerly of said Robert B. Bates SOUTH 06° 13' 30" WEST, Eight Hundred Seventy-seven and 22/100 (877.22) feet; thence along said land now or formerly of said Bates, land now or formerly of John S. Bosworth and land now or formerly of William Quinn, SOUTH 83° 12' 10" EAST, Seven Hundred Ninety-one and 10/100 (791.10) feet; thence continuing along said land now or formerly of said Quinn SOUTH 43° 10' 50" EAST, Forty-seven and 22/100 (47.22) feet to land of the New York, New Haven and Hartford Railroad Company; thence along said Railroad Company's land SOUTH 31° 27' WEST, Seven Hundred Eighty-five and 60/100 (785.60) feet, to land now or formerly of Davis and Ericson; thence along said land of Davis and Ericson NORTH 61° 34' 50" WEST, Nine Hundred Five and 48/100 (905.48) feet to the center line of a brook; thence continuing along said Davis and Ericson land along the center line of said brook about Seven Hundred Fifty (750) feet to land now or formerly of John R. Hogan; thence along land now or formerly of John R. Hogan NORTH 62° 24' 20" WEST, Seven Hundred Eleven and 64/100 (711.64) feet; thence continuing along land of said Hogan NORTH 53° 49' 50" WEST, Four Hundred Thirty-nine and 51/100 (439.51) feet to land conveyed by the Normar Corporation to Leo M. Speight et ux. by deed dated October 31, 1956 and recorded in Hampden County Registry of Deeds in Book 2518, Page 253; thence along said Speights' land NORTH 36° 10' 10" EAST, Two Hundred (200) feet; thence continuing along said Speights' land SOUTH 53° 49' 50" EAST, Forty and 83/100 (40.87) feet; thence continuing along said Speights' land NORTH 20° 09' 20" EAST, Five Hundred Forty-eight and 97/100 (548.97) feet; thence continuing along said Speights' land NORTH 04° 50' 30" EAST, Fifty (50) feet; thence continuing along said Speights' land NORTH 85° 09' 30" WEST, Eighty-one and 93/100 (81.93) feet; thence continuing along said Speights' land NORTH 04° 50' 30" EAST, One Hundred Fifty (150) feet to a point in the southerly line of Lot #18 (eighteen) on plan recorded in Book 53, Page 69; thence along the southerly line of Lots #18 (eighteen), #17 (seventeen), #16 (sixteen), and #15 (fifteen) on said last mentioned Plan, SOUTH 85° 09' 30" EAST, Three Hundred (300) feet; thence along land conveyed to Robert Barnes et ux, by deed dated October 29, 1954 and recorded in said Registry in Book 2346, Page 539, SOUTH 04° 50' 30" WEST, One Hundred Forty (140) feet; thence continuing along said Barnes' land SOUTH 85° 09' 30" EAST, Two Hundred feet; thence continuing along said Barnes' land NORTH 04° 50' 30" EAST, One Hundred forty-two and 11/100 (142.11) feet; thence continuing along said Barnes' land SOUTH 86° 44' 10" EAST, Thirty-five and 12/100 (35.12) feet; thence continuing along said Barnes' land NORTH 00° 16' 40" EAST, One Hundred Fifty (150) feet to a point in the southerly line of Maple Street; thence along said Maple Street SOUTH 89° 43' 20" EAST, One Hundred Twenty-two and 54/100 (122.54) feet; thence continuing along said Maple Street NORTH 83° 02' EAST, Eighty-five and 49/100 (85.49) feet to a stone bound at the northwesterly corner of Lot #10 (ten) on said first mentioned plan; thence continuing along said Maple Street NORTH 76° 03' 10" EAST, One Hundred (100) feet to the northwesterly corner of Lot #9 (nine) on said first mentioned plan; thence along said Lot #9 (nine) SOUTH 13° 56' 50" EAST, One Hundred Fifty (150) feet to the southwesterly corner thereof; thence along the southerly line of Lots #9 (nine), #8 (eight), #7 (seven) and #6 (six), NORTH 76° 03' 10" EAST, Four Hundred (400) feet to the southwesterly corner of Lot #5 (five) on said first mentioned plan; thence along the westerly line of said Lot #5 (five) NORTH 13° 56' 50" WEST, One Hundred Fifty (150) feet to a point in the southerly line of Maple Street distant One Hundred (100) feet SOUTH 76° 03' 10" WEST from the point of beginning; thence along Maple Street NORTH 76° 03' 10" EAST, One Hundred (100) feet to the point of beginning, containing about 63.1 acres.

SUBJECT TO a first Mortgage in the original sum of Forty-Four Thousand Five Hundred (\$44,500.00) Dollars given by the Grantor herein to the Normar Corporation dated December 13, 1957 and recorded in Book 2585, Page 127 which the Grantee herein agrees and assumes to pay.

BEING THE SAME premises conveyed to the Grantor by deed of The Normar Corporation dated December 3, 1957 and recorded in the Hampden County Registry of Deeds on December 18, 1957 in Book 2585, Page 123.

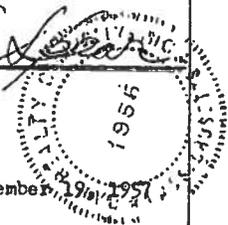
IN WITNESS WHEREOF, the said BAR REALTY COMPANY, INC. has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name and behalf by Gerald E. Spear its President hereto duly authorized, this 19th day of December in the year one thousand nine hundred and fifty-seven.

Signed and sealed in the presence of:

BAR REALTY COMPANY, INC.

William J. Foley

BY Gerald E. Spear
Its President



COMMONWEALTH OF MASSACHUSETTS

HAMPDEN, SS.

December 19, 1957

Then personally appeared the above named Gerald E. Spear and acknowledged the foregoing instrument to be the free act and deed of the BAR REALTY COMPANY, INC., before me,

William J. Foley
William J. Foley - Notary Public

My commission expires: March 3, 1962.



I, JANE B. KERVICK, Clerk of Bar Realty Company, Inc., a Massachusetts corporation, hereby certify that at a special meeting of the stockholders of said corporation held at Room #310, 31 Elm Street, Springfield, Massachusetts on December 3, 1956, of which meeting notice was duly given and all the stockholders being present, and at a meeting of the directors of said corporation immediately following said meeting of the stockholders, said meeting of directors being duly called and held and all the directors being present, the following vote was unanimously adopted by both stockholders and directors:

VOTED: That Gerald E. Spear, Treasurer of the Corporation, be and he hereby is authorized in the name and on behalf of the corporation, and upon such terms as he, in his sole discretion, may determine, to borrow money on behalf of the corporation and to make, sign and deliver promissory notes of the corporation, to sell, convey, mortgage, lease and otherwise deal with any and all real estate now owned or hereafter acquired by the corporation; to enter into contracts for the sale of the whole or any part of such real estate, to enter into contracts for the purpose of developing such real estate; to assign, transfer, discharge or execute partial releases of any mortgages now or hereafter held by said Corporation, and, if necessary or proper, to make entry thereunder for the purpose of foreclosing the same and to foreclose the same by sale, to execute proper deeds and affidavits of foreclosure; to endore, assign, transfer of release the interest of said corporation in any policies of insurance; and to sign, seal with the corporate seal, acknowledge and deliver all instruments authorized by this vote, and that this vote shall remain in full force and effect as to all persons relying thereon until an instrument modifying or revoking the same shall be recorded in the Registry of Deeds where this vote is

recorded. That he has been the duly elected Treasurer of said corporation since December 3, 1956.

BOOK 2600 PAGE 53

A true copy
Attest:

Jane B. Kernick
Clerk

RECEIVED
MAR 31 1958
AT 3:10 PM AND
REG'D FROM THE ORIGINAL

6208

NO DOCUMENTARY REVENUE STAMPS NECESSARY

KNOW ALL MEN BY THESE PRESENTS, that we, ANNIE PATTERSON and INA PATTERSON, both being unmarried, and both being

of LUDLOW, HAMPDEN County, Massachusetts,
~~being unmarried~~, for consideration paid, grant to NORMAN P. SUNTER and CATHERINE P. SUNTER, husband and wife as tenants by the entirety and not as tenants in common, both of said Ludlow, with warranty covenants

the land in said Ludlow, with the buildings thereon, bounded and described as follows:

(Description and encumbrances, if any)

Beginning at an iron bar in the southerly side line of Howard Street, said iron bar being distant Westerly seventy-three and 7/10 (73.7) feet from a stone bound at the intersection of the southerly side line of Howard Street and the westerly side line of Whitney Street; thence SOUTHERLY, seventy-four and 9/10 (74.9) feet to an iron bar at land now or formerly of one Hitchcock; thence turning an internal angle of 89° 56' and running WESTERLY along land of the aforesaid Hitchcock eighty-two and 72/100 (82.72) feet to an iron bar at land now or formerly of one Glassman; thence turning an internal angle of 90° 04' and running NORTHERLY along land of the aforesaid Glassman, seventy-four and 8/10 (74.8) feet to an iron bar in the southerly side line of Howard Street; thence turning an angle of 90° and running EASTERLY along the aforesaid street line, eighty-two and 7/10 (82.7) feet to the point of beginning; the last described line forming an angle of 90° with the line first described.

Containing 6,190 square feet of land.

Being the same premises conveyed to us by deed from Robert Amory, et al, Trustees of the Ludlow Manufacturing Associates by deed dated December 17, 1935 and recorded with Hampden County Registry of Deeds in Book 1615, Page 78, and this conveyance is made subject to the reservation as to sewer or drain contained in said deed.

Witness our hands and seals this twenty-ninth day of March 1958

Signed and sealed in presence of

Annie Patterson

Peter D. Wilson

Ina Patterson

by both

The Commonwealth of Massachusetts

Hampden

ss.

March 29, 1958

Then personally appeared the above named ANNIE PATTERSON and INA PATTERSON,

and acknowledged the foregoing instrument to be their free act and deed, before me

RECEIVED
MAR 31 1958
AT 3:10 PM AND
REG'D FROM THE ORIGINAL

Peter D. Wilson
PETER D. WILSON Notary Public

My Commission expires February 19, 1960



J1843-21-01
August 11, 2022

Jones Whitsett Architects
308 Main Street
Greenfield, Massachusetts 01301

Attn: Mr. Kristian Whitsett, Vice President

Subject: Phase I Environmental Site Assessment (ESA)
East Longmeadow High School
180 Maple Street
East Longmeadow, Massachusetts

Dear Mr. Whitsett:

Attached is our Phase I Environmental Site Assessment (ESA) report for the above-referenced property. Our Phase I ESA was performed in general accordance with ASTM Standard Practice E1527-21 (the "all appropriate inquiry" standard).

We appreciate the opportunity to assist you on this project. Should you have any questions regarding the report, please do not hesitate to call us.

Very truly yours,
O'Reilly, Talbot & Okun Associates, Inc.

A handwritten signature in blue ink that reads "Jonathan Hermanson".

Jonathan Hermanson
Environmental Scientist

A handwritten signature in blue ink that reads "Mark O'Malley".

Mark O'Malley
Project Manager

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FIGURES

Figure 1 – Locus Map

Figure 2 – Property Map

APPENDICES

Appendix A	Limitations
Appendix B	Property Record Information
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1.0 SUMMARY

O'Reilly, Talbot & Okun Associates, Inc. (OTO) has conducted a Phase I Environmental Site Assessment (ESA) of the Town of East Longmeadow High School property at 180 Maple Street in East Longmeadow, Massachusetts (the "subject property"). The subject property covers approximately 61.4-acres and is identified by assessor's map 17-33-10. Our assessment consisted of a records review, reconnaissance, interviews, review of User provided information, and preparation of this report.

Based on the services and limitations summarized herein, this assessment has identified one Recognized Environmental Condition in connection with the subject property as defined in the ASTM E1527-21 Standard Practice. This condition is associated with an out-of-use in-ground hydraulic vehicle lift located beneath the garage floor at the southern end of the High School building. The oil and/or hazardous material content, state of condition of the lift components, and soil conditions surrounding the out-of-use vehicle lift are unknown. Given these unknowns, it is likely that a release of oil or hazard material may have occurred beneath the ground surface from this lift system.

No other Recognized Environmental Conditions or significant data gaps in connection with the subject property were identified by this assessment. As with many parcels, such as the subject property, the possible presence of undiscovered releases of oils or hazardous materials is a possibility that cannot be ruled out. As referred to in the ASTM E1527-21 Standard Practice for Phase I ESAs, no ESA can wholly eliminate uncertainty regarding environmental matters in connection with a parcel of real estate.

2.0 INTRODUCTION

2.1 PURPOSE

A Phase I Environmental Site Assessment (ESA) was performed of the subject property, identified as 180 Maple Street in East Longmeadow, Massachusetts. The Phase I ESA was performed in general accordance with ASTM Standard Practice E1527-21 (the “all appropriate inquiry” standard, or the Standard) and our proposal to Jones Whitsett Architects (report “User”) dated May 2, 2022. The purpose of our Phase I ESA was to evaluate the history and current conditions of the subject property to identify Recognized Environmental Conditions (RECs)¹, historical Recognized Environmental Conditions (HRECs)², controlled Recognized Environmental Conditions (CRECs)³, or significant data gaps⁴.

2.2 SCOPE OF SERVICES

The following tasks were undertaken:

1. A review of User provided information, physical setting resources, historical records, and government records as described in the Standard.
2. A reconnaissance following the procedures outlined in the Standard.
3. An interview with the Key Site Manager.
4. A records request to local officials and review of provided information.
5. Evaluation and preparation of this Phase I ESA report.

2.3 SIGNIFICANT ASSUMPTIONS

OTO performed the environmental record searches in accordance with current ASTM and industry practice. The data, findings, and conclusions presented in this Phase I ESA are based upon a search, review, and analysis of the documents and interviews as well as observations made during the reconnaissance.

Conclusions reached regarding the conditions of the subject property do not represent a warranty that all areas within the property are of a similar quality as may be inferred from observable conditions and available history. As stated in the ASTM standard, no ESA can wholly eliminate uncertainty regarding potential environmental conditions in

¹ Recognized Environmental Condition (REC): (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment. A de minimis condition (as defined) is not a recognized environmental condition.

² Historical RECs: a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition.

³ Controlled RECs: recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).

⁴ Significant Data Gap: a data gap that affects the ability of the environmental professional to identify a recognized environmental condition.

connection with a property. OTO's evaluation and analysis are intended to reduce, not eliminate, the potential for conditions that result in environmental risk for the end user of this report.

2.4 LIMITATIONS, EXCEPTIONS, TERMS & CONDITIONS

Our report was performed subject to limitations and exceptions outlined in the Standard, identified herein, and as attached in Appendix A. The contractual Terms and Conditions governing the agreement between OTO and Jones Whitsett Architects under which this report was prepared, are attached in Appendix A.

2.5 USER RELIANCE

This report documents the Phase I ESA of the subject property performed by OTO at the request of Jones Whitsett Architects and in general accordance with ASTM Standard E1527-21. The findings, opinions, and conclusions of this report are for the confidential and exclusive use of Jones Whitsett Architects and the Town of East Longmeadow. Reliance on this report for any use or by parties other than those specifically stated is prohibited without the express written consent of OTO. Such use is at the sole risk of the user.

3.0 PROPERTY DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

A Locus Map based on the current United States Geological Survey (USGS) topographic map of the area (7.5 minute) is attached as Figure 1. A property map is attached as Figure 2.

According to the Town of East Longmeadow Assessors Office, the subject property covers approximately 61.4-acres and is identified by assessor's map 17-33-10. The property was acquired by the Town of East Longmeadow in 1957 through an Order of Taking of Land for School Purposes (eminent domain) signed on March 28, 1958, and recorded on April 2, 1958, in the Hampden County Registry of Deeds in book 2600 page 313. A copy of the current property record card and Order of Taking are attached in Appendix B.

3.2 PROPERTY AND VICINITY GENERAL CHARACTERISTICS

The subject property is located approximately 0.5-miles to the west of the East Longmeadow town center. The area is moderately developed with various residential, commercial, and industrial uses.

The subject property is at a mean elevation of approximately 220 feet. In general, the property slopes gently downward to the south, away from Maple Street. Wetlands and intermittent streams on the eastern and southern portion of the subject property flow in a southerly direction to form the headwaters of Jawbuck Brook. Shallow overburden

groundwater is inferred to flow towards the wetlands and on-site surface water features. No on-site groundwater surveys were performed as part of this assessment.

3.3 CURRENT USE OF THE PROPERTY

The subject property is used as East Longmeadow High School. It is frequently used by children and adults for educational and recreational activities, athletics, parking, work, community events, and public displays.

3.4 CURRENT USES OF ADJOINING PROPERTIES

Adjoining properties to the north and west of the subject property are residential. The Saint Michaels Parish Catholic Church and associated parking lot lie to the northeast along with additional residences. A small portion of the subject property abuts the rear wooded portion of the 90-92 Maple Street property which is used for commercial purposes by a general contractor. The eastern most property boundary runs along Redstone Rail Trail, a 1.5-mile paved walking path over a former railroad. Utilities and a petroleum pipeline run alongside the rail trail. To the east of the rail trail are a series of commercial business and shops fronting Shaker Road. To the south of the subject property is the American Saw & Manufacturing facility used for tool manufacturing by the Lenox, Irwin Industrial Tool, and Stanley, Black & Decker corporations. Also to the south is the Excel Dryer manufacturing facility and additional residences.

3.5 DESCRIPTIONS OF STRUCTURES, ROADS, AND IMPROVEMENTS

The subject property is developed with a brick two-story high school building with a gross square footage of approximately 186,000 square feet. Original portions of the building date back to 1959/1960. There have been two significant building expansions and various renovations over the decades. As typical for a school building such as this, there are numerous classrooms, workrooms, labs, shop areas, offices, storage areas, lockers, restrooms, two gymnasiums, a pool, an auditorium, a library, cafeterias, an elevator, mechanical rooms, and two boiler rooms. A basement area lies beneath a portion of the pool room and girls swimming locker room at the northeast corner of the building. This basement area contains the pool mechanical equipment, filters, and chemicals. The school is currently heated with natural gas. However, 10,000-gallon and 20,000-gallon No. 2 fuel oil underground storage tanks (USTs), installed in 2008, are located beneath the pavement along the south side of the building and serve as a backup fuel reserve for heating.

Outside the school building are paved entrances off Maple Street and a rear paved entrance off Norden Street. The main parking area is located on the northeast portion of the subject property. Athletic facilities include tennis courts, an artificial turf multi-use field with a track, bleachers, and concession buildings on the eastern portion of the campus. There are a pair of wooden sheds and several shipping containers used for athletic storage. At the southeast corner of the subject property is a stormwater retention pond which dates to the original school construction.

3.6 CURRENT POTABLE WATER SOURCE AND SEWAGE DISPOSAL

The main school building is connected to municipal water and sewer. Portions of the athletic fields are irrigated. Water service lines connect handwashing sinks in the concession stands near the athletic field. According to the Key Site Manager, an underground septic system was installed for the handwashing sinks. However, the sinks discharge to the ground surface as the plumbing from the sinks to the septic was never completed. Accordingly, there are no permanent restrooms outside the main school building. Portable restroom units are brought to the property for outdoor events and athletics.

4.0 USER PROVIDED INFORMATION

A User Questionnaire was completed on July 7, 2022, by Mr. Bruce Fenney of the East Longmeadow Department of Public Works. A Title Examination on behalf of the Town of East Longmeadow was completed on August 2, 2022, to fulfill the User responsibilities of ASTM E1527-21. The Department of Public Works also provided OTO with the most recent annual UST tank monitoring equipment testing report, documentation of past UST removals, asbestos abatement notifications, waste manifest information, combustion source registrations, and information regarding the presence of an in-ground hydraulic vehicle lift in the high school building. A copy of the Questionnaire, title search and other information provided by the Department of Public Works is attached in Appendix C. The Questionnaire indicates that the User is unaware of past chemical releases, environmental cleanups, or obvious indicators that point to the presence or likely presence of oil or hazardous material at the subject property from a reported release.

5.0 RECORDS REVIEW

5.1 STANDARD ENVIRONMENTAL RECORDS SOURCES

The Standard Environmental Records Sources identified in the ASTM Standard were reviewed for the subject property and vicinity using a database search provided by Environmental Data Resources, Inc (EDR). The radii searched for in these databases meets or exceeds the radii required in the ASTM Standard. A copy of the EDR report is attached in Appendix D.

On-Property: The state and federal databases searched by EDR identify the subject property in the federal U.S. Airs, FINDS, and ECHO databases which appear to be related to atmospheric emissions and prior asbestos abatement notifications at the East Longmeadow High School. The subject property is listed in state databases for past asbestos abatement notifications, Tier 2 chemical inventory reporting for the two No. 2 fuel oil USTs, and one listing in the historical Massachusetts Spills database under spill # W92-0088.

OTO contacted MassDEP for more information regarding the historical spill database listing. On July 14, 2022, MassDEP provided OTO will public file record information for spill # W92-0088. A copy of the records provided are attached in Appendix E. The

documents indicate that on February 28, 1992, MassDEP was notified by Con-Test, Inc. shortly following a failed test of one of the two former 10,000-gallon fuel oil USTs (identified as Tank No. 2 in the spill report). Tank No. 2 was emptied by transferring the fuel oil to Tank No. 1. MassDEP issued the Town of East Longmeadow a Notice of Responsibility under M.G.L. c.21E dated March 18, 1993, which required the removal of Tank No. 2 and an assessment by an environmental consultant. Tank No. 2 was removed on May 5, 1992 by BGL Corp. under the observation of Con-Test, Inc. and the East Longmeadow Fire Department. MassDEP was provided with a UST removal report prepared by Con-Test, Inc. on behalf of the Town. As documented in that report, no release conditions were identified upon removal of the UST from the ground. Soil samples from above the tank, the sides, and bottom of the UST excavation were analyzed for volatile organic compounds (VOCs). No VOCs were detected. No further actions were required by MassDEP following the tank removal, and the spill # W92-0088 is listed as “closed” in the historical database.

Under current Massachusetts Contingency Plan regulations (MCP, 310 CMR 40.0000), a tank test failure, such as the one described in spill #92-0088, would be considered a threat of release which requires notification to the MassDEP. The threat of release was abated in 1992 via the removal of the tank and product. No releases to the environment were identified upon removal of the UST. Therefore, this historical spill finding does not to meet the ASTM E1527-21 definitions of a recognized environmental condition or historical recognized environmental condition.

Off-Property: Twenty-eight (28) state-listed oil or hazardous material release locations (State equivalent of CERCLIS) were identified within the referenced search radii by EDR. Eleven (11) orphan listings with inadequate location data were also identified by EDR. The identified release locations in the EDR report were reviewed based on distance and direction from the subject property, the age of the release, remedial measures conducted, and regulatory status. Most of the listed releases have achieved closure through the filing of a Response Action Outcome (RAO), Permanent Solution, or no further action required by the MassDEP. Using the website links within the EDR report, we reviewed available reports and maps in MassDEP files for the releases on adjoining properties, and those potentially cross gradient or up-gradient of the subject property based on topography and inferred groundwater flow directions.

Based on our review, no previously reported state-listed oil or hazardous material releases are likely to have impacted soil, groundwater, or subsurface vapors on the subject property to levels of regulatory significance. The subject property is not depicted in the mapped limits of disposal sites for which an RAO, Permanent or Temporary Solution has been filed with MassDEP.

5.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

MassDEP Phase I Site Assessment Map

The MassDEP on-line Phase I Site Assessment Map of the subject property vicinity is provided in Appendix E. Wetlands are mapped at the subject property. Due to the subject property’s use as a school, MassGIS identifies the school grounds as an area of protected open space.

The Massachusetts Contingency Plan (MCP) has established reporting classifications for potential releases to soil and groundwater. Groundwater located within current or potential drinking water source areas is classified as RCGW-1.

Current drinking water source areas are defined as areas:

- Within a Zone II or Interim Wellhead Protection Area for a public water supply;
- Within the Zone A of a Class A surface water body used as a public water supply; or
- Within 500 feet of a private water supply well.

Potential drinking water source areas are defined as areas:

- 500 feet or more from a public water supply line;
- Within an area designated by a municipality specifically for the protection of groundwater quality; or
- Within a Potentially Productive Aquifer (PPA) that has not been excluded as a Non-Potential Drinking Water Source Area (NPDWSA).

Soils at the subject property are classified as RCS-1 due to the use of the subject property as school, local zoning, and abutting land uses. MassDEP's Well Driller database identifies private water supply wells used for domestic purposes on properties located off Maple Street and other nearby addresses. The location of these off-property wells has not been independently verified by OTO. Portions of the subject property are likely greater than 500 feet from the nearest public water supply lines. Groundwater at the subject property should be conservatively classified as RCGW-1 for purposes of release notification to the MassDEP. Due to the size of the subject property, groundwater in certain areas may qualify for the RCGW-2 classification. Applicable soil and groundwater classifications should be revisited by a Massachusetts Licensed Site Professional (LSP) if exceedances of any reporting standard are detected.

5.3 PHYSICAL SETTING SOURCES

The United States Geological Survey (USGS) topographic map of the area was used to prepare the Locus Map (Figure 1). The USGS map of the property vicinity is the only physical setting source required to be reviewed by the ASTM Standard. Other physical setting sources were reviewed including aerial imagery and GIS mapping. Information from these sources is provided in the appropriate sections of this report.

5.4 HISTORICAL PROPERTY USE INFORMATION

Historical information incorporated into the executive summary and findings of this report was gathered and cross-referenced using ASTM E1527-21 standard historical sources. OTO reviewed the Historical Topographic Maps, City Directory, Fire Insurance Maps, and Historical Aerial Images attached in Appendix D. In addition, information from our interviews, field visit, and the property record card were incorporated into the historical use review of this report.

The following key information was available in our review of the historical sources:

- Surrounding Area and Adjoining Properties: The surrounding area has a history of residential and agricultural uses dating back prior to the 1940s. Railroad tracks running along the eastern property boundary are depicted on topographical maps dating back to 1889. Commercial and industrial developments to the east and south of the subject property pre-date 1952 (oldest available aerial image). Over time the surrounding area has gradually become more developed.
- Subject Property: Based on the historical aerial images attached in Appendix D, prior to the subject property being taken by the Town for use as a school, much of the property had been cleared and used for agriculture. No historical, pre-1957 structures were identified on the subject property by our review of information; however, parts of a historical homestead, former shed, or barn cannot be ruled out. Based on information OTO obtained from Town research and our knowledge of the area, it appears that the former agricultural fields were primarily utilized for growing field tobacco by the Wetstone Tobacco Farm (company). From the mid-1940s through around 1976 Wetstone Tobacco farmed several areas in East Longmeadow and nearby Somers, Connecticut. The subject property was acquired by the Town in 1957/1958 and developed into a high school as evident in historical aerial photographs. Historical topographic maps indicate that a significant amount of regrading and leveling of the school grounds occurred during its development. Provided information shows the school building has expanded over the years and athletic fields have been altered and improved. Overall uses of the subject property appear relatively consistent from 1957 to the present day.

6.0 RECONNAISSANCE

6.1 METHODOLOGY AND LIMITING CONDITIONS

OTO performed the Phase I reconnaissance on July 12, 2022. Mr. Mark O'Malley of OTO was lead on a tour of the school building and grounds by the Key Site Manager, Mr. Joseph Dunn of the East Longmeadow Department of Public Works. The head custodian was present at the time and provided additional knowledge of the subject property. OTO's tour and observations of the school building focused on mechanical rooms, boiler rooms, storage, and maintenance areas where oil and hazardous materials are commonly stored or utilized. Numerous classrooms, labs, and offices within the school building were observed, but not every room nor every closet was inspected by OTO. The

exterior accessory concession buildings and storage containers were viewed. OTO walked the property perimeter and made transects across the field areas OTO walked along walking paths through wooded wetland areas and along the rail trail near the subject property boundary.

At the time of the visit, the weather was sunny, hot, and humid. OTO's observations of the subject property and immediately adjacent areas was limited by dense vegetation, wood debris, and leaf litter covering the ground surface. Parked vehicles and numerous material objects blocked or obstructed our observations of the subject property and building interiors. Some storage areas were poorly lit.

6.2 SITE SETTING AND OBSERVATIONS

The setting and observations were generally consistent with those described in Section 3.0 of this report. OTO's reconnaissance was performed following guidelines presented in Section 9.0 of ASTM Standard E1527-21. Photographs taken during the visit are attached in Appendix F.

6.2.1 Current Use, Treatment, Storage, Disposal, or Generation of Hazardous Substances or Petroleum Products

One 10,000-gallon and one 20,000-gallon No. 2 fuel oil UST, installed in 2008, are located beneath the pavement on the south side of the school. These serve as a back-up fuel source for heating. The school building elevator is hydraulic with a remote oil reservoir which is routinely serviced and inspected by an elevator technician. Within the building there were numerous containers 5-gallons or less in size containing hazardous substances or petroleum products. These containers include but are not limited to building maintenance and cleaning supplies, lubricants, paints, laboratory supplies, photograph development chemicals, aerosols, hydraulic oils, gasoline and diesel for maintenance equipment, and pool chemicals. Laboratory classroom wastewater treatment systems were identified by the Key Site Manager. No significant generation or on-site disposal of hazardous substances or petroleum products was identified at the subject property.

6.2.2 Obvious Past Use, Treatment, Storage, Disposal, or Generation of Hazardous Substances or Petroleum Products

Obvious past use of hazardous substances or petroleum products dating back to 1958 is assumed to be similar to the present day. An automotive and carpentry shop were formerly located in the southern portion of the school building. According to the Key Site Manager, former students used to work on school busses in the automotive shop. An out-of-use in-ground hydraulic lift was identified in the garage (former automotive shop area). No oil/water separators, drywells, or underground tanks were identified in connection with the former automotive shop. Construction activities, firework displays, training exercises, and numerous events and anthropogenic activities over the decades likely involved the use, storage, and de minimis disposal of hazardous substances and petroleum products.

6.2.3 Hazardous Substances and Petroleum Products in Connection with Identified Uses

Hazardous substances or petroleum products used at the property are described above.

6.2.4 Storage Tanks

One 10,000-gallon and one 20,000-gallon No. 2 fuel oil UST, installed in 2008, are located beneath the pavement on the south side of the school. These serve as a back-up fuel source for heating.

6.2.5 Strong, Pungent or Noxious Odors and Their Sources

No strong, pungent, or noxious odors were observed during our reconnaissance.

6.2.6 Standing Surface Water and Pools or Sumps of Liquids Likely to be Hazardous Substances or Petroleum Products

Standing water (groundwater) was observed in sumps located in the basement area near the swimming pool. Other than water in and around the swimming pool, wetland areas, and the stormwater retention pond, no pools of standing water or liquids were observed.

6.2.7 Drums, Totes, and Intermediate Bulk Containers

No drums, totes, or intermediate bulk containers were observed at the subject property containing hazardous substances or petroleum products. Numerous empty 55-gallon drums and plastic barrels repurposed into trash and recycling receptacles were observed throughout the property, particularly outside around the athletic fields. Three blue 55-gallon drums contained spent swimming pool filter media (sand and peastone) were observed in the basement area near the swimming pool. These three drums were unlabeled, and the bottoms had rusted. We consider this to be de minimis within the scope of this assessment.

6.2.8 Hazardous Substances and Petroleum Products Containers Not in Connection with Identified Uses

No hazardous substances or petroleum product containers of significance not in connection with the identified uses at the subject property were identified.

6.2.9 Unidentified Substance Containers

Numerous, 5-gallon or less containers, were observed to have been repurposed or poorly labeled. We consider this to be de minimis within the scope of this assessment. No containers with unidentified substances suspected of being hazardous substances or petroleum products were identified. Some litter items and empty containers (such as beverage containers) were observed outside on the school grounds.

6.2.10 Polychlorinated Biphenyl (PCB) Containing Items

No PCB containing items were identified. Electrical equipment and fluorescent light ballasts and building materials may contain PCBs given the age of the school building. Evaluation of these items is outside the scope of this assessment.

6.2.11 Stains or Corrosion on Floors, Walls, or Ceilings (except from water)

De minimis stains and corrosion were observed on floors and metal objects. We did not observe stains or corrosion which we would attribute to a reportable release of oil or hazardous material.

6.2.12 Drains and Sumps

Floor drains, sumps, and wastewater treatment systems were observed in the building. These are presumed to be connected to the sanitary sewer.

6.2.13 Pits, Ponds, or Lagoons

A stormwater retention pond is located on the southeast portion of the subject property.

6.2.14 Stained Soil or Pavement

No significantly stained soil or pavement was observed. De minimis staining from previously parked vehicles was apparent.

6.2.15 Stressed Vegetation

No vegetation stressed from past chemical exposure from a reportable release of oil or hazardous substances was identified.

6.2.16 Solid Waste

Solid waste was observed in trash receptacles and dumpsters. Other than cut vegetation and grass clippings, no significant on-site disposal of solid waste was observed. De minimis litter items and micro-trash were observed in various areas of the school grounds.

6.2.17 Water/Wastewater

Water was observed in wetlands and the stormwater retention pond. Wastewater generated within the school building discards into the sanitary sewer. The hand-sinks in the concession buildings discharge to the ground surface. Given the use of these sinks, we consider this to be a non-scope compliance issue and de minimis within the scope of this assessment.

6.2.18 Wells

No wells were identified on the subject property (including dry wells, irrigation wells, injection wells, monitoring wells, abandoned wells or other wells).

6.2.19 Exterior Observations - Septic Systems or Cesspools

An unutilized septic system was installed adjacent to the concession stands according to the Key Site Manager.

7.0 INTERVIEWS

7.1 INTERVIEWS WITH OWNERS/OCCUPANTS/SITE MANAGER

OTO interviewed Key Site Manager, Mr. Joseph Dunn of the East Longmeadow Department of Public Works on July 12, 2022 during the reconnaissance. The Key Site Manager was unaware of the presence of or likely presence of oil or hazardous material in, on, or at the subject property due to a release to the environment. Information provided in the interview was incorporated into appropriate sections of this report.

7.2 INTERVIEWS WITH LOCAL GOVERNMENT AGENCIES

On July 11, 2022, OTO visited the East Longmeadow Fire Department to review available department records on the subject property and interview Fire Chief Paul Morrisette and Fire Prevention Office Brian Daponde. The fire department officials indicated that they were not aware of any oil or hazardous material releases reported for the subject property. The department officials provided records indicating that the fire department was involved in aiding the removal and off-site disposal of unlabeled presumed hazardous chemicals from one of the classroom laboratories and photography dark rooms in 2010. OTO was provided with a copy of the up-to-date Tier II Emergency and Hazardous Chemical Inventory reporting form for the high school, as well as past permit records for the installation and removal of USTs, natural gas and boiler heating equipment, fire department inspection records, and sprinkler diagrams. OTO was also provided a copy of the permit record for the July 2022 fireworks display, and informed older fireworks permits were available in department files. The Town's permitted annual Fourth of July fireworks are launched from the southernmost portion of the athletic fields on the subject property. UST permit records indicate that two 10,000-gallon fuel oil USTs were removed in 1992 and replaced with 10,000-gallon and 20,000-gallon USTs. The 1992 UST removal contamination assessments were performed by Con-Test, Inc. In 2008 the two USTs were removed and replaced with one 10,000-gallon UST and one 20,000-gallon UST. Contamination assessments following the 2008 UST removals were performed by Tighe & Bond and observed by the fire department. The USTs installed in 2008 are the current generation of tanks at the subject property. These USTs have continuous tank monitoring systems and are inspected annually.

As mentioned in Section 5.0, OTO sent a public records request to MassDEP and received documentation regarding historical spill # W92-0088.

8.0 FINDINGS

A Phase I Environmental Site Assessment was conducted by OTO. Our assessment consisted of a records review, a reconnaissance, interviews, review of User provided information, and preparation of this report.

The subject property covers approximately 61.4-acres and has been utilized as the East Longmeadow High School and athletic fields since 1958. The subject property was used for agriculture prior to the taking of the land by the Town of East Longmeadow. The surrounding area is heavily developed with residential, commercial, industrial, and recreational uses.

The East Longmeadow High School building is two-story brick building with a gross square footage of approximately 186,000 square feet. Original portions of the building date back to 1959/1960. There have been two significant building expansions and various renovations over the decades. There are athletics fields, an artificial turf football/soccer field surrounded by a track, tennis courts, bleachers, and related accessory structures. The main school building is connected to municipal water and sanitary sewer services. The school is currently heated with natural gas. However, a 10,000-gallon and 20,000-gallon No. 2 fuel oil UST, installed in 2008, are located beneath the pavement along the south side of the building and serve as a backup fuel reserve for heating. These current UST systems have continuous tank monitoring and leak detection systems which are inspected on an annual basis.

User and Key Site Manager provided information and the Questionnaire attached in Appendix C indicate that the User and Key Site Manager are unaware of past chemical releases, environmental cleanups, or obvious indicators that point to the presence or likely presence of oil or hazardous material at the subject property from a reported release. During OTO's reconnaissance, an out-of-use in-ground hydraulic lift was identified in the garage (former automotive shop area). This finding was confirmed by the East Longmeadow Department of Public Works.

Our review of federal and state regulatory database information found that MassDEP was notified of a UST test failure at the subject property in 1992. The UST was subsequently removed and no indications of a release fuel oil from were identified in the available documentation provided to OTO by MassDEP. Therefore, this historical finding does not meet the ASTM E1527-21 definitions of a recognized environmental condition or historical recognized environmental condition.

Based on our review, no previously reported state-listed oil or hazardous material releases are likely to have impacted soil, groundwater, or subsurface vapors on the subject property to levels of regulatory significance. The subject property is not depicted in the mapped limits of disposal sites for which an RAO, Permanent or Temporary Solution has been filed with MassDEP.

Oil and/or hazardous substances are presumed to be present in soil on the subject property attributable to historical development and use of the property, pesticide/herbicide applications, atmospheric emissions, permitted activities and fireworks displays, de minimis

disposal, and Anthropogenic Background sources, as defined in the MCP⁵. These conditions and sources are specifically exempt from the definitions of a “release” and constitute “background” conditions. Current and future property owners should be aware that proper management of such material is required if relocated.

9.0 OPINION AND CONCLUSIONS

O’Reilly, Talbot & Okun Associates, Inc. (OTO) have performed a Phase I Environmental Site Assessment (ESA) of the subject property in general conformance with the scope and limitations of ASTM Standard E1527-21. Exceptions to, or deletions from this practice are described in Sections 2.4 and 10.0 of this report.

Based on the services and limitations summarized herein, this assessment has identified one Recognized Environmental Condition in connection with the subject property as defined in the ASTM E1527-21 Standard Practice. This condition is associated with an out-of-use in-ground hydraulic vehicle lift located beneath the garage floor at the southern end of the High School building. The oil and/or hazardous material content, state of condition of the lift components and soil conditions surrounding the out-of-use vehicle lift are unknown. Given these unknowns, it is likely that a release of oil or hazard material may have occurred beneath the ground surface from this out-of-use hydraulic vehicle lift system.

No other Recognized Environmental Conditions or significant data gaps in connection with the subject property were identified by this assessment. As with many parcels, such as the subject property, the possible presence of undiscovered releases of oils or hazardous materials is a possibility that cannot be ruled out. As referred to in the ASTM E1527-21 Standard Practice for Phase I ESAs, no ESA can wholly eliminate uncertainty regarding environmental matters in connection with a parcel of real estate.

⁵ Anthropogenic Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern and which are: (a) attributable to atmospheric deposition of industrial process or engine emissions and are ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern; (b) attributable to Historic Fill; (c) associated with sources specifically exempt from the definitions of disposal site or release as those terms are defined in MGL c. 21E and 310 CMR 40.0006; (d) releases to groundwater from a public water supply system; or (e) petroleum residues that are incidental to the normal operation of motor vehicles.

10.0 DEVIATIONS

We are not aware of significant deviations from the ASTM E1527-21 practice used to prepare this report. Historical records, databases, and other information reviewed or provided as part of this assessment may contain data gaps or data failures.

11.0 ADDITIONAL SERVICES

No additional services outside of the ASTM E1527-21 Standard Practices were performed in completing this report.

12.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

Mark E. O'Malley declares that, to the best of his professional knowledge and belief, he meets the definition of Environmental Professional as defined in Part 312.10 of 40 CFR. OTO has the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. OTO has developed and performed the all-appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

13.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Jonathan Hermanson, an Environmental Scientist at OTO, has over six years of experience in the consulting field. Since joining OTO, Mr. Hermanson has focused on conducting field work, data evaluation, environmental site assessments, remediation activities, and assisting on human health risk assessment projects. Mr. Hermanson earned Bachelor of Science Degrees in Chemistry and Environmental Science from Tulane University in 2016.

Mark E. O'Malley Jr., an Environmental Scientist and Project Manager at OTO, has approximately twelve years of full-time experience in the environmental consulting field. He holds a 2009 B.S. in Earth Systems from the University of Massachusetts, Amherst. Mr. O'Malley joined OTO in January 2013, where he has focused on conducting fieldwork, data evaluation, site assessments, remediation, and reporting for projects primarily in Massachusetts and Connecticut, with limited work on projects in Vermont, New York, and New Jersey. He holds paramount the health, safety, and welfare of the public and the environment for which we all live, work, and play. Mr. O'Malley strives to stay up to date on local and regional environmental issues, guidance, and regulatory changes. He has a strong technical understanding of the Massachusetts Contingency Plan (MCP), the Connecticut Transfer Act and Remediation Standards.

14.0 LIST OF ACRONYMS

AST	Above ground Storage Tank
AUL	Activity and Use Limitation
BMP	Best Management Practices
CMR	Code of Massachusetts Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability ACT
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability ACT Information System
DEPNFA	No further action is necessary per MassDEP
EPA	U.S. Environmental Protection Agency
EPH	Extractable petroleum hydrocarbons
ESA	Environmental Site Assessment
HREC	Historical Recognized Environmental Conditions
LSP	Licensed Site Professional
MassDEP	Massachusetts Department of Environmental Protection
MassGIS	Massachusetts Geographic Information System
MCP	Massachusetts Contingency Plan
MGL	Massachusetts General Laws
MGP	Manufactured gas plant
NHESP	Natural Heritage & Endangered Species Program
NOI	Notice of Intent
NPL	National Priority List
NSR	No Significant Risk
OHM	Oil and/or Hazardous Materials
OTO	O'Reilly, Talbot & Okun Associates, Inc.
PAHs	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
RAO	Response Action Outcome
RC	Reportable Concentration
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
RTN	Release Tracking Number
SQG	Small Quantity Generator
TSDF	Treatment, Storage and Disposal Facilities
TCLP	Toxicity Characteristics Leaching Procedure
UST	Underground Storage Tank
VSQG	Very Small Quantity Generator
WPA	Wetlands Protection Act



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180 MAPLE STREET
EAST LONGMEADOW
MASSACHUSETTS

LOCUS MAP

July 2022

Figure 1

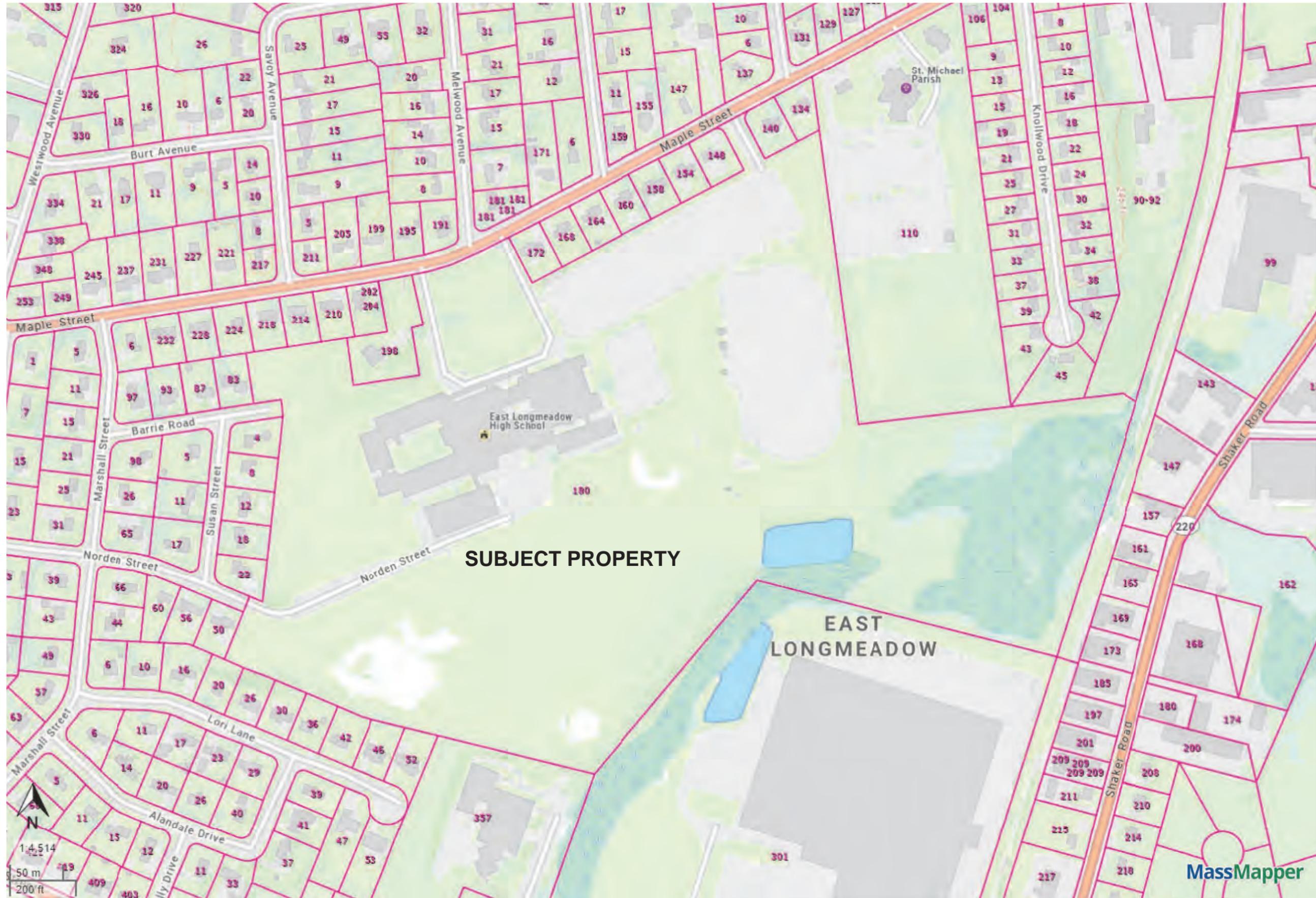


Image Source: MassMapper GIS(2022).<https://maps.massgis.digital.mass.gov/MassMapper/MassMapper.html>
 O'Reilly, Talbot & Okun Associates, Inc. assumes no legal responsibility for the information contained herein. All features are approximate. This map is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

**180 MAPLE STREET
 EAST LONGMEADOW, MA
 PROPERTY MAP**

PROJECT NO.
J1843-21-01

FIGURE NO.
2

LIMITATIONS

1. Our Report does not present scientific certainties, but rather our professional opinions on the data obtained through our assessment. Our Report was prepared for the exclusive benefit of our client and its mortgage lender. Reliance upon the Report and its conclusions is not made to third parties or future property owners. We would be pleased to discuss extension of reliance to third parties through execution of a written contract with such parties.
2. The observations presented in this Report were made under the conditions described herein. The conclusions presented in this Report were based solely upon the services described in the Report and not on scientific tasks or procedures beyond the scope of the project or the time and budgetary constraints imposed by the client. The work described in this Report was carried out in accordance with the contract Terms and Conditions.
3. In preparing the Report, O'Reilly, Talbot, Okun & Associates, Inc. relied on certain information provided by state and local officials and other parties referenced herein, and on information contained in prior Reports. Although there may have been some degree of overlap in the information provided by these sources, O'Reilly, Talbot, Okun & Associates, Inc. did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this assessment.
4. Observations were made of the subject property and of the structures as indicated within the Report. Where access to portions of the property, areas or to structures was unavailable or limited, we render no opinion as to the presence of hazardous materials or oil, or to the presence of indirect information relating to hazardous materials or oil in that portion of the property. In addition, we render no opinion as to the presence of hazardous materials or oil, where direct observations of portions of the property were obstructed by objects or coverings on or over these surfaces.
5. Unless otherwise specified in the Report, we did not perform testing or analyses to evaluate background conditions or determine the presence or concentration of asbestos at or in the environment at the subject property.
6. The purpose of this Report was to assess the physical characteristics of the subject property with respect to the presence of hazardous material or oil in soil or groundwater. No specific attempt was made to check on the compliance of present or past owners or operators of the site with federal, state, or local laws and regulations, environmental or otherwise.

TERMS & CONDITIONS OF ENGAGEMENT

THESE TERMS AND CONDITIONS APPLY TO THE PROSAL AT MA 2, 22 SUBMITTED BY ORILL, TALBOT & O'NEILL ASSOCIATES, INC. CONSULTANT TO THE STATE OF MASSACHUSETTS, MA, UNDER AGREEMENT WITH THE CLIENT AND CONSULTANT.

- SRIKESHAN STANAROCAR THE SRIKESHAN RINC IN OUR PROSAL AT MA 2, 22 CONSULTANT UNDER AGREEMENT WILL CONDUCT IN A MANNER CONSISTENT WITH THE LOCAL CHARACTERISTICS AND IN ACCORDANCE WITH THE LOCAL CUSTOMS AND PRACTICES IN THE SAME LOCALITY UNDER SIMILAR CONDITIONS. NO OTHER REPRESENTATION, REPRESENTATIVE, OR IMPLICATION, AND NO WARRANT OR GUARANTEE IS INCLUDED OR INTENDED IN THIS AGREEMENT, OR IN ANY REPORT, OPINION, DOCUMENT, OR OTHER RWIS.
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- ASSIGNMENT IN THE CONTRACT TO THIS AGREEMENTS ALL ASSIGNMENTS UTILIZED OR LIABILITIES ARISING WITHOUT PRIOR WRITTEN CONSENT OF THE CONTRACTOR, CONTRACTOR SHALL BE THE SRIKESHAN PERSONS AND ENTITIES NOT IN ITS MODEL, WHEN IT IS INCURRED OR CONSULTANT'S ASSUMPTIONS. SRIKESHAN ENTITIES SHALL INCLUDE, BUT NOT BE LIMITED TO SUPPLIERS, SPECIALT CONSULTANTS, MILLING CONTRACTORS, AND STEEL FABRICATORS.
- TERMINATION CLIENT MAY TERMINATE THIS AGREEMENT WITHOUT NOTICE BY WRITING TO CONSULTANT, PROVIDED THAT CLIENTS ALL OBLIGATIONS UNDER THIS AGREEMENT SHALL BE FULLY SATISFIED AND ALL OBLIGATIONS INCURRED BY CONSULTANT ON CLIENT'S BEHALF SHALL BE FULLY SATISFIED. SRIKESHAN SHALL INCLUDE THE COSTS ASSOCIATED WITH TERMINATION OF THIS AGREEMENT, AS WELL AS THE COSTS ASSOCIATED WITH TERMINATION OF THIS AGREEMENT. CONSULTANT MAY TERMINATE THIS AGREEMENT UPON RECEIVING WRITTEN NOTICE TO CLIENT TO NON-AMENDMENT IN OIG SWITTING PORT 145 A RIOR SCRI IN ARTICLE 5 OF THIS AGREEMENT. IN THE EVENT OF TERMINATION OR NON-AMENDMENT IN OIG, CLIENT WILL BE RESPONSIBLE FOR ALL REASONABLE TERMINATION COSTS INCURRED BY CONSULTANT.
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14. T IR ART RI TS UNL SS OT RWIS S CI I INT A R M NT, T
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CURRENT OWNER		TOPO	UTILITIES	STRT / ROAD	LOCATION	CURRENT ASSESSMENT				
TOWN OF EAST LONGMEADOW			1 TYPCL			Description	Code	Appraised	Assessed	1006 EAST LONGMEADOW, MA
60 CENTER SQ						EXEMPT	934	21,125,600	21,125,600	
EAST LONGMEADOW MA 01028						EXM LAND	934	5,211,600	5,211,600	
						EXEMPT	934	248,200	248,200	
SUPPLEMENTAL DATA										
Alt Prcl ID					Received					
SP Permit					NIA					
Chapter La					Field 8					
OC Dates					Field 9					
In+Ex FY					Field 10					
Mailed										
GIS ID F_378284_2847900					Assoc Pid#					
							Total	26,585,400	26,585,400	

VISION

RECORD OF OWNERSHIP		BK-VOL/PAGE	SALE DATE	Q/U	VI	SALE PRICE	VC	PREVIOUS ASSESSMENTS (HISTORY)						
TOWN OF EAST LONGMEADOW		02600 0051	03-31-1958	U	I	0		Year	Code	Assessed	Year	Code	Assessed	
								2021	934	21,125,600	2020	934	21,125,600	
									934	5,211,600	2019	934	5,211,600	
									934	248,200		934	248,200	
							Total	26,585,400	Total	26,585,400	Total	26,585,400	Total	25,959,700

EXEMPTIONS				OTHER ASSESSMENTS			
Year	Code	Description	Amount	Code	Description	Number	Amount
Total			0.00				

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD			
Nbhd	Nbhd Name	B	Tracing
0001			934
			CA

APPRAISED VALUE SUMMARY	
Appraised Bldg. Value (Card)	21,125,600
Appraised Xf (B) Value (Bldg)	0
Appraised Ob (B) Value (Bldg)	248,200
Appraised Land Value (Bldg)	5,211,600
Special Land Value	0
Total Appraised Parcel Value	26,585,400
Valuation Method	C
Total Appraised Parcel Value	26,585,400

NOTES	
HIGH SCHOOL, 94 BP NVC, 95 BP NVC, 97 BP REMODEL OFFICES.	40,550= APPROXIMATELY 191,960 ACTUAL LIVING AREA OF SCHOOL
THE COURTYARDS ARE INCLUSIVE OF THE SQ OF THE LIVING AREA.	
TOTAL SQ 232,510 LESS COURTYARDS SF OF	

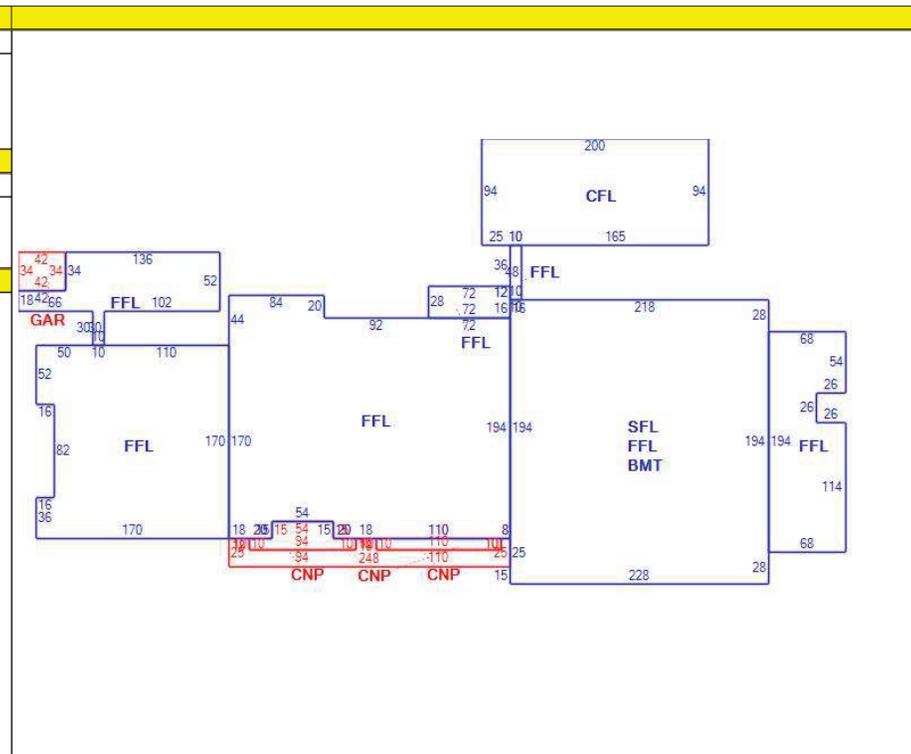
BUILDING PERMIT RECORD										VISIT / CHANGE HISTORY				
Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments	Date	Id	Type	Is	Cd	Purpose/Result
202102641	08-20-2021	MN	Manual Note	1,300		0		INSTL RADIO BOX ON FIRE	05-29-2013	317			15	PERMIT VISIT
201501977	06-22-2015	6	SIGN	149		0		TEMPORARY	05-29-2013	317			15	PERMIT VISIT
201302945	10-25-2013	8	RENOVATION	228,506		100	06-27-2014	SHOWERS/LOCKER RM AS	12-03-2009	317			15	PERMIT VISIT
201203355	10-26-2012	9	ALTERATION	243,113				REMODEL GARAGE SPACE	12-28-2006	311			15	PERMIT VISIT
201203168	09-26-2012	25	WINDOWS	56,000					12-19-2005	311			15	PERMIT VISIT
45	03-09-2009	8	RENOVATION	0				CONCESSION STAND NVC	12-20-2004	311			15	PERMIT VISIT
74	03-27-2006	10	SHED	5,000				OC 6/30/2006 DUGOUTS. CO	06-07-2004	303			3	MEAS+INSPCTD

LAND LINE VALUATION SECTION															
B	Use Code	Description	Zone	Land Type	Land Units	Unit Price	I. Factor	Site Index	Cond.	Nbhd.	Nbhd Adj	Notes	Location Adjustment	Adj Unit Pric	Land Value
1	934	EDU IMPR	RB	SITE	900,000	SF	2.55	1.56000	D	1.00	BA	1.000		0	3,582,000
1	934	EDU IMPR	RB	EXCESS	40.740	AC	50,000	0.80000	0	1.00	BA	1.000		0	1,629,600
					Total Card Land Units	61.40	AC	Parcel Total Land Area: 61.40					Total Land Value	5,211,600	

CONSTRUCTION DETAIL			CONSTRUCTION DETAIL (CONTINUED)		
Element	Cd	Description	Element	Cd	Description
Style:	58	SCHOOL			
Model	94	COMMERCIAL			
Grade	B	GOOD			
Stories	2.00	2 STORY			
Occupancy	1.00				
Exterior Wall 1	7	BRICK			
Exterior Wall 2					
Roof Structure	4	FLAT			
Roof Cover	4	TAR+GRAVEL			
Interior Wall 1	7	ABOVE AVG			
Interior Wall 2	1	DRYWALL			
Interior Floor 1	14	ASPHL TILE			
Interior Floor 2	4	CARPET			
Heating Fuel	1	OIL			
Heating Type	3	FORCED H/W			
AC Percent	0				
FBM Sqft					
Bldg Use	934	EDU IMPR			
Total Rooms	0				
Bedrooms	0				
Full Baths	0				
Half Baths	39				
Extra Fixtures	276				
#Heat Sys	10				
Frame	4	FIREPF STL			
Bath Style	A	AVERAGE			
Foundation	1	CONCRETE			
Partitions	E	EXTENSIVE			
Wall Height	10.00				
FBM Quality					
Overhead Door					
Kitchens	1				

MIXED USE		
Code	Description	Percentage
934	EDU IMPR	100
		0
		0

COST / MARKET VALUATION		
RCN		28,939,141
Year Built		1960
Effective Year Built		1991
Depreciation Code		GD
Remodel Rating		
Year Remodeled		
Depreciation %		27
Functional Obsol		
External Obsol		
Trend Factor		1
Condition		
Condition %		
Percent Good		73
Cns Sect Rcnd		21,125,600
Dep % Ovr		
Dep Ovr Comment		
Misc Imp Ovr		
Misc Imp Ovr Comment		
Cost to Cure Ovr		
Cost to Cure Ovr Comment		



OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)										
Code	Description	L/B	Units	Unit Price	Yr Blt	Cond. Cd	% Good	Grade	Grade Adj	Appr. Value
85	PAVING	L	27,500	1.61	1968	AV	55	A	1.00	24,400
18	CABIN/L	L	192	48.30	2002	GD	70	G	1.25	8,100
02	SHED/FR	L	64	7.48	1995	GD	70	A	1.00	300
88	FENCE-6	L	1,440	9.78	1980	AV	55	A	1.00	7,700
77	LITE-SIN	L	12	690.00	1960	AV	55	A	1.00	4,600
87	FENCE-4	L	1,160	6.90	1960	AV	55	A	1.00	4,400
02	SHED/FR	L	180	7.48	2006	EX	90	E	1.75	2,100
10	POOL I-C	L	1,500	29.90	1960	AV	55	A	1.00	24,700
27	TENNIS C	L	6	18400.00	1960	AV	55	A	1.00	60,700
79	LITE-TPI	L	14	1035.00	1990	GD	70	G	1.25	12,700

BUILDING SUB-AREA SUMMARY SECTION							
Code	Description	Living Area	Floor Area	Eff Area	Unit Cost	Undeprec Value	
BMT	BASEMENT	0	57,000		23.59	1,344,383	
CFL	CATHEDRAL CE	18,800	18,800		121.47	2,283,564	
CNP	CANOPY	0	7,010		5.90	41,393	
FFL	1ST FLOOR	156,710	156,710		117.93	18,480,544	
GAR	GARAGE	0	1,428		47.15	67,337	
SFL	2ND FLOOR	57,000	57,000		117.93	6,721,913	
Ttl Gross Liv / Lease Area		232,510	297,948	245,396		28,939,134	152



CURRENT OWNER		TOPO	UTILITIES	STRT / ROAD	LOCATION	CURRENT ASSESSMENT				1006 EAST LONGMEADOW, MA VISION							
TOWN OF EAST LONGMEADOW			1 TYPCL			Description	Code	Appraised	Assessed								
60 CENTER SQ						EXEMPT	934	21,125,600	21,125,600								
EAST LONGMEADOW MA 01028						EXM LAND	934	5,211,600	5,211,600								
						SUPPLEMENTAL DATA											
		Alt Prcl ID		Received													
		SP Permit		NIA													
		Chapter La		Field 8													
		OC Dates		Field 9													
		In+Ex FY		Field 10													
		Mailed															
		GIS ID F_378284_2847900		Assoc Pid#													
						Total		26,585,400	26,585,400								
RECORD OF OWNERSHIP			BK-VOL/PAGE	SALE DATE	Q/U	V/I	SALE PRICE	VC	PREVIOUS ASSESSMENTS (HISTORY)								
									Year	Code	Assessed	Year	Code	Assessed	Year	Code	Assessed
									2021	934	21,125,600	2020	934	21,125,600	2019	934	20,598,900
										934	5,211,600		934	5,211,600		934	5,112,600
										934	248,200		934	248,200		934	248,200
									Total		26,585,400	Total		26,585,400	Total		25,959,700
EXEMPTIONS				OTHER ASSESSMENTS				This signature acknowledges a visit by a Data Collector or Assessor									
Year	Code	Description	Amount	Code	Description	Number	Amount						Comm Int				
									APPRAISED VALUE SUMMARY								
Total														Appraised Bldg. Value (Card)		21,125,600	
									Appraised Xf (B) Value (Bldg)		0						
									Appraised Ob (B) Value (Bldg)		248,200						
									Appraised Land Value (Bldg)		5,211,600						
									Special Land Value		0						
									Total Appraised Parcel Value		26,585,400						
									Valuation Method		C						
									Total Appraised Parcel Value		26,585,400						
BUILDING PERMIT RECORD								VISIT / CHANGE HISTORY									
Permit Id	Issue Date	Type	Description	Amount	Insp Date	% Comp	Date Comp	Comments	Date	Id	Type	Is	Cd	Purpose/Result			
LAND LINE VALUATION SECTION																	
B	Use Code	Description	Zone	Land Type	Land Units	Unit Price	I. Factor	Site Index	Cond.	Nbhd.	Nbhd Adj	Notes	Location Adjustment	Adj Unit Pric	Land Value		
Total Card Land Units						Parcel Total Land Area:					153	Total Land Value			5,211,600		

CONSTRUCTION DETAIL						CONSTRUCTION DETAIL (CONTINUED)					
Element	Cd	Description				Element	Cd	Description			
Style:	58	SCHOOL									
Model	94	COMMERCIAL									
Grade	B	GOOD									
Stories	2.00	2 STORY									
Occupancy	1.00					MIXED USE					
Exterior Wall 1	7	BRICK				Code	Description			Percentage	
Exterior Wall 2											
Roof Structure	4	FLAT									
Roof Cover	4	TAR+GRAVEL									
Interior Wall 1	7	ABOVE AVG				COST / MARKET VALUATION					
Interior Wall 2	1	DRYWALL				RCN					
Interior Floor 1	14	ASPHL TILE									
Interior Floor 2	4	CARPET									
Heating Fuel	1	OIL									
Heating Type	3	FORCED H/W									
AC Percent	0										
FBM Sqft											
Bldg Use	934	EDU IMPR									
Total Rooms	0										
Bedrooms	0										
Full Baths	0										
Half Baths	39										
Extra Fixtures	276										
#Heat Sys	10										
Frame	4	FIREPF STL									
Bath Style	A	AVERAGE									
Foundation	1	CONCRETE									
Partitions	E	EXTENSIVE									
Wall Height	10.00										
FBM Quality											
Overhead Door											
Kitchens	1										
OB - OUTBUILDING & YARD ITEMS(L) / XF - BUILDING EXTRA FEATURES(B)											
Code	Description	L/B	Units	Unit Price	Yr Blt	Cond. Cd	% Good	Grade	Grade Adj	Appr. Value	
83	SIGN	L	19	28.75	1995	AV	55	A	1.00	300	
17	CABIN	L	192	46.00	1999	GD	70	A	1.00	6,200	
85	PAVING	L	100,00	1.61	1960	AV	55	A	1.00	88,600	
83	SIGN	L	16	28.75	1968	AV	55	A	1.00	300	
84	SIGN-ILU	L	87	40.25	1999	GD	70	G	1.25	3,100	
BUILDING SUB-AREA SUMMARY SECTION											
Code	Description	Living Area	Floor Area	Eff Area	Unit Cost	Undeprec Value					
Ttl Gross Liv / Lease Area						154					

THE BAR REALTY COMPANY, INC., a corporation duly established under the laws of the Commonwealth of Massachusetts, having its usual place of business at East Longmeadow, Hampden County, Massachusetts, for consideration paid, grants to GERALD E. SPEAR, married, of Springfield, Hampden County, Massachusetts, with WARRANTY COVENANTS, the land in East Longmeadow, Hampden County Massachusetts, bounded and described as follows:

BEGINNING at a point in the Southerly line of Maple Street at the northwesterly corner of Lot #4 (four) as shown on a Plan of Lots recorded in Hampden County Registry of Deeds in Book 48 of Plans, Page 102, and running thence along the Westerly line of said Lot #4 (four) (heretofore conveyed to Bar Realty Company, Inc. by deed dated June 5, 1957 and recorded in Hampden County Registry of Deeds in Book 2556, Page 43) S 13° 56' 50" E, One Hundred Fifty (150) feet to the southwesterly corner of said Lot #4 (four); thence along the southerly line of Lots #4 (four) and #3 (three) on said Plan NORTH 76° 03' 10" EAST, Two Hundred Seven and 25/100 (207.25) feet to the southeasterly corner of said Lot #3 (three); thence along the easterly line of said Lot #3 (three) NORTH 13° 56' 50" WEST, One Hundred Twenty-five (125) feet; thence continuing along said Lot #3 (three) on a curve to the left of twenty-five (25) feet radius an arc distance of thirty-nine and 27/100 (39.27) feet to the southerly line of Maple Street; thence along said Maple Street, NORTH 76° 03' 10" EAST, One Hundred Twenty (120) feet; thence along Lot #2 (two) on said Plan on a curve to the left of twenty-five (25) feet radius an arc distance of thirty-nine and 27/100 (39.27) feet; thence continuing along said Lot #2 (two) SOUTH 13° 56' 50" EAST, One Hundred Twenty-five (125) feet to the southwest corner of said Lot #2 (two); thence continuing along the southerly line of said Lot #2 (two) and said Lot #1 (one) on said Plan, NORTH 76° 03' 10" EAST, One Hundred Seventy-nine and 70/100 (179.70) feet to land now or formerly of Robert B. Bates; thence along said land now or formerly of said Robert B. Bates SOUTH 06° 13' 30" WEST, Eight Hundred Seventy-seven and 22/100 (877.22) feet; thence along said land now or formerly of said Bates, land now or formerly of John S. Bosworth and land now or formerly of William Quinn, SOUTH 83° 12' 10" EAST, Seven Hundred Ninety-one and 10/100 (791.10) feet; thence continuing along said land now or formerly of said Quinn SOUTH 43° 10' 50" EAST, Forty-seven and 22/100 (47.22) feet to land of the New York, New Haven and Hartford Railroad Company; thence along said Railroad Company's land SOUTH 31° 27' WEST, Seven Hundred Eighty-five and 60/100 (785.60) feet, to land now or formerly of Davis and Ericson; thence along said land of Davis and Ericson NORTH 61° 34' 50" WEST, Nine Hundred Five and 48/100 (905.48) feet to the center line of a brook; thence continuing along said Davis and Ericson land along the center line of said brook about Seven Hundred Fifty (750) feet to land now or formerly of John R. Hogan; thence along land now or formerly of John R. Hogan NORTH 62° 24' 20" WEST, Seven Hundred Eleven and 64/100 (711.64) feet; thence continuing along land of said Hogan NORTH 53° 49' 50" WEST, Four Hundred Thirty-nine and 51/100 (439.51) feet to land conveyed by the Normar Corporation to Leo M. Speight et ux. by deed dated October 31, 1956 and recorded in Hampden County Registry of Deeds in Book 2518, Page 253; thence along said Speights' land NORTH 36° 10' 10" EAST, Two Hundred (200) feet; thence continuing along said Speights' land SOUTH 53° 49' 50" EAST, Forty and 87/100 (40.87) feet; thence continuing along said Speights' land NORTH 20° 09' 20" EAST, Five Hundred Forty-eight and 97/100 (548.97) feet; thence continuing along said Speights' land NORTH 04° 50' 30" EAST, Fifty (50) feet; thence continuing along said Speights' land NORTH 85° 09' 30" WEST, Eighty-one and 93/100 (81.93) feet; thence continuing along said Sepights' land NORTH 04° 50' 30" EAST, One Hundred Fifty (150) feet to a point in the southerly line of Lot #18 (eighteen) on plan recorded in Book 53, Page 69; thence along the southerly line of Lots #18 (eighteen), #17 (seventeen), #16 (sixteen), and #15 (fifteen) on said last mentioned Plan, SOUTH 85° 09' 30" EAST, Three Hundred (300) feet; thence along land conveyed to Robert Barnes et ux, by deed dated October 29, 1954 and recorded in said Registry in Book 2346, Page 539, SOUTH 04° 50' 30" WEST, One Hundred Forty (140) feet; thence continuing along said Barnes' land SOUTH 85° 09' 30" EAST, Two Hundred feet; thence continuing along said Barnes' land NORTH 04° 50' 30" EAST, One Hundred forty-two and 11/100 (142.11) feet; thence continuing along said Barnes' land SOUTH 86° 44' 10" EAST, Thirty-five and 12/100 (35.12) feet; thence continuing along said Barnes' land NORTH 00° 16' 40" EAST, One Hundred Fifty (150) feet to a point in the southerly line of Maple Street; thence along said Maple Street SOUTH 89° 43' 20" EAST, One Hundred Twenty-two and 54/100 (122.54) feet; thence continuing along said Maple Street NORTH 83° 02' EAST, Eighty-five and 49/100 (85.49) feet to a stone bound at the northwesterly corner of Lot #10 (ten) on said first mentioned plan; thence continuing along said Maple Street NORTH 76° 03' 10" EAST, One Hundred (100) feet to the northwesterly corner of Lot #9 (nine) on said first mentioned plan; thence along said Lot #9 (nine) SOUTH 13° 56' 50" EAST, One Hundred Fifty (150) feet to the southwesterly corner thereof; thence along the southerly line of Lots #9 (nine), #8 (eight), #7 (seven) and #6 (six), NORTH 76° 03' 10" EAST, Four Hundred (400) feet to the southwesterly corner of Lot #5 (five) on said first mentioned plan; thence along the westerly line of said Lot #5 (five) NORTH 13° 56' 50" WEST, One Hundred Fifty (150) feet to a point in the southerly line of Maple Street distant One Hundred (100) feet SOUTH 76° 03' 10" WEST from the point of beginning; thence along Maple Street NORTH 76° 03' 10" EAST, One Hundred (100) feet to the point of beginning, containing about 63.1 acres.

SUBJECT TO a first Mortgage in the original sum of Forty-Four Thousand Five Hundred (\$44,500.00) Dollars given by the Grantor herein to the Normar Corporation dated December 13, 1957 and recorded in Book 2585, Page 127 which the Grantee herein agrees and assumes to pay.

BEING THE SAME premises conveyed to the Grantor by deed of The Normar Corporation dated December 3, 1957 and recorded in the Hampden County Registry of Deeds on December 18, 1957 in Book 2585, Page 123.

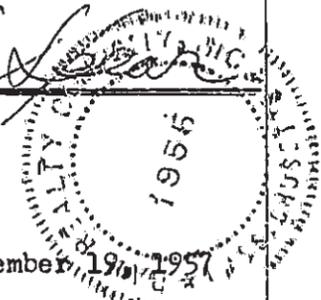
IN WITNESS WHEREOF, the said BAR REALTY COMPANY, INC. has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name and behalf by Gerald E. Spear its President hereto duly authorized, this 19th day of December in the year one thousand nine hundred and fifty-seven.

Signed and sealed in the presence of:

BAR REALTY COMPANY, INC.

William J. Foley

BY: Gerald E. Spear
Its President



COMMONWEALTH OF MASSACHUSETTS

HAMPDEN, SS.

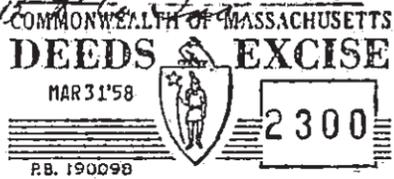
December 19, 1957

Then personally appeared the above named Gerald E. Spear and acknowledged the foregoing instrument to be the free act and deed of the BAR REALTY COMPANY, INC., before me,

William J. Foley
William J. Foley - Notary Public

My commission expires: March 3, 1962.

HAMPDEN



I, JANE B. KERVICK, Clerk of Bar Realty Company, Inc., a Massachusetts corporation, hereby certify that at a special meeting of the stockholders of said corporation held at Room #310, 31 Elm Street, Springfield, Massachusetts on December 3, 1956, of which meeting notice was duly given and all the stockholders being present, and at a meeting of the directors of said corporation immediately following said meeting of the stockholders, said meeting of directors being duly called and held and all the directors being present, the following vote was unanimously adopted by both stockholders and directors:

VOTED: That Gerald E. Spear, Treasurer of the Corporation, be and he hereby is authorized in the name and on behalf of the corporation, and upon such terms as he, in his sole discretion, may determine, to borrow money on behalf of the corporation and to make, sign and deliver promissory notes of the corporation, to sell, convey, mortgage, lease and otherwise deal with any and all real estate now owned or hereafter acquired by the corporation; to enter into contracts for the sale of the whole or any part of such real estate, to enter into contracts for the purpose of developing such real estate; to assign, transfer, discharge or execute partial releases of any mortgages now or hereafter held by said Corporation, and, if necessary or proper, to make entry thereunder for the purpose of foreclosing the same and to foreclose the same by sale, to execute proper deeds and affidavits of foreclosure; to endore, assign, transfer of release the interest of said corporation in any policies of insurance; and to sign, seal with the corporate seal, acknowledge and deliver all instruments authorized by this vote, and that this vote shall remain in full force and effect as to all persons relying thereon until an instrument modifying or revoking the same shall be recorded in the Registry of Deeds where this vote is

recorded. That he has been the duly elected Treasurer of said corporation since December 3, 1956.

BOOK 2600 PAGE 53

A true copy
Attest:

Jane B. Kerwick
Clerk

RECEIVED
'MAR 31 1958
AT 3:10 PM AND
REG'D FROM THE ORIGINAL

6708

NO DOCUMENTARY REVENUE STAMPS NECESSARY

KNOW ALL MEN BY THESE PRESENTS, that we, ANNIE PATTERSON and INA PATTERSON, both being unmarried, and both being

of LUDLOW, HAMPDEN County, Massachusetts,
~~being unmarried~~, for consideration paid, grant to NORMAN P. SUNTER and CATHERINE P. SUNTER, husband and wife as tenants by the entirety and not as tenants in common, both of said Ludlow, with warranty covenants

the land in said Ludlow, with the buildings thereon, bounded and described as follows:

[Description and encumbrances, if any]

Beginning at an iron bar in the southerly side line of Howard Street, said iron bar being distant Westerly seventy-three and 7/10 (73.7) feet from a stone bound at the intersection of the southerly side line of Howard Street and the westerly side line of Whitney Street; thence SOUTHERLY, seventy-four and 9/10 (74.9) feet to an iron bar at land now or formerly of one Hitchcock; thence turning an internal angle of 89° 56' and running WESTERLY along land of the aforesaid Hitchcock eighty-two and 72/100 (82.72) feet to an iron bar at land now or formerly of one Glassman; thence turning an internal angle of 90° 04' and running NORTHERLY along land of the aforesaid Glassman, seventy-four and 8/10 (74.8) feet to an iron bar in the southerly side line of Howard Street; thence turning an angle of 90° and running EASTERLY along the aforesaid street line, eighty-two and 7/10 (82.7) feet to the point of beginning; the last described line forming an angle of 90° with the line first described.

Containing 6,190 square feet of land.

Being the same premises conveyed to us by deed from Robert Amory, et al, Trustees of the Ludlow Manufacturing Associates by deed dated December 17, 1935 and recorded with Hampden County Registry of Deeds in Book 1615, Page 78, and this conveyance is made subject to the reservation as to sewer or drain contained in said deed.

Witness our hands and seals this twenty-ninth day of March 19 58

Signed and sealed in presence of

Annie Patterson

Peter D. Wilson

Ina Patterson

by both

The Commonwealth of Massachusetts

Hampden

ss.

March 29,

1958

Then personally appeared the above named ANNIE PATTERSON and INA PATTERSON,

and acknowledged the foregoing instrument to be their free act and deed, before me

Peter D. Wilson
PETER D. WILSON Notary Public

My Commission expires

February 19, 1960

RECEIVED
MAR 31 1958
AT 3:10 PM AND
REG'D FROM THE ORIGINAL

6436

TOWN OF EAST LONGMEADOW
MASSACHUSETTS
OFFICE OF THE SELECTMEN

AN ORDER OF TAKING OF LAND FOR SCHOOL PURPOSES

At a special meeting of the Board of Selectmen of the Town of East Longmeadow held on the twenty-eighth day of March, 1958, we the undersigned Selectmen of said Town, by virtue of the authority of Chapter 79 of the General Laws of the Commonwealth, and in the exercise of every other power and authority in us, having complied with all the preliminary requirements prescribed by law, and in accordance with a vote of the inhabitants of the Town passed at the Special Town Meeting held on March 28, 1958, and having adjudged the land necessary for school purposes, have taken and by these presents do take, for and in behalf of the Town of East Longmeadow, a municipal corporation, the following land for school purposes:

Certain land situated in East Longmeadow, Hampden County, Massachusetts, bounded and described as follows:

Beginning at a point on the southerly side of Maple Street marked by a stone bound at the northeasterly corner of Lot No. 3 as shown on a Plan of Lots recorded in Hampden County Registry of Deeds in Book 48 of Plans, Page 102, and running thence along said Maple Street, N 76° 03' 10" E, one hundred twenty (120) feet;
thence along Lot No. 2 on said Plan on a curve to the left of twenty-five (25) feet radius an arc distance of thirty-nine and 27/100 (39.27) feet;
thence continuing along said Lot No. 2, S 13° 56' 50" E, one hundred twenty-five (125) feet to the southwest corner of said Lot No. 2;
thence continuing along the southerly line of said Lot No. 2 and Lot No. 1 on said Plan, N 76° 03' 10" E, one hundred seventy-nine and 70/100 (179.70) feet to land now or formerly of Robert B. Bates;
thence along said land now or formerly of said Robert B. Bates S 06° 13' 30" W, eight hundred seventy-seven and 22/100 (877.22) feet;
thence along said land now or formerly of said Bates, land now or formerly of John S. Bosworth and land now or formerly of William Quinn, S 83° 12' 10" E, seven hundred ninety-one and 10/100 (791.10) feet;
thence continuing along said land now or formerly of said Quinn S 43° 10' 50" E, forty-seven and 22/100 (47.22) feet, to land of the New York, New Haven and Hartford Railroad Company;
thence along said Railroad Company's land S 31° 27' W, seven hundred eighty-five and 60/100 (785.60) feet to land now or formerly of Davis and Ericson;
thence along said land of Davis and Ericson N 61° 34' 50" W, nine hundred five and 48/100 (905.48) feet to the center line of a brook;
thence continuing along said Davis and Ericson land along the center line of said brook about seven hundred fifty (750) feet to land now or formerly of John R. Hogan;
thence along land now or formerly of John R. Hogan N 62° 24' 20" W, seven hundred eleven and 64/100 (711.64) feet;
thence continuing along land of said Hogan N 53° 49' 50" W, four hundred thirty-nine and 51/100 (439.51) feet to land conveyed by the Normar Corporation to Leo M. Speight et ux, by deed dated October 31, 1956 and recorded in Hampden County Registry of Deeds in Book 2518, Page 253;
thence along said Speights' land N 36° 10' 10" E, two hundred

4.B.1 ARCHITECTURAL SUMMARY

East Longmeadow High School



Location: 180 Maple Street, East Longmeadow

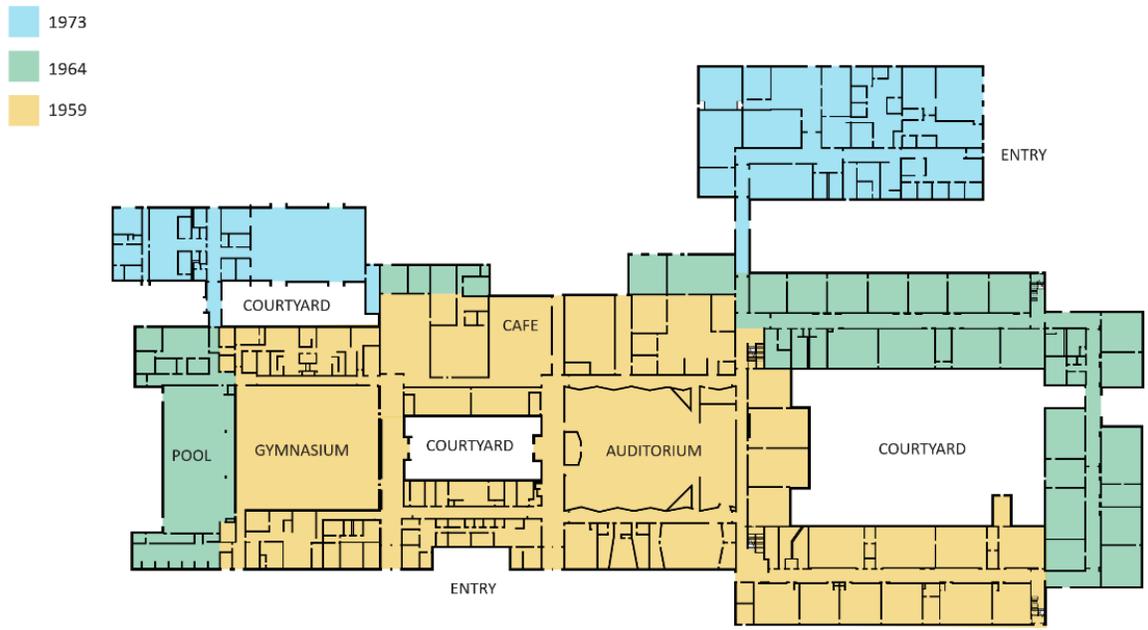
Original Building: 1959
 Additions: 1963, 1973
 Gross Square Footage: 186,890 gsf
 Floors: 2
 (plus subgrade pool pump room)

Construction Type: IIB
 Non-Sprinklered

Occupancy Type: E – Educational (primary)
 A – Assembly (secondary)

History:

The school was constructed in three eras. The original construction occurred in 1959 and included the auditorium, cafeteria, gymnasium and the north bar of classrooms. In 1964, a 4-lane pool, support spaces and two additional classroom wings were added, including a one-story science wing. In 1973 two additional volumes were built and connected to the main building. These spaces include the current small gym and weight room and a wing originally designed to support vocational studios that has since been converted to support the District Offices, East Longmeadow Cable Access Television(ELCAT), and several classrooms. Other than spot alterations to accommodate program changes, the building has not undergone a major renovation. It was built in an era of construction in which there was no building code and most aspects of the building structure and building systems can be assumed to not meet current code requirements.

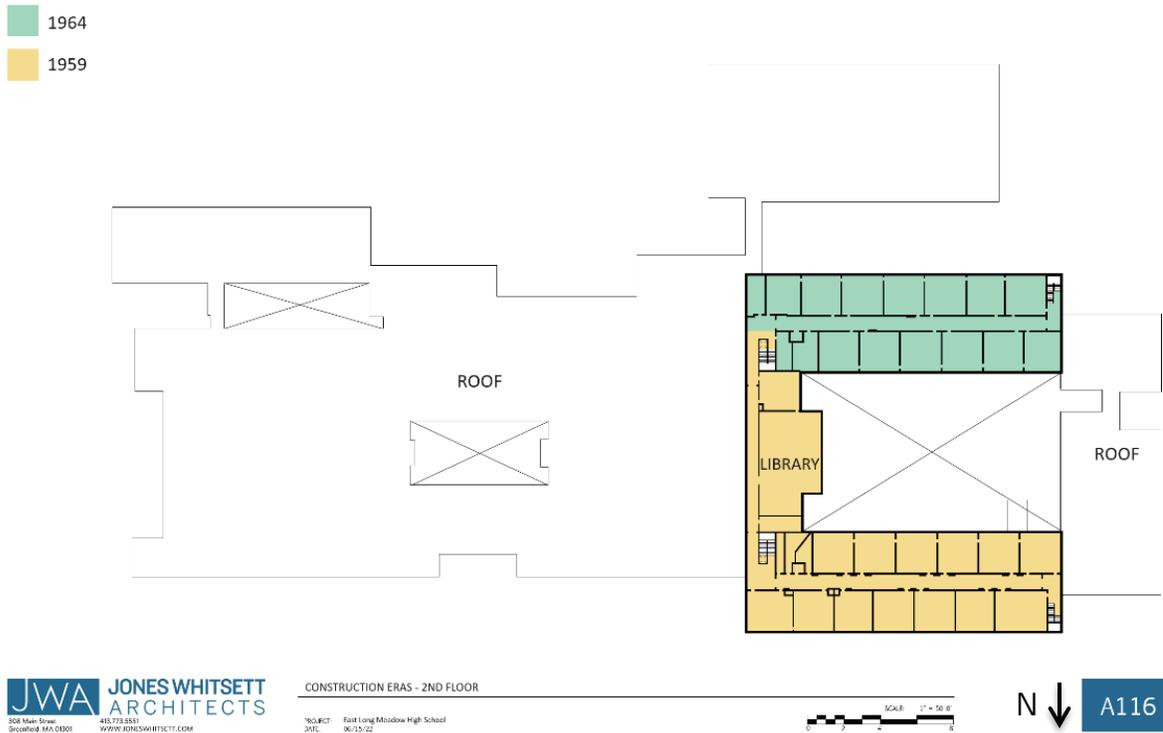


CONSTRUCTION ERAS - 1ST FLOOR

PROJECT: East Longmeadow High School
DATE: 06/15/22



A114



Floors: Concrete slab on grade construction at all first-floor locations. Second floor and floor framing appears to be reinforced concrete slab on thin gauge steel decking supported by open web steel joists. Drawings indicate interior wall of footing contains 2 inches of rigid insulation and no insulation or vapor barrier below slab in 1959 and 1963 section. Drawings indicate 2" insulation below slab and at perimeter of 1973 construction.

Roof: The roofs are primarily white membrane roofs in poor condition and beyond useful life. The school has a reported history of roof leaks. Insulation is inadequate to meet current requirements. Most roof areas are low slope with no parapet. All membrane roofs are not flashed up against adjacent walls sufficiently.



View of cafeteria roof showing membrane, original skylights, vents and lightning protection. Discoloration from frequent ponding.



Classroom wing showing low slope, fascia and minimal roof drains.



Flashing at wall beneath required height. Debris pooled by wind and water.



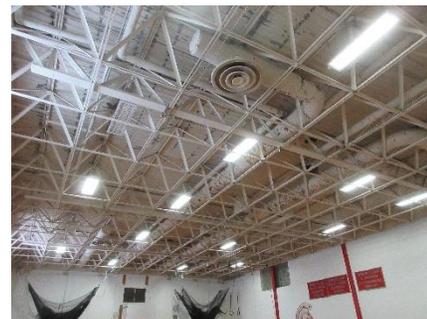
View of north first floor roof (admin) towards entry canopy

Structure:

The structure is primarily made up of steel columns, beams, and open-web steel joists. See structural narrative for more information.



Structure above corridor, typical of 1959 and 1963 sections



Open web 2 way structure in 1973 sections

Exterior Walls:

Exterior walls are comprised of brick veneer with CMU backup with no apparent insulation. Some cavity insulation is documented by Smith and Wessel at the wood door surrounds. Upper areas of walls above brick are

8" block with painted asbestos panels as cladding at the top 4 feet. Total R-Value of the typical exterior wall assembly is approximately R-2.2. Generally, the brick veneer is in good condition with some minor localized areas of cracking and spalling. The asbestos panels are in very poor condition and should be fully replaced. The EIFS panels over the window systems are in poor condition and should be fully replaced.



East elevation pool addition. Infilled panelized cement board cladding disintegrating above masonry. Window areas infilled with EIFS.



North elevation (Entry). All window systems infilled from original size with EIFS. Canopy metal in need of repainting.



Typical interior courtyard showing revised windows with EIFS coverings



Exterior cladding at 1973 addition to rear of school. Upper locations are ACM containing sheet product.

Windows:

All window replacements date from the early 1980s. During an early 1980s energy upgrade, the window systems were removed and the opening filled with an EIFS (stucco) insulation system to improve energy performance. Smaller ribbon windows were installed. The EIFS is not in good shape. A significant quantity of skylights are also in poor shape and prone to leakage.



Classroom windows from exterior



Classrooms from interior

Exterior Doors:

Most doors appear to be original metal and wood doors with no thermal breaks. All of these doors should be replaced.



Utility door at Locker Room



Typical doors at entry points.

Interior Walls:

Wall types include painted CMU, structural glazed block, painted plaster, painted gypsum board and ceramic tile. Walls appear to be in good condition with some cosmetic repair needed. Some areas of damage and minor cracks at CMU walls are evident.



Durable glazed tile in classroom wings



Painted block in PE wing wings

Floors:

Flooring of the building is predominately 12x12 VCT in fair to poor condition. VCT flooring in classrooms and hallways show signs of deterioration. Abatement quantities are referenced in the Smith and Wessel Report.

PE Wing:

Ceilings are primarily hung ceiling grids. Fixtures are dated in classrooms. Fluorescents remain in use. Some corridor locations have been updated to newer LED but are surface mount, utility and not salvageable.



Ceiling in classroom wing.



Painted plaster ceiling in auditorium.



New ceiling in classroom wing in select areas where lighting has been replaced / upgraded.

Casework:

Built-in casework throughout the building is in worn condition, and at the end of its useful life. Labs are undersized. Labs lack safety equipment. Art spaces are former vocational spaces, with limited daylight and dated fixtures, finishes and equipment. Engineering, graphic design and culinary and early childhood education spaces lack required teaching equipment, storage, casework and furniture to support vocation needs.

The media center and an adjoining classroom were updated within the last ten years. This classroom has served as a demonstration room showing lighter, flexible furnishings. The ELCAT area of the school was renovated within the last five years and is in excellent shape. It comprises less than 2,000sf of the school.



Typical science lab casework



Art classroom



Engineering Classroom



Typical Classroom

PE Wing:

The existing PE wing is extremely worn. ELHS has significant requirements for PE participation and a broad range of athletic options. Additionally, the school contains a 4-lane pool that is accessible to the community after school hours. The complex of locker rooms, staff offices, storage rooms, weight rooms, and equipment rooms is poorly organized and in disrepair in part because of heavy use. The hazmat study notes significant quantities of hazmat material in the flooring and exterior cladding of this wing. The existing pool is in fair shape. The exposed steel open web joist supporting the roof should be more carefully inspected for rust given the high moisture content of the room and age of the pool. The mechanical space below shows persistent moisture leakage from piping systems.



Existing pool



Pool mechanical room

District Offices/ELCAT: The vocational technology annex added in the 1970s was converted in later years to serve as the District's main offices. More recently a storage area of this complex in the southeast corner of the school was converted to a video studio and offices to support the local cable access station, ELCAT. Students are not separated from these offices. Students regularly intern and produce podcasts/videos and sportscasts through ELCAT. A conference room in the District offices is heavily used by town committees and the school committee, such that it is not made use of by the high school faculty. The room, less than 500sf, is too small to allow for an audience or to support the entire faculty. Its adjacency near ELCAT is advantageous for the broadcast of community meetings.



District office area



Heavily used meeting room



Podcast area in ELCAT offices



Exterior/public entry to District Offices from Norden Street access

4.B.2

KITCHEN SUMMARY

East Longmeadow High School

Food Service Existing Conditions

On Monday, July 25, 2022, design team members visited East Longmeadow High School to evaluate the food service facility. During the visit, Ms. Lori Pahl, Food Service Director, discussed the existing operation and equipment. Given the existing conditions outlined herein, the food service management and staff should be commended for their efforts in providing nutritional food service and good housekeeping to the greatest extent possible. Briefly, the following are the design team's findings:

Receiving Area: All food service deliveries and trash pass through this area. Deliveries must travel through the cafeteria, the kitchen, and serving areas to storage. The vestibule area is congested because it is currently shared with table and chair storage.

Janitorial Area: This room is congested and undersized. In the laundry area, floors have degraded and exposed piping and electrical conduit is unsanitary as it is difficult to access for cleaning and maintenance.



Limited space for organized housekeeping storage.



Exposed piping and conduit collect dust and are unsanitary.

Dry Storage Area: Storage areas are minimal and food storage is shared with pots, pans and office equipment. Metal fencing with a gate separates the storage area. Metal fencing tends to accumulate dust and is unsanitary.



Dry food storage room with metal fencing, which is unsanitary.

**Refrigerator/
Freezer Storage:** The walk-in refrigerator and freezer compartments are undersized for the current program and at times commodities or goods must be declined. By design, the freezer compartment is accessed through the refrigerated compartment, which extremely limits storage shelving. Some interior ceiling panels appear to be deteriorating.



Interior ceiling panels are degrading.

Food Service Office: This area is congested and extremely undersized for a staff of two (2), computer stations and multiples of required work items including file cabinets. This space is not A.D.A. accessible.



Office is congested and not A.D.A. compliant.

Toilet & Lockers: Single unisex toilet is not A.D.A. accessible. Lighting is poor in the locker room.



Toilet facility is not A.D.A. compliant.



Poor lighting.

Preparation Areas: Understructures, utensil racks, pot & pan racks, etc. are constructed of inappropriate materials (galvanized steel or painted steel), which have degraded, are peeling and should be considered unsanitary. Wood-top tables are unsanitary because it is not possible to properly sanitize them. Arrangement of equipment is poor and inefficient as it relates to storage and cooking. There is an insufficient quantity of code-mandated hand sinks. There is only one (1) dedicated hand washing sink in the entire facility. There are no A.D.A. accessible work stations.



Understructures and utensil rack are constructed of inappropriate materials, degraded, and peeling. Unsanitary condition.



Floor surfaces are extremely slippery when wet or even damp. Rubber mats are used throughout to prevent falls. Unsanitary and hazardous to foot traffic.



Flooring has degraded and exposed interceptor is unsanitary.



The only hand washing station in the entire facility.

Cooking Equipment: Most equipment appears to be in fair condition; however, equipment is limited. There is no water capture in the floor for the steamer, kettle, and skillet. This situation poses a hazard to foot traffic. There is an inadequate number of floor drains to enhance housekeeping. Exposed piping, between and behind the cooking equipment, is unsanitary and difficult to access for cleaning and maintenance. Exhaust hood appears to be in fair condition.



Equipment is limited for the current program.



No water capture at wet cooking.

Serving Lines: Equipment and arrangement of the serving line is antiquated and congested. Serving lines are undersized for the total student population. The serving lines do not have code mandated refrigerated cold food serving stations. There is limited food holding cabinets to ensure temperature maintenance. There are not food protectors. There are no hand sinks at the lines. There are no A.D.A. accessible work stations.



Serving lines lack food protectors. Equipment and arrangement are antiquated and congested.



Back serving lines are congested and lack adequate temperature maintenance equipment.

Ware Washing:

Equipment appears to be in fair condition; however, some understructures are constructed of inappropriate materials (galvanized steel or painted steel), which have degraded, peeling and should be considered unsanitary. Floor surfaces are extremely slippery when wet or even damp. Rubber mats are used throughout the food facility to prevent falls. This is unsanitary and hazardous to foot traffic. There are an inadequate number of floor drains to enhance housekeeping. There is a considerable amount of scale/lime buildup up at the dishwasher due to water quality. An unsanitary grease trap is located on the floor under the soiled dish-table as well as exposed piping that render this area extremely difficult to maintain as a sanitary environment. There is no code required hand sink in this area.



Floor surfaces are extremely slippery when wet or even damp. Rubber mats are used throughout to prevent falls. Unsanitary and hazardous to foot traffic.



Some understructures are constructed of inappropriate materials. Degraded and peeling. Unsanitary condition.



Considerable scale/lime buildup and flooring has degraded. Exposed piping. Unsanitary.



Flooring has degraded, and exposed interceptor is unsanitary.

Faculty Dining: This room is underutilized and is partly shared with storage overflow.

General Conditions: Exposed piping, electric conduit and duct work render some areas almost impossible to maintain as a sanitary environment. In some areas, wall surfaces, ceilings, and flooring have deteriorated and are in unsanitary condition. Fans are used to circulate air in warm weather. These fans tend to spread dust throughout the entire area. There are an inadequate number of floor drains to enhance housekeeping. Perforated ceiling panels are located in some areas. These panels are non-washable and therefore not code compliant. Some portions have degraded. Some light fixtures lack protective covers and therefore are not code compliant. Food service staff toilet is not handicap compliant.



In some areas, flooring is degraded.



Exposed piping and degraded ceiling tiles are unsanitary.

Conclusion:

The deficiencies outlined herein may or may not be specific Code issues (most are by any interpretation), however; all are unacceptable in terms of sanitation, food safety and generally acceptable food service practice.

By design/arrangement, the facility is operationally inefficient and labor intensive. The extremely congested and under-equipped arrangement of the kitchen poses a risk of operational safety to food service staff. It is our opinion that there is a considerable risk of cross-contamination, which jeopardizes the health, safety and well-being of students, staff and faculty.

All deficiencies should be reviewed and addressed now, if possible. Those that cannot be immediately addressed should be included in any future planning. Final determinations are subject to local authorities having jurisdiction.

Briefly, the following recommendations are based on current food service standards, sanitation, life safety and code compliance;

Recommendations:

The issues of physical hazards and the potential of cross-contamination of foods must be addressed. While some of the observations outlined herein may not be specific Code violations (by interpretation), all are below the standards of recognized food service practice as set-forth by HACCP (Hazard Analysis Critical Control Points) and NSF (National Sanitation Foundation).

Food Service Design Criteria

On Monday, July 25, 2022, we visited the above referenced to evaluate the food service facility. During our visit, we met with Ms. Lori Pahl, Food Service Director, who was extremely helpful and informative. The purpose of this meeting was to establish the schematic design criteria for the East Longmeadow High School. The following was recorded during our meeting, should exception be taken to any item herein please contact us at your earliest.

1. The total student population is anticipated to be 800, grades 9-12. The food facility will be self-sustaining without dependence upon outside commissary operations.
2. Participation in the food service program in all types of food service for a new food facility is estimated at 85%. This equates to 680 meals/transactions per day to be served in three (3) lunch waves of approximately 266 each.
3. Currently, the existing high school serves as a satellite kitchen that prepares cooks and delivers approximately 450 meals per day to two (2) district elementary schools and plans to continue to satellite these meals in the future.

Please note: Additional space is necessary for dry food, paper storage, refrigerator/freezer storage and staging area to support the satellite food service program.

4. Breakfast is being considered for future operations. This will include a grab & go style breakfast to all students and served in the Servery.
5. A can wash & janitor's closet is required, which will include space for detergent storage.
6. A residential clothes washer and dryer are required for food service use only. This area will include a landing table.
7. Handicap accessible toilet(s) and lockers should be provided for eleven (11) staff. Locker size shall be determined by the Architect.
8. The food service office shall be sized to accommodate a staff of two (2) and shall include computer workstations along with multiples of required work items, including file cabinets. This office will be centrally located to the kitchen and cafeteria. An office or alcove will be provided for the food service manager and will include a workstation and file cabinets. This station will be located in close proximity to receiving. Office(s) will be glazed to the greatest degree possible.
9. Dry food, paper storage and refrigerator/freezer storage will be calculated at seven (7) days inventory based on meal production of approximately 1,280 per day.
10. Currently, bread is delivered when the facility is not in operation. A secure depository space at the loading dock has been requested.
11. Walk-in refrigerators/freezers will require back-up generator power. All will be fitted with audio/visual temperature alarm, refrigeration control alarm. Temperature alarms are to be

wired to “Building Monitoring System”. Doors will be fitted with glass vision panels. Each compartment is to be fitted with audible “panic” alarms. Commodities freezer storage is required.

12. Preparation equipment will consist of the following;
 - Double sink preparation tables shall be provided for the proper separation and preparation of food products. Each sink will be equipped with one (1) standard faucet and one (1) pre-rinse faucet.
 - Stainless steel preparation & work tables, mobile
 - Manual can openers
 - Multiple hand sinks
 - Eye wash assemblies
 - Food slicer
 - Food processor
 - Immersion mixer
 - Microwave oven
 - 30-quart mixing machine
 - under-counter low boy refrigerators with drawer
13. Cooking and support equipment will consist of the following;
 - Exhaust hood with lights, demand control ventilation system and ansul system
 - Two (2) double deck convection ovens
 - One (1) double stacked combi-ovens or convection steamer ovens
 - One (1) 40-gallon tilting kettle or skillet
 - One (1) 2-burner range with oven
 - No deep fat fryers required
 - Stainless steel cook’s table with sinks
 - Under-counter low boy refrigerators with drawer
 - Overhead utensil rack
 - 4-tier pot and pan shelving sections
 - Hot holding cabinets, mobile
14. Basic pot and pan washing will be accomplished through the use of a three (3) compartment sink assembly with drainboards. Each compartment shall measure 27” x 27” x 16” deep. A waste disposer shall be provided at the soiled drainboard. Final sanitizing will be rendered by Owner’s chemicals. A pre-rinse spray assembly will be required at one (1) sink compartment.
15. Eye wash assemblies shall be located within proximity to the cooking and ware washing for emergency first aid.
16. A Ware Washing Room will be provided, fitted with a ware wash machine with raised hood and support tables. This will ensure the proper sanitation of all permanent trays and cutlery as

well as kitchen wares.

Students will participate in soiled return by bussing/recycling wares in the dish room. The Architect shall provide bins for composting, recycling and trash.

Ware washing equipment will consist of the following;

- Conveyor multi-tank dish machine with high temperature booster heater
- Stainless steel soiled with pre-rinse sink support table with waste disposer located before the pre-rinse sink
- Stainless steel soiled with pre-rinse sink and clean dish support tables
- Waste disposer
- Hose reel assembly
- Hand sink with eye wash assembly
- Multiple service ware storage carts, mobile
- 4-tier pot and pan drying shelving sections

17. The Servery will be designed as a “free-flow” and open landscape arrangement. To the greatest extent possible, stations will be designed to allow patron self-service.

A preliminary list of the serving & support equipment will be comprised of the following:

- Pizza oven station
- Multi-temperature drop-in food serving counters with food protectors
- Hot or cold flat shelf serving counters with food protectors
- All food protectors to be adjustable (self or full service)
- Flat counter serving counters for dry display
- Island merchandising unit
- Refrigerated merchandisers
- Milk cabinets
- Ice cream cabinets
- P.O.S./Cashier counters, mobile
- Condiment stations, mobile with cutlery dispensers
- Hot & cold roll-in/thru holding cabinets
- Back-counter support tables with work sink
- Hand sinks

18. Paper condiment stations are to be located in the cafeteria dining room and they shall be mobile.

19. An ice machine is not required.

20. Hand sinks with foot pedals are preferred.

Architect Notes:

1. The Architect is requested to review requirements for faculty dining and vending machines.
2. The Architect to review with Administration and Food Service all wall, floor and ceiling finishes, signage, lighting and windows.
3. Selected doors in the food service areas to be 42" wide.
4. The A/E team is requested to review the issue of water quality. Incorporating an "industrial" type water filtering system will prolong the life of equipment by protecting against scale, corrosion and hard water. This type of system may be more cost-effective than providing stand-alone filters throughout the food facility. In addition, a main water filtering system can provide a single point of access for servicing and maintenance. Some critical items of food service equipment that are recommended for water filtration are steamers, kettles, ice machines, water dispensers, fountain beverage dispensers, coffee brewers and ware washing machinery.

If implemented, this system must be selected and specified by the A/E team.

4.B.3 Evaluation of Code and MAAB Compliance

Introduction

East Longmeadow High School is an existing public educational facility for the town of East Longmeadow, MA. The building includes classrooms, a gymnasium, pool, cafeteria, auditorium, library, and administrative offices. This code summary is based on a site visit to review existing conditions conducted on July 19, 2022.

According to IEBC MA Amended Section 104.2.2.1, any building regulated by 780 CMR undergoing a renovation must be investigated and evaluated in accordance with the code in a written report form. The purpose of this report is to serve as the existing building evaluation report for its major fire protection, life safety, and accessibility features.

Following is a list of applicable codes:

Code Type	Applicable Code (Model Code Basis)
Building	780 CMR: Massachusetts State Building Code, 9 th Edition ^A <ul style="list-style-type: none"> Amended 2015 International Building Code (IBC) Amended 2015 International Existing Building Code (IEBC)
Fire Prevention	527 CMR: Massachusetts Fire Prevention Regulations M.G.L. Chapter 148 Section 26G – Sprinkler Protection
Accessibility	521 CMR: Massachusetts Architectural Access Board Regulations 2010 ADA Standards
Electrical	527 CMR 12.00: Massachusetts Electrical Code ^B <ul style="list-style-type: none"> Amended 2020 National Electrical Code
Elevators	524 CMR: Massachusetts Elevator Code <ul style="list-style-type: none"> Amended ASME A17.1-2013/CSA B44-13

Mechanical	2015 International Mechanical Code (IMC) ^A
Plumbing	248 CMR: Massachusetts Plumbing Code
Energy Conservation	2018 International Energy Conservation Code (IECC) ^A

- a) The 10th Edition of 780 CMR is expected to take effect in 2023, although a specific date has yet to be announced. The 10th Edition will be based on the 2021 International Codes.
- b) The 2023 National Electrical Code is expected to be adopted in January 2023.

International Existing Building Code

The International Existing Building Code with Massachusetts amendments allows for 3 separate compliance methods, the Prescriptive Method (in general, altered areas must comply with the code for new construction), Work Area Method (level of compliance is based on the classification of work), and Performance Compliance Method (numerical method that allows tradeoffs for deficiencies). This report is based on the Work Area Method.

1. Work Area and Classification of Work:

The requirements in the IEBC area based on the classification of the work as Alteration Level 1, 2 or 3. This is based on the extent of the project “work area”, which is defined as the area within which architectural reconfiguration will occur (IEBC Chapter 2). Areas where the only work will be new finishes, furnishings, or installation of new building systems are not classified as part of the work area. The levels of work are defined as follows:

Level 1 Alteration	No architectural reconfiguration, no work area.
Level 2 Alteration	Aggregate size of work areas (architectural reconfigured area) does not exceed 50% of the gross building area.
Level 3 Alteration	Aggregate size of all work areas (architectural reconfigured area) exceeds 50% of the gross building area.

For the purposes of this report, it has been assumed that if the building is renovated it will undergo a Level 2 or Level 3 Alteration, in which case IEBC Chapters 7, 8, and 9 apply.

2. Occupancy Classification:

- Use Group E (Educational)
- Use Group A-1 (Theater)
- Use Group A-3 (Gymnasium/Pool without spectator seating)
- Use Group A-4 (Gymnasium/Pool with spectator seating)

Assembly spaces that are used for non-school events must be classified as a Use Group A occupancy rather than Use Group E (IBC 303.1.3).

3. Construction Type:

Type IIB (non-combustible, unprotected)

4. Fire Resistance Ratings:

The following table summarizes the required fire resistance ratings for new building elements of Type IIB construction, based on IBC Table 601 and other applicable code provisions:

Building Element	Fire Resistance Rating (Hrs)
Primary Structural Frame	0
Exterior Bearing Walls including columns along the exterior wall	0
Exterior Non-Bearing Walls	0
Interior Bearing Walls	0
Floor Construction	0
Roof Construction	0

Building Element (Within the Work Area)		Fire Resistance Rating (Hrs)	Opening Protectives (Hrs)
Existing shafts < 4 stories (IEBC 803.2.1)	Non-Sprinklered	½	½
	Fully Sprinklered	0	0
New shafts < 4 stories (IBC 713.4)		1	¾
New Corridor walls (IBC Table 1020.1)	Non-Sprinklered	1	1/3
	Fully Sprinklered	0	0

5. Vertical Openings:

All existing vertical openings in the work area connecting two or more floors must be enclosed with 1 hour rated construction and approved opening protectives unless the openings meet one of the exceptions in IEBC 803.2.1. New vertical openings are required to comply with IBC

712 & 713. If the building is fully sprinklered existing shafts connecting no more than three stories do not require a fire-resistance rating (IEBC 803.2.1 Exception 6).

All of the existing shafts (i.e. exit stairs and elevator) appear to be generally enclosed in fire-rated construction, including fire-rated doors (many are held open with magnetic hold-open devices). Assuming any future renovation will require full sprinkler protection, none of the existing two-story egress stairs would require any enclosure.

6. Interior Finishes:

The existing interior finish of walls and ceilings in the work area and in all exits and corridors serving the work area must comply with the code requirements for new construction (IEBC 803.4). All newly installed wall and ceiling finishes, and interior trim materials must also comply with IBC Table 803.11 (IEBC 702.1, 702.2, 702.3). The requirements are summarized below:

Walls & Ceilings (IBC Table 803.11) – Non-Sprinklered

Use Group:	E	A
Exit Enclosures	Class A	Class A
Exit Access Corridors	Class B	Class A
Rooms & Enclosed Spaces	Class C	Class B

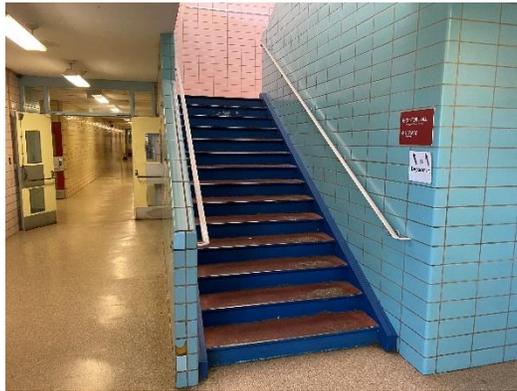
Walls & Ceilings (IBC Table 803.11) – Fully Sprinklered

Use Group:	E	A
Exit Enclosures	Class B	Class B
Exit Access Corridors	Class C	Class B
Rooms & Enclosed Spaces	Class C	Class C

The existing finishes generally consisted of painted drywall or masonry that complies with the above requirements.

7. Means of Egress:

Means of egress conforming to the requirements of the building code under which the building was constructed shall be considered compliant means of egress if, in the opinion of the code official, they do not constitute a distinct hazard to life (IEBC 805.2). The existing stairs are fairly modern exit stairs, no hazardous conditions were noted during the site visit. If the cost of renovation triggers full compliance with 521 CMR, new handrails would be required throughout however (see accessibility section of report).



Typical Existing Stairs

Level 3 Alteration Egress Requirements

If the building undergoes a Level 3 Alteration, the means of egress throughout the work areas are required to comply with Chapters 7 and 8 of the existing building code; the remaining portions of the building must maintain or improve their current level of egress (IEBC 704.1 & 805.1). These chapters include the following provisions:

- 7.1 All rooms or spaces in the work area with a travel distance of over 75 feet or with an occupant load greater than 50 must be provided with two egress doors (IEBC 805.4.1.1).
All of the larger assembly spaces with greater than 50 occupants are provided with at least two egress doors as required.
- 7.2 In the work area and in the egress, path serving the work area egress doors must swing in the direction of egress travel where serving an occupant load of 50 or more people (IEBC 805.4.2). Where the work area exceeds 50% of the floor the entire floor must comply with this section (IEBC 805.4.2.1).
All the existing primary egress doors appear to swing in the direction of egress as required.
- 7.3 In any work area, and in the egress path from the work area to an exit discharge, any doors that serve 100 occupants or more in Group A areas must be equipped with panic hardware (IEBC 805.4.4). Where the work area exceeds 50% of the floor this requirement applies throughout the floor (IEBC 805.4.4.1).
The existing primary egress doors with latches appeared to include panic hardware as required.
- 7.4 In the work area the maximum existing dead-end corridor length must be < 35 feet or 2.5 times the least width of space. Less than 50 ft in other than Group A areas where equipped throughout with automatic fire alarm system installed in accordance with IBC. Less than 70 feet in other than Group A areas where equipped throughout with an automatic sprinkler system installed in accordance with the IBC (IEBC 805.6).

The building does not contain dead-end corridors beyond 35 feet.

- 7.5 Illuminated exit signs and means-of-egress lighting must be provided in all work areas in accordance with the code for new construction (780 CMR 102.6.4). If the work area exceeds 50% of the floor area, this requirement applies to the entire floor (IEBC 805.7.2 & 805.8.2)

The building includes a illuminated exit signs and emergency lighting throughout. Although a detailed review was not conducted, no significant deficiencies were noted.

8. Required Fire Protection Systems:

The following fire protection systems are required in the areas noted:

- Automatic Sprinkler System - required throughout the work area if the work area serves occupant load greater than 30 and exceeds 50% of floor area (IEBC 804.2.2). In addition, sprinkler protection throughout the building can be required under Massachusetts General Law (M.G.L. Chapter 148 Section 26G) as discussed below. The existing building is currently not provided with sprinkler protection.
- Fire Alarm System – for a Level 2 Alteration existing previously approved fire alarm systems are permitted to remain (IEBC 804.4.1 Exception 1). A Level 3 Alteration requires a fire alarm system that complies with the code requirements for new construction (IEBC 904.2). The building includes an existing relatively modern voice/alarm signaling system that appears capable of being maintained and modified as necessary to accommodate any future alterations. Although not required by the IBC for a new Use Group E occupancy, smoke detection is also required throughout the building.



Existing Voice Alarm System



Fire extinguishers (527 CMR 1 Section 13.6 & IBC 906.1). Fire extinguishers must be located throughout the building so that the maximum travel distance to an extinguisher is less than 75 feet.

The building includes existing fire extinguishers; however a detailed survey of existing extinguisher locations was not conducted.

M.G.L. Chapter 148 Section 26G – Sprinkler Protection

Since the building is over 7,500 gross square feet in area, it is subject to the requirements of M.G.L. Chapter 148 Section 26G. These amendments require the entire building to be provided with sprinkler protection if the renovations are considered “major”.

Renovations are considered major depending on the type of work and the scope / cost of work. The following are general guidelines established by the board to be used to determine if the scope or the cost of the planned alterations are major:

- 1. Major alterations are reasonably considered major in scope when such work over a 5-year period affects 33% or more of the total gross square footage of the building (measured from the outside walls, regardless of firewalls).*
- 2. Major alterations are reasonably considered major in scope or expenditure, when the total cost of the work over a 5-year period, excluding costs relating to sprinkler installation, is equal to or greater than 33% of the assessed value of the building, as of the date of permit application. Based on the Town of East Longmeadow’s on-line assessing records, the assessed value of the existing building is \$21,125,600 and therefore full sprinkler protection may be required by the fire official for a renovation cost exceeding \$6,971,448.*

In addition, regardless of the scope of the renovation, if an addition is constructed the general law requires full sprinkler protection throughout the building.

9. Energy Code Provisions for Existing Buildings:

New work is subject to the International Energy Conservation Code (IECC) or ANSI/ASHRAE/IESNA 90.1 with Massachusetts Amendments (Massachusetts Energy Code). Both Level 2 and Level 3 alterations to existing buildings are permitted without requiring the entire building to comply with the energy requirements of the International Energy Conservation Code (IECC). The alterations (new elements and addition) must conform to the energy requirements of the IECC as they relate to new construction only (IEBC 811.1).

10. Ventilation Requirements:

All reconfigured spaces must provide mechanical or natural ventilation in accordance with the International Mechanical Code, except that existing ventilation systems are permitted to remain provided they achieve not less than 5cfm of outdoor air per person and not less than 15 cfm of ventilation air per person (IEBC Section 809).

11. Structural Provisions for Existing Buildings:

Structural alterations and/or additions to buildings must be evaluated by a registered structural engineer to determine compliance with the IEBC based on the proposed scope of work.

12. Accessibility for Persons with Disabilities:

Massachusetts Architectural Access Board Regulations

Alterations to the building must comply with the requirements of the Massachusetts Architectural Access Board Regulations (521 CMR). For existing building alterations the requirements of 521 CMR are based on the cost of the proposed work:

A. If the cost of the proposed work is less than \$100,000, only the new work must comply.

B. If the cost of the proposed work is greater than \$100,000 then all new work must comply and the existing building must include an accessible public entrance, toilet room, telephone and drinking fountain (if public phones and drinking fountains are provided) (521 CMR Section 3.3.1(b)). Exempt work when calculating the cost of work includes roof repair or replacement, window repair or replacement, and repointing and masonry repair work unless the exempt work exceeds \$500,000.

The building has existing accessible entrances and drinking fountains. The toilet room across from the Auditorium and the toilet rooms near the main office are semi-accessible but not fully compliant (i.e. lacking grab bars and less than 42" clear floor space in front of the toilet). The toilet rooms are large enough that it appears they could be altered to be made compliance, however. No existing pay telephones were noted during the site visit, and therefore an accessible pay telephone is not required.



Main Entrance



Drinking Fountain



Toilet Room

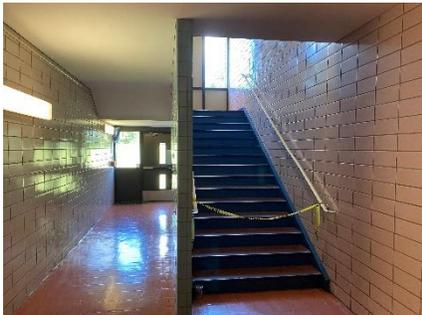
- C. If the cost of the proposed work is greater than 30% of the full and fair cash value of the existing building, the entire building is required to comply with 521 CMR (521 CMR Section 3.3.2). There is no exempt work, i.e. the entire project costs apply to determining the 30% criteria.

The cost of all work performed on a building in any 36-month period must be added together in determining the applicability of 521 CMR (521 CMR Section 3.5). The full and fair cash value of the existing building is determined by using the 100% equalized assessed value of the building on record with the city assessor's office. Based on the Town of Spencer's on-line assessing records, the assessed value of the existing building is \$21,125,600. The Massachusetts Department of Revenue's website lists an assessment ratio of 1.01 for Spencer, resulting in a 100% equalized assessed value of \$20,916,435. Therefore, full compliance with 521 CMR is required if the cost of the renovations or an addition exceeds \$6,274,930.

If the renovation triggers the 30% threshold, all portions of the building open to the general public (students, visitors, etc) must be upgraded to comply in full with the current requirements of 521 CMR. Any employee-only areas such as staff lounges, staff bathrooms, and staff work areas are not required to comply with 521 CMR, as long as student and public access is not permitted. The building is fairly accessible, but would require upgrades to meet full compliance with the provisions of 521 CMR, including the following building features (note that this is not a comprehensive list):

1. Toilet Rooms – none of the existing toilet rooms appear to be fully compliant, although some are semi-accessible. Each toilet room location would require accessible fixtures or a unisex accessible toilet room in each toilet room location (521 CMR 30.1).



<p>2. Classroom Sinks & Counters – none of the art or science classrooms with sinks and built-in counters include accessible elements, at least one of each must be accessible (521 CMR 12.4).</p>	
<p>3. Double Doors – the building include many double doors in corridors, at stair enclosures, at the gym entries, etc. where each leaf provides a clear width of less than 32 inches (521 CMR 26.4).</p>	
<p>4. Elevator – the existing elevator car is 61" wide and 53" deep (wall-to-door), which exceeds the minimum 48" x 48" required by 521 CMR Section 28.7 and includes a 32" wide door opening which complies with 521 CMR Section 28.6.1. The controls are not compliant however (i.e. no Braille or raised characters (521 CMR 28.8.4).</p>	
<p>5. Stair Handrails – none of the stair handrails are compliant, typically flat in profile rather than round and do not include the required extensions at the top and bottom of the stairs (521 CMR 27.4).</p>	

Americans with Disabilities Act Guidelines

The ADA Guidelines are not enforced by the Commonwealth of Massachusetts, they can only be enforced through a civil lawsuit or complaint filed with the U.S. Department of Justice. Compliance with the ADA Guidelines is triggered by renovations to the existing building. All renovations to the building must be made to ensure that, to the maximum extent feasible, the altered portions of the facility are readily accessible to and usable by individuals with disabilities (28 CFR Part 36 Section 36.402(a)).

Alterations made to provide an accessible path of travel to altered areas and accessible facilities (i.e. provide accessible toilet facilities) are not required if the cost exceeds 20% of the total cost of the alteration (28 CFR Part 36 Section 36.403(f)). However, if the cost to meet these accessibility requirements does exceed 20%, alterations are still required to the maximum extent that the area can be made accessible without exceeding the 20% criteria (28 CFR Part 36 Section 36.403(g)). The ADA also contains less stringent dimensional requirements for some building elements in an existing building where it is infeasible to meet the requirements for new construction (ADA Section 4.1.6).

Compliance with the requirements of 521 CMR will typically satisfy the ADA for existing buildings.

4.B.4 STRUCTURAL EVALUATION

East Longmeadow High School

Introduction

On June 17, 2022, RSE visited the existing building to make observations of the structure. No exploratory probes were performed at this time, hence all field observations were made on exposed structure. Existing drawings that were made available to us include: 1959 structural & architectural original building drawings and 1973 structural and architectural drawings of major additions.

Background & Existing Construction

Both the 1959 & 1973 existing structural drawings are fairly complete, providing a clear picture of the building structure. The original 1959 building is supported by shallow foundations – concrete spread footings at columns and continuous concrete footings at perimeter walls. Ground floors consist of 4" concrete slab on grade. Elevated floors are structured with slab on metal deck, typically 3" of concrete of 1.5" deck. Slab on deck is supported by open web steel joists, which are supported by steel beams & steel columns. In the classroom wings, joists are oriented perpendicular to the corridors with the bearing lines of steel beams running along corridors and the perimeter. Roofs are structured with metal roof deck and open web joists (Photo 1) also supported by steel beams and steel columns.

The gymnasium roof is structured with six clear spanning steel bents with steel beam purlins spanning to them (Photo 2). The auditorium roof is supported by long span, 8ft deep steel trusses. The trusses support open web steel joists and metal roof deck.

The 1973 addition involved three distinct single story wings – a new gymnasium wing, new industrial arts wing, and a new science wing. The science wing matched the classroom wing structure of the 1959 building with shallow foundations and roof framing comprised of open web steel joists, steel beams, steel columns. The roof has 2.5” concrete slab on form-deck with the intent of being able to use the roof as a future floor. The industrial arts and new gym wings are structured similarly to each other. They use shallow foundations and the roofs are comprised of triangle shaped steel space trusses, beam trusses and metal roof deck (Photo 3). The pool building roof is structured with open web steel joists and metal roof deck (Photo 4)

The lateral system is not explicitly identified in either set of drawings. Presumably the ample presence of CMU walls both at the exterior and interior provides the lateral resistance. Interior CMU walls go directly to floor undersides providing a positive connection.



Photo 1 – Typical Roof Structure
Open Web Steel Joists & Metal Roof Deck



Photo 2 – Gymnasium Roof Structure
Steel bents with steel purlin beams

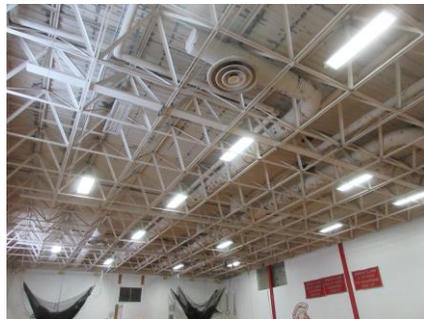


Photo 3 – Industrial Arts & New Gym
Space Truss Roof Structure



Photo 4 – Pool Roof Structure
Open Web Steel Joists & Metal Roof Deck

Structural Conditions Assessment

The structure observed in the field matches the drawings well. The condition of the visible structure appears to be good. No visible distress in finishes is noticeable. The exterior brick masonry walls appear to be in good condition. The following specific conditions while not directly structural are worth noting.

-While the general condition of exterior brick is good, one location was noted with a significant vertical crack (Photo 5)

-The exterior side of some façade stucco shows delamination in multiple locations (Photo 6)



Photo 5 – Vertical crack in brick façade



Photo 6 - Façade stucco deterioration

In association with



4.B.5 ELECTRICAL SYSTEMS EVALUATION

Electrical Systems

The original school building's 120/208V 3 phase 4 wire electrical service was upgraded in 1973 to a 277/480V 3 phase 4 wire service via an outdoor pad-mounted transformer. Transformer is owned and maintained by the utility company, National Grid. The service is metered at the transformer's secondary side, and meter is installed indoor, in one of two electric rooms, herein referenced as "newer" (year 1973) and "older" (year 1959/1964).

The transformer's secondary feeder enters the school building underground. It terminates in the "newer" electric room at 1,200 Amp 277/480V 3 phase 4 wire Main Switchboard, year 1973, manufactured by Eaton. The Main Switchboard appears to be in good operational condition; however, it reached or exceeded its useful life expectancy (usually about 30-40 years).

The Main Switchboard back-feeds via an indoor 500 kVA transformer the "old" (year 1959/1964) 800 Amp 120/208V 3 phase 4 wire Distribution Panel "DP-1" located in "older" electric room. Panel "DP-1" is manufactured by General Electric. It appears to be in poor condition, its installation does not meet the current Electrical Code requirements, and it significantly exceeds its useful life expectancy.



Outdoor Utility Transformer



1,200 Amp 277/480V Main Switchboard



800 Amp 120/208V Distribution Panel "DP-1"

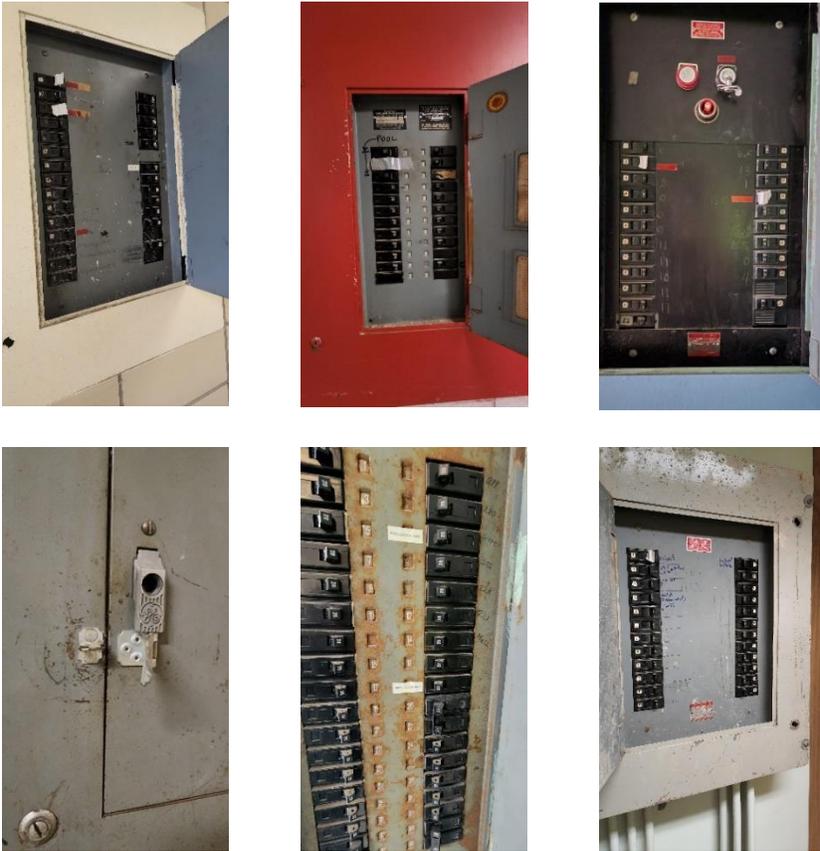
Power Distribution System

Both, the "newer" Main Switchboard and the "old" Panel "DP-1" distribute power to various downstream "branch" panelboards throughout the school building. There are currently 36 branch panelboards, predominantly installed flush mounted in corridor walls.

Approximately 30 panelboards are “older”, fed from the “old” panel “DP-1”. The majority of these “older” panels are in poor condition, have no locks on their covers, missing cover screws, and all significantly exceed their useful life expectancy (usually about 30-40 years). The condition of associated power feeders is unknown, but the feeders exceeded their useful life expectancy too (usually about 40-50 years).

A few branch panels that are fed from the “newer” Main Switchboard, appear in good operational condition, however, they also approach their useful life limits, with their associated feeders as well.

It was observed that a few panelboards were recently replaced, such as kitchen and Gym panels – those are in good condition, but their power feeders are most likely still “old” and should be replaced.



Examples of “older” panels in poor condition.



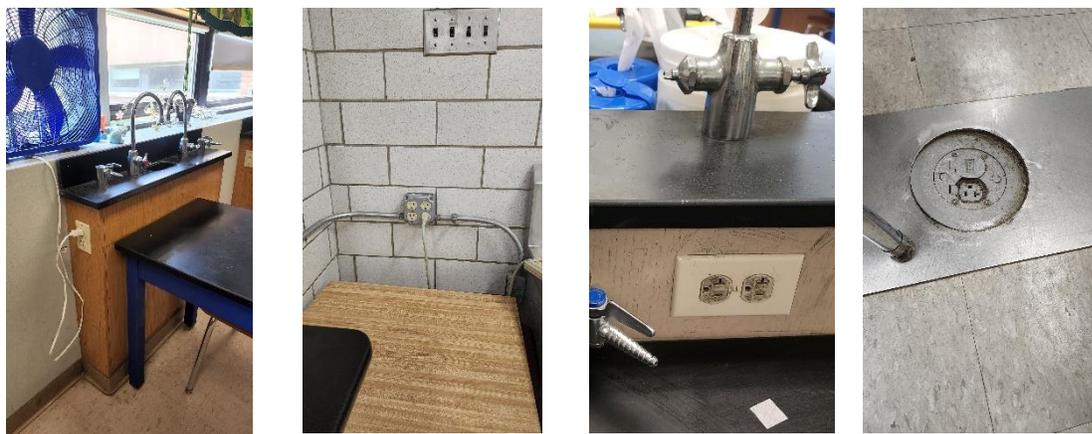
Examples of “older” panels in poor condition.

Emergency power source

There is no emergency generator on site. Except for emergency battery units, utilized for egress lights and exit signs, all other building loads (heating system, sewage systems, FACP, security, communication systems, kitchen refrigeration equipment, etc.) are powered by “normal” power.

Branch wiring and devices

Branch wiring from “old” branch panels to “original” location of receptacles and lights (irrespective of whether the receptacles and lights have been replaced later) is beyond its useful life expectancy (usually about 40-50 years). Assumed that the majority of “old” receptacles would require replacement (if not replaced recently). A few receptacles in kitchen were observed as non-GFCI type (Code violation). A few receptacles in science classrooms near sinks were observed as non-GFCI type (Code violation). In general, the number of receptacles in classrooms and similar educational spaces found inadequate (or in inconvenient locations). A few floor boxes with receptacles were observed missing covers.



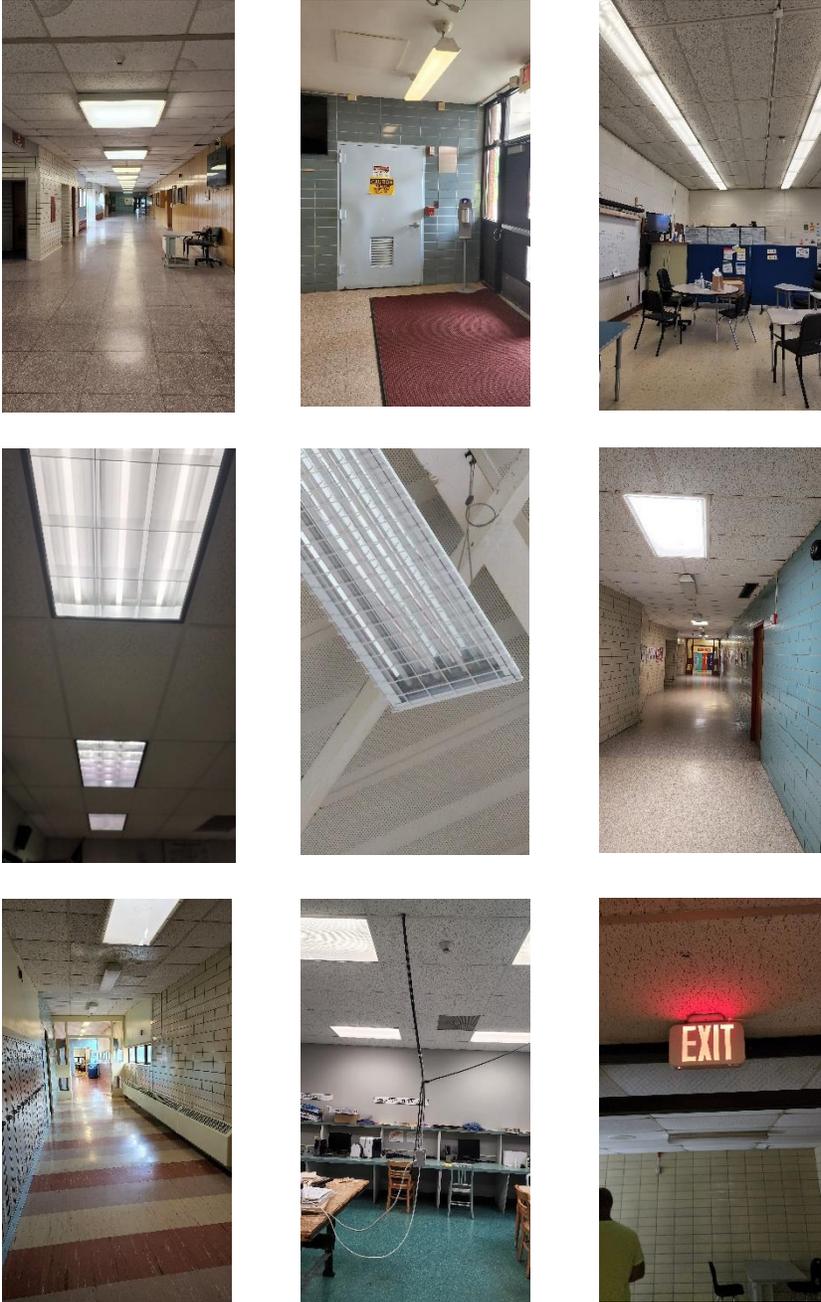
Examples of non-GFCI type receptacles and floor boxes with missing covers

Lighting

Lighting throughout the school consists of various types of lights, including wraparound pendants, recessed and surface-mounted linear lights, recessed and surface-mounted 2’x4’ lensed lights, surface-mounted 4’x4’ lensed lights, recessed 2’x4’ lights with open blade lights, etc. Except for gymnasiums, the lighting fixtures throughout the school are equipped with T8 lamps. Both gymnasiums have 2’x4’ high bay fixtures with T5HO lamps. All lights except for gymnasiums appear dated. Exit signs are internally lit, as required by Building Code, but not of an LED source.

Interior lighting is functional and provides adequate illumination in most areas, however, lighting quality does not meet present day standards.

Based on observations, the current overall Lighting Power Density (LPD, watts/sf) appears to exceed the current Energy Code watts/sf allowance established for schools. Code upgrading may require replacement of the majority of fluorescent lights with more energy-efficient dimmable LED versions.



Examples of various lighting fixture types

The school building does not have a “common” automatic lighting control system that would comply with the current Energy Code requirements, and could be monitored by Facilities DDC system (BMS).

All school interior spaces (corridors, classrooms, offices, etc.) and exterior building-mounted lights are switched “on/off” manually, and only a limited number of classrooms and offices are provided with local occupancy sensors in addition to manual switches. In order to meet the current Energy Code mandatory requirement, occupancy sensors shall be present in all classrooms, science rooms, conference room, copy/print rooms, lunch/break rooms, restrooms, private offices, locker rooms, storage rooms, etc., for

automatic lighting shut off during unoccupied time. Lights in remaining building areas and rooms that are not specifically listed in Energy Code for mandatory occupancy sensors shall be controlled as well – either by occupancy sensors too or by a “common” time-scheduled networked lighting control system (a few exemptions apply).

No daylight sensors (photocells) were observed in building interior spaces, which is also a mandatory requirement of the current Energy Code for “daylight” zones - lights shall switch “off” lights in individual daylight zones automatically upon detecting an adequate natural light level. Additionally, in classrooms, offices, labs, library, etc., the daylight-responsive controls shall dim lights continuously from full light output to 15 percent – all listed above areas would need to be equipped with new dimmable lights accordingly.

Another Energy Code mandatory requirement was not observed – providing manual “light-reduction controls” for uniformed illumination pattern by 50 percent. The current school lighting “switching” concept was not designed to accommodate this standard.

Auditorium Lighting

Auditorium “Stage” and “House” lights appear to be in good operational condition, however, not of an energy-efficient LED source, which would not meet the current Energy Code requirements. The “House” lights consist of incandescent type recessed downlights, controlled/dimmed in by0zone basis. The “Stage” lighting is a full “performance” lighting package with front, side and back flood and spot lights, controlled by console and entrance light stations. Seat lights are provided at every third row. The Auditorium Lighting system is dated, but operational.



Examples of Auditorium Lighting



Examples of Auditorium Lighting

Fire Alarm

Existing addressable Fire Alarm system EST-3 is about 20 years old. It appears to be in good operational condition with full smoke detection coverage. The system consists of manual double action pull stations, speaker/strobes and strobe units, area smoke detectors, and radio antenna communicator for transmitting alarm and trouble conditions to Fire Department. A few corridors and larger classrooms looked as if they would benefit from additional smoke detectors and/or speaker/strobes, but otherwise the existing fire alarm system appears to be adequate.



Examples of addressable Fire Alarm system

Lightning Protection System

Aluminum air terminals and aluminum stranded interconnecting conductors are installed on roof perimeter, canopies, extended to roof-mounted equipment and up along chimney. The installation looks a bit dated. Assumption is that it's periodically tested for LPI re-certification.



Examples of Lightning Protection system installations.

Exterior Lighting

Building-mounted lights were observed to be dated and appeared not to be an energy-efficient LED source. As well they seem to be manually switched "on/off", with no programmable schedule, which would not comply with the current Energy Code.



Examples of exterior building-mounted lights

Additional Notes

1. Existing 1,200 Amp 277/480v 3 phase 4 wire electrical service might not be sufficient for the new school building program, size and new building systems, and potential utility service upgrade shall be reviewed/defined in subsequent design phases.
2. There is no Distributed Antenna System (DAS) with Bi-Directional Amplifier (BDA) for Police and Fire Fighter use.
3. Existing parking lot lights are currently powered and metered by National Grid separately from school.
4. Existing football and tennis court lights are currently powered and metered by National Grid separately from school.

Telecommunications Systems

The building interior was recently upgraded to provide 100% coverage with the addition of 85 new wireless access points. The existing horizontal cable infrastructure is a combination of Category 5 and 6, unshielded twisted pair cable. It is recommended that the existing horizontal cable infrastructure be upgraded to a Category 6A solution to enable current and future bandwidth requirements. The internal fiber optic cable backbone was recently upgraded to provide greater bandwidth among the existing telecommunications rooms.

Power upgrades in the Telecommunications equipment spaces will be required to support future network electronic equipment upgrades. The Main Distribution Frame room and another Network Equipment room on the second floor of the 1964 addition are air conditioned to prevent equipment overheating. The remaining five network equipment spaces including rooms and wall mounted cabinets are not secured or air conditioned.

The main office is served by a town-wide IP phone system. There are no telephones in the classrooms. The paging system has been upgraded recently and is in good condition. A new master clock system has been installed and is battery operated. There are no paging horn speakers on the exterior of the building.



Examples of Network Equipment Racks in unsecured, unairconditioned spaces.



Example of improper telecommunications installation.



Upper Left: Example of Network Equipment Cabinet in unsecured, unairconditioned space.

Note mounting height requires a ladder to service equipment.

4.B.6

SECURITY SUMMARY

Systems: Districtwide, East Longmeadow Public Schools utilizes infinias (3xLOGIC) as the security software for access control and Tyco ExacqVision for video management and monitoring.

Head end panels, power supplies and other equipment enclosures are located in dedicated closets, as well as within classroom spaces, including the IT closet adjacent to the cafeteria, the second floor IT offices, the prep & work room between the biology labs and a storage room outside the superintendent area.



Wall rack in storage room next to boys' locker room.



Floor rack in IT closet next to cafeteria.

Cameras: East Longmeadow High School (ELHS) uses Axis cameras, including fixed dome cameras, fisheye cameras and pan-tilt-zoom (PTZ) cameras.

There are two cameras in the parking lot, one fixed dome and one PTZ, as well as building-mounted cameras around the school. Cameras do not provide a complete coverage of the building but are placed at most entry and exit points. Some building-mounted cameras provide general surveillance of the parking lot and bus loop areas. There is one PTZ camera located on a light pole at the football stadium. Inside the school, cameras are surface and recessed ceiling and wall mounted.



Axis ceiling-mounted fixed dome camera.



Axis ceiling-mounted fixed dome camera.



Axis wall-mounted fixed dome camera.



Axis pole-mounted PTZ camera.

Access Control:

ELHS uses standard HID and infinias branded HID card readers. The HID readers the MiniProx, Thinline and ProxPro models. There are doors (typically one double-door) into classroom wings. There are no card readers on any of these doors and there is no ability to lockdown the school in the event of an emergency. Additionally, there are no lockdown buttons in the school to allow for this operation. It is possible that a lockdown could be initiated through the access control system but this could not be determined during the assessment.

There are two entrance vestibules in the school: one located at the admin/main office and one located at the guidance/gym. There is signage on the doors of the gym vestibule directing visitors to the main entrance near the admin area.



HID card reader.



Main entrance doors, with card reader and intercom on the left.



Infinias branded HID card reader.

Intrusion Detection: A Sonitrol intrusion detection system in place at the school. Most exterior doors, through surface-mounted door position switches, as well as a few internal motion sensors, are connected to the system. There are intrusion keypads located in the men's swim locker storage room, ELCAT interior and exterior entrances and outside the teacher resource room.

There are many exterior doors that do not have door position switches including the cafeteria doors, the cafeteria vestibule doors, Alt. P.E. door, courtyard doors and pool doors.

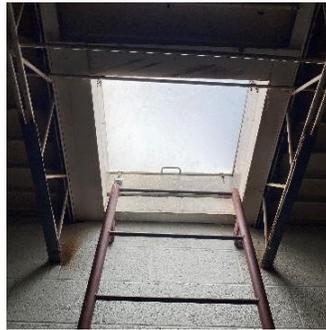
There is a duress button located under one of the secretary desks within the main office that calls to local police.



Honeywell and Sonitrol intrusion keypad.



Door position switch on exterior door in men's swim lockers storage room.



Ladder to roof has padlock but does not have door position switch.

Communications:

An Airphone audio-only intercom, model LEM-1DL, is used at the school main entrance and rear entrance, where the superintendent is located, providing two-way communication with administrative staff. The main entrance audio intercom, model LE, has one button that calls to the master intercom stations within the main office. The rear entrance audio intercom, model LE, has one button that calls to the receptionist within the METCO office. There are two master intercom stations in the main office, located on the secretaries' desks.



Audio intercom at main entrance.



Master intercom at main office desk.

Door Hardware:

Classroom doors are equipped with either classroom style locks or corridor function locks that can be locked or unlocked from the unsecure and secure side. Some classroom doors have a deadbolt but this is not standardized.

The majority of classroom connecting doors have passage set hardware, meaning if one room in a wing can be accessed, the rest of doors along that same wing can be accessed. Some of these connecting doors have a deadbolt keyed from both sides in addition to the passage set hardware.

Vestibules are set up with the following hardware: panic hardware on the outer/exterior set of doors and push/pull hardware on the inner/interior set of doors.

Doors that connect corridors have either panic hardware or push/pull hardware.

Storage rooms and closets have storeroom function locks.

There are a few doors with mechanical mortise locks, including in the Tech. Engineering classroom and Chorus room.

There is one door, the entrance door into the cable television area, that is equipped with a magnetic lock and push to exit button.



Typical classroom style lock door hardware.



Door with magnetic lock.



Exterior door with panic hardware.



Passage set hardware on classroom connecting door.

Other Observations: There is no labeling system for windows and doors to aid first responders on the exterior of the building.

There is chain link fencing around the football field and tennis courts. The football field has two layers of fencing, an outer fence that is approximately 6' in height and an inner fence that is approximately 4' in height.

There is a vault/safe in the admin area and the superintendent area that is used for general file and supplies storage.

There are seven data "closets" in the school. Some of these are dedicated rooms for equipment, while others are a rack located within a

classroom or office. There is also a network switch located at the stadium.

There is a rollup window located in the IT closet next to the cafeteria. It is unclear if this window is used.



Rollup window located in the IT closet next to the cafeteria.

In association with



4.B.7

HVAC, PLUMBING & FIRE PROTECTION SYSTEMS EVALUATION

HVAC Systems

General: The building is primarily heated and ventilated only. Administration, IT and the ELCAT studio have dedicated air conditioning units of varying ages, and multiple window units have been added throughout the building. There are two boiler plants in the building: one serving the original building as well as the 1964 addition and the other serving the 1973 addition. The HVAC systems, distribution and equipment are at or beyond their life expectancy. Many code deficiencies exist throughout the building. Most piping is not visible, and some system conditions noted herein are presumed due to age and the condition of the visible portion of each system.

A Wing

Small Gymnasium & Weight/Training Rooms

The Small Gymnasium is served by a Trane H&V unit in the penthouse which is original to the 1973 building. Duct and piping insulation is missing/damaged in the penthouse, and the exposed supply ductwork, insulation and diffusers in the Small Gym show signs of deterioration and damage.

The Weight/Training Rooms associated with the Small Gymnasium are served by hot water finned tube radiation, cabinet unit heaters and unit ventilators original to the 1973 building. The cabinets and interior components show corrosion and many of the air grilles are damaged. The amount of fresh air being introduced through the unit ventilators may not be in accordance with the current codes.

Temperature controls for the Gym have been upgraded to DDC, and we have been informed that they are part of the town building management system network. We have no information on the system and its performance is unknown.

All equipment serving the Small Gymnasium & Weight/Training Rooms is beyond its useful life and should be replaced.

Pool/Locker Rooms

The pool/locker area is served by two Trane H&V units located in the basement pool filter room, and a third Trane H&V unit provides ventilation to the pool filter room itself. All three units are original to the 1964 building. There is no dehumidification system for the pool.

Each of the pool locker rooms are served by H&V units, along with hot water finned tube radiation, all original to the 1964 building. The finned tube radiation covers show corrosion and many of the air grilles are damaged.

Temperature controls are the original pneumatic systems. Thermostats are antiquated and some appear inoperable. All should be replaced.

All equipment serving the Pool/Locker Rooms is beyond its useful life and should be replaced.

Large Gymnasium & Locker Rooms

The Large Gymnasium is served by two Trane H&V units and associated vent sets located in the penthouse, all of which are original to the 1959 building. Existing ductwork in the Penthouse is damaged in many locations. Return air to the H&V units is via floor registers and trenches under the gymnasium floor. The floor registers are dirty and damaged, and it is presumed the floor trenches also contain debris. All equipment serving the Large Gymnasium is beyond its life expectancy and should be replaced.

The Boys Locker Rooms are served by hot water finned tube radiation with and without enclosures, unit ventilators and two exhaust fans located in the penthouse, all of which are original to the 1959 building. All of this equipment is beyond its life expectancy and should be replaced.

Two Munters heat recovery units were added in the penthouse approximately ten years ago. The units provide additional ventilation to the Boys Locker Room and appear to be in fair condition.

The Girls Locker Rooms are served by hot water finned tube radiation with and without enclosures, and unit ventilators, all of which are original to the 1959 building and should be replaced.

Temperature controls for the Gym have been upgraded to DDC, and we have been informed that they are part of the town building management system network. We have no information on the system and its performance is unknown.

Administration

This area is served by a Trane split system with the air conditioning unit located within the space and an air-cooled condenser on the roof, along with hot water finned tube radiation. All this equipment is beyond its useful life and should be replaced.

Temperature controls are the original pneumatic systems. Thermostats are antiquated and some appear inoperable. All should be replaced.



Damaged diffuser in Small Gym



Damaged ductwork in penthouse serving Large Gym



Bare finned tube element in Boys Locker Room

B Wing

Cafeteria/Kitchen

The cafeteria is served by unit ventilators from the original 1959 building and the 1963 addition. The unit ventilators are in poor condition and many of the air grilles are damaged. The amount of fresh air being introduced to the cafeteria through the unit ventilators may not be in accordance with the current codes as the ventilation dampers are controlled to limit outside air in the colder months. The unit ventilators are beyond their useful life and should be replaced.

The kitchen has a commercial hood however there is no associated makeup air unit. The hood exhaust fan is not NFPA compliant and should be replaced.

Temperature controls are the original pneumatic systems. Thermostats are antiquated and some appear inoperable. All should be replaced.

Administration

This area is served by two Trane air conditioning units located within the space, along with hot water finned tube radiation. The air conditioning units do not have associated condensing units - cooling is provided by domestic water and discharged to drain, which is not in compliance with current code. All this equipment is beyond its useful life and should be replaced.

Temperature controls are the original pneumatic systems. Thermostats are antiquated and some appear inoperable. All should be replaced.

C Wing

Auditorium

The auditorium is heated and ventilated only and is served by a Trane H&V unit located in the penthouse, which is original to the 1959 building. The unit is beyond its useful life and should be replaced.

Temperature controls for the Auditorium have been upgraded to DDC, and we have been informed that they are part of the town building management system network. We have no information on the system, and its performance is unknown.



Auditorium H&V unit

D Wing

Classrooms and Other Teaching and Support Spaces

The classrooms are served by unit ventilators with hot water heating coils. The unit ventilators are original to the building (1959 original building, 1964 addition and 1973 addition). The unit ventilators are in poor condition. The unit ventilator cabinets and interior components show corrosion and many of the air grilles are damaged. The amount of fresh air being introduced to the classrooms through the unit ventilators may not be in accordance with the current codes as the ventilation dampers are controlled to limit outside air in the colder months. All unit ventilators are beyond their useful life and require replacement. Hot water piping and associated valves are antiquated, piping insulation is damaged in many areas, and both require replacement. Temperature controls are the original pneumatic system, may not all be operational, and a number of valves are replaced each heating season to keep the system running – all require replacement.

The Chemistry classroom has a six-section fume hood which is antiquated and not currently in use. There are blast gates in the fume hood exhaust ductwork, the fume hood lacks flow alarms to alert users of unsafe conditions, and the makeup air unit has been abandoned on the roof. The fume hood and associated HVAC equipment are not compliant with current code and should be replaced.

The Prep Rooms adjacent to the Chemistry classroom lack proper ventilation, are exhausted via a series of transfer grilles and an inline exhaust fan mounted below the ceiling and are not compliant with current code.

The perimeter science Classrooms added in the 1973 addition have wall exhaust fans in addition to the unit ventilators. The wall exhaust fan cabinets and interior components show corrosion, are in poor condition similar to the unit ventilators, and should be replaced.

Janitor's Closets are not being exhausted. Current mechanical code dictates that they must be exhausted.

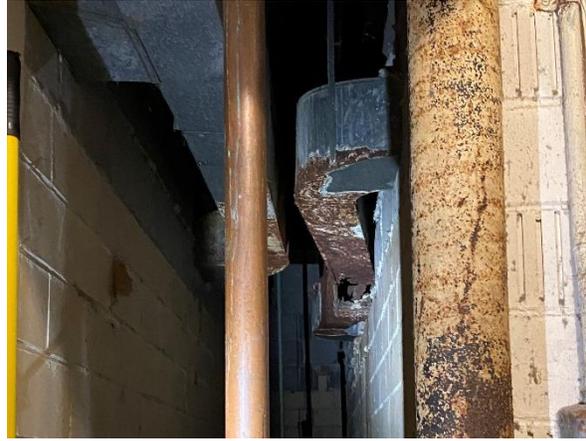
Toilet Rooms are exhausted; however, the make-up air path is not apparent in many cases and where it is, the door louvers are damaged and/or obstructed with dirt and debris. It was noted that the toilet exhaust ducts serving the south side of D Wing are completely rusted through at the first floor.

Corridor heat is provided by occasional unit heaters concealed within the walls, which are difficult to maintain and should be replaced with a system providing more even distribution throughout the corridors.

Temperature controls are the original pneumatic systems. Thermostats are antiquated and some appear inoperable. All require replacement.



Classroom Unit Ventilator



Toilet Room exhaust ducts rusted through



Chemistry classroom fume hood



Abandoned makeup air unit on roof

Industrial Arts Wing

ELCAT

The 1973 Auto Shop was converted into the East Longmeadow Cable Access Television (ELCAT) Studio and Storage in 2012. The ELCAT space is served by two split systems, one serving the Studio and one serving the adjacent Office/Lab areas. The two air handlers with hot water heating and DX cooling are hung in the adjacent Storage Room and the air-cooled condensers are located on the roof above. Although these systems are newer, operation was not confirmed. An existing unit ventilator remains in the Storage Room.

Temperature controls for the ELCAT studio are DDC, and we have been informed that they are part of the town building management system network, but we have no information on the system. The performance of this system is unknown.

Superintendent's Offices

The Superintendent's Office and the Assistant Superintendent's Office are served by wall mounted split systems with one air cooled condenser on the roof and the other on the exterior wall. The remainder

of this office area is served by two ceiling mounted air conditioning units with air cooled condensers outside on grade. Although these systems are newer, we cannot confirm their operation. The skylight was covered with plastic and occupants noted that cold air infiltrates in the winter.

The age and performance of these systems is unknown. No information is available on the temperature controls for this area.

Offices

The Office area is served by a ceiling mounted air conditioning unit with an air-cooled condenser outside on grade. Although this system is newer, its age and performance are unknown.

No information is available on the temperature controls for this area.

Tech. Education Room

The Tech. Education Room is also served by a ceiling mounted air conditioning unit with an air-cooled condenser outside on grade. Although this system is newer, its age and performance are unknown.

No information is available on the temperature controls for this area.

IT Spaces

IT Server Room (C Wing)

The IT Server Room is served by a wall mounted split system with an air-cooled condenser on the roof. The age and performance of this system is unknown.

No information is available on the temperature controls for this area.

IT Offices (D Wing)

The two IT Offices on the second floor are served by wall mounted split systems with air-cooled condensers mounted on the exterior wall. The age and performance of these systems is unknown.

No information is available on the temperature controls for these areas.

IT MDF Room (D Wing)

The MDF Room on the second floor is served by a Trane air conditioning unit located within the space. There is no condensing unit - cooling for this unit is provided by domestic water and discharged to drain, which is not in compliance with current code. The age and performance of these systems is unknown.

No information is available on the temperature controls for these areas. This equipment is beyond its useful life and should be replaced.

Boiler Rooms

The building does not have a consolidated Boiler plant/system. The building has two separate Boiler Rooms. Boiler Room #1 is located in C Wing of the original 1959 building and serves both the 1959 building and the 1963 addition. Boiler Room #2 was added as part of the 1973 addition and serves the three wings added in that addition.

Boiler Room #1

Boiler Room #1 has three 900 MBH Buderus cast iron boilers with dual fuel Power Flame burners that are approximately ten years old. However, the five pairs (1 + spare) of end suction pumps, piping and insulation serving the various wings are original to the building. The pipe insulation is damaged in many areas and requires replacement. The pumps are beyond their useful life and should be replaced.

Each boiler has a dedicated MetalFab chimney up through the roof. The original brick stack is no longer used for boiler exhaust.

Three old Burnham boilers were abandoned in place and remain in the Boiler Room.

Boiler Room makeup air is oversized, and facilities noted that the boilers freeze when the makeup air fan runs, so the fan is not used.

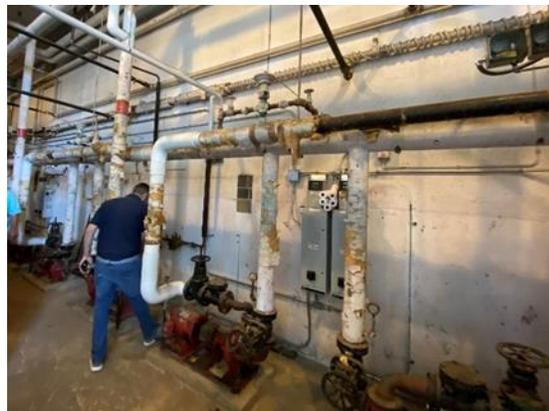
Boiler Room #2

Boiler Room #2 has two 900 MBH Buderus cast iron boilers with dual fuel Power Flame burners that are approximately fourteen years old. However, the three pairs (1 + spare) of end suction pumps, piping and insulation serving the various wings are original to the building. The pipe insulation is damaged in many areas and requires replacement. The pumps are beyond their useful life and should be replaced.

The boilers are connected to the original brick chimney on the exterior of the Boiler Room.

Fuel Oil

All five boilers have run exclusively on gas since installed. Facilities noted that all three original 10,000-gallon underground storage tanks were replaced with double wall tanks. The double wall underground oil tanks and alarms are tested annually but the fuel oil pumps have not been exercised and are presumed inoperable. It is unlikely the fuel oil currently in these tanks is still usable and should be removed.



Original pumps, piping and insulation

Automatic Temperature Controls

Andover electronic controls have been added to equipment in five discreet areas in the building with limited control capabilities: large gym, small gym, auditorium, ELCAT studio and boiler rooms. Boiler room control is limited to boiler on/off and boiler setpoint; all pumps run in 'hand' position. We have been informed that these controls are part of the town building management system network, but we have no information on the system and its performance is unknown.

The remainder of the building has pneumatic temperature controls which are original to the building (1959, 1963 and 1973). Although the pneumatic controls are functioning, lines are beginning to rot, and valves require constant replacement. The systems are beyond their useful life and should be replaced.

Conclusion

The HVAC systems serving the high school are generally functional, but most equipment is 50-60 years old and is beyond its useful life. The result is that many spaces in the school appear to have compromised ventilation and temperature control.

All of the HVAC systems serving the school should be replaced as part of a major renovation/addition project.

**LIMITED INSPECTION REPORT FOR
Asbestos-Containing Building Materials, Lead-Based Paint,
Polychlorinated Biphenyls, Mercury Containing Components
and Miscellaneous Hazardous Materials**

**East Longmeadow High School
180 Maple Street
East Longmeadow, Massachusetts**

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APPENDIX B: Results of Testing for Lead-Based Paint (LBP)

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INTRODUCTION

SMMA retained Smith & Wessel Associates, Inc. (SWA) to conduct a limited inspection feasibility study for asbestos-containing building materials (ACBM), lead-based paint (LBP), polychlorinated biphenyls (PCBs), mercury containing components and miscellaneous hazardous materials at the East Lonmeadow High School located at 180 Maple Street in East Longmeadow, Massachusetts.

SWA conducted the site inspection from June 17th through July 21, 2022 to accommodate the feasibility study. The feasibility study was limited in scope and concentrated on identifying “large ticket items” that, if present, would require significant costs for their handling and disposal as hazardous or special waste materials. In addition, the 3 year AHERA plan inspection information was reviewed and verified. A more comprehensive, intrusive follow-up inspection would be required prior to any renovation and/or demolition of the school.

Asbestos

The purposes of the limited inspection were to evaluate the types, locations, and extent of suspect large ticket ACBM and to provide appropriate recommendations for its abatement and or management as well as determining estimated remediation costs. SWA's inspection addressed both friable (materials that can be easily crumbled, crushed, or pulverized by hand pressure) and non-friable suspect materials present in large quantities.

SWA identified and assumed friable and non-friable ACBM at the site in the form of the following materials:

- Pipe fitting insulation
- Floor tile and mastic adhesive
- Window glazing compound
- Carpet mastic adhesive
- Ceiling glue daubs and associated tiles
- Wall/window/canopy/fume hood panels
- Vapor/moisture barriers
- Fire door insulation
- Wall panel glue
- Chalkboard/whiteboard glue

Lead-Based Paint

The purpose of the limited lead paint inspection was to evaluate the types, locations, and extent of suspect LBP present on large ticket items in the building, to evaluate potential hazards associated with LBP, and to provide appropriate recommendations for its abatement and management.

The United States Department of Housing and Urban Development (HUD) and the Massachusetts Department of Public Health have established a standard for lead-based paint, as tested using an X-ray Fluorescence Analyzer (XRFA), of 1.0 milligram per square centimeter (mg/cm²). Although this standard only applies to housing where children under the age of six reside, it is a useful reference concentration for assessing hazards associated with lead in paint in other settings. Thus, when paint contains greater than 1.0 mg/cm², special care should be taken when conducting activities that impact these paints.

The lead content of paints surveyed at the site ranged from less than 0.1 mg/cm² to 3.8 mg/cm² as measured with the XRFA. If LBP are impacted by demolition in a manner that may generate dust or fumes, compliance with United States Occupational Safety and Health Administration (US OSHA) regulations regarding worker exposure to lead may be necessary. Additionally, United States Environmental Protection Agency (US EPA) and Massachusetts Department of Environmental Protection (MA DEP) regulations relative to waste disposal may apply.

PCBs

SWA's limited investigation for PCBs in light fixture ballasts was visual only. Typically, ballasts installed after 1978 do not contain PCBs and are marked as such. Ballasts that do not have the "No PCBs" wording on the label are assumed to contain PCBs. SWA inspected the labels on representative ballasts throughout the building. Ballasts representative of various types of light fixtures contained the "No PCBs" wording on the affixed labels and therefore are assumed to not contain PCBs in their capacitor oils. However, all individual ballasts must be inspected for the "No PCB" wording on affixed labels to determine proper disposal/recycling requirements.

Typically, SWA would collect building materials such as window caulk, door caulk, wall expansion, sealants, etc., to be analyzed for PCB concentrations. However, during this phase of work, no sampling for PCBs was conducted.

SWA observed an electrical transformer at the exterior front section of the school that may contain PCBs in dielectric fluids. All interior transformers that were observed were the dry type, which are assumed to not contain PCB oils based on identification tags adhered to the transformers.

Mercury Filled Fluorescent Light Fixtures

SWA observed fluorescent light bulbs that if impacted by renovations must be collected and recycled in accordance with the "Universal Waste" regulatory requirements. The fluorescent bulbs are located throughout the space.

SWA estimates that there are 2,565 (4') fluorescent bulbs that would require recycling. No heat regulating thermostats with associated mercury tubes was observed in at the site.

Miscellaneous Hazardous Materials

SWA inspected for miscellaneous hazardous materials including, but not limited to, stored solvents, chlorofluorocarbons (CFCs), batteries, emergency exit signs, fire extinguishers, etc. No confirmatory sampling was conducted.

Exclusions

SWA's inspection was limited and the following exclusions are warranted. Because our inspection was not intrusive and addressed a limited number of areas, it is likely that the locations that we inspected were not fully representative of materials found in other areas. In particular, SWA made observations for large ticket items that if present would be of significant costs to remediate. Additional sampling and analysis will be necessary to comply with NESHAP and MA DEP requirements to accommodate renovation and/or demolition projects.

Our inspection included building areas only; no assessment of soil, debris, or subterranean areas was conducted. Additional limitations may have impacted our ability to inspect all locations such as poor lighting, height constraints, unusual building features, occupancy, and stored materials that block access to suspect materials. Stored goods, debris, and building materials that were removed and were either stored or loose were not inspected, but if observed were assessed and quantified.

SWA did not conduct roof sampling at this time. Reportedly, the original roof was stripped and replaced some 15 years ago, but SWA has no documentation to support this supposition. The roof system will need to be further evaluated prior to any renovations or demolition activities.

Because SWA's inspection was mainly limited to large ticket items, we do not warrant that all suspect hazardous building materials were identified in or on the buildings and shall not be held liable related to future abatement costs related to hazardous materials that are either not discovered or not appropriately characterized. This is due in part to inherent problems with every building inspection, such as, but not limited to:

- Seemingly homogeneous materials that are not in fact homogeneous;
- Seemingly representative locations that are not in fact representative;
- Layered materials that are not uniformly present or are isolated;
- Materials that are present and accessible but were not considered to be hazardous,
- Materials that are present in an isolated and limited quantity; and
- Material that is present in locations that are unsafe or otherwise difficult to access.

Client acknowledges that SWA's inspection is inherently limited and that a comprehensive room by room and full exterior inspection will be required prior to

renovation or demolition of the structures. During the course of future renovation/demolition work, it is likely that additional hazardous materials or materials suspected of being hazardous will be identified. Such materials should be assumed to be hazardous unless appropriate evaluation or sampling and analysis demonstrate otherwise. Contracts, specifications and plans should advise contractors to conduct controlled demolition work and stop immediately should any hazardous building materials be encountered during the course of their work.

Due to the occupancy of the school, some areas were sensitive in terms of SWA conducting intrusive inspection activities. Therefore, full access was neither feasible or allowed during this limited study.

1.0 ASBESTOS CONTAINING BUILDING MATERIALS

1.1 Scope of Work

SWA's Massachusetts certified Asbestos Inspectors, Ted Sherry (Cert. # AI-32572), Richard Bourassa (Cert. # AI-901081) and assistant performed the limited asbestos inspection of readily accessible and observable areas throughout the interior and exterior of the school. SWA inspected for the following types of suspect ACBM:

- Thermal system insulation (TSI), such as insulation on pipes, boilers, tanks and related equipment;
- Surfacing material, acoustical and decorative plasters, fireproofing and other sprayed or trowel applications; and
- Miscellaneous materials, such as window caulking, wallboard, floor tile, adhesives, and other building materials that are not TSI or surfacing materials.

To determine the asbestos content of suspect ACBM, SWA collected and analyzed representative bulk samples by extracting a small but representative portion of suspect material from the substrate. The samples, typically measuring one cubic centimeter, were collected using a variety of methods. The extracted samples were then placed into labeled, individual sealed plastic bags for transport to the laboratory.

EMSL Analytical, Inc. (EMSL) of Woburn, Massachusetts, a fully accredited asbestos analytical laboratory, analyzed the bulk samples utilizing Polarized Light Microscopy (PLM) in accordance with the requirements of 40 CFR Part 763, Subpart F, Appendix A (see Appendix A of this report). Because PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials, when a negative result is obtained by PLM (less than one percent asbestos), the laboratory was instructed to analyze the sample by Transmission Electron Microscopy (TEM) to confirm the results.

For each homogeneous sampling group, the laboratory analyzed samples until a positive result was obtained (i.e. greater than one percent asbestos) or until all samples were analyzed. If one sample indicates an asbestos content greater than one percent, the entire homogenous area must be considered to be an ACBM even if one or more samples in the group indicates an asbestos content of less than one percent.

1.2 Regulatory Guidance

The US EPA, US OSHA, Massachusetts Department of Labor Standards (MA DLS) and MA DEP are responsible for regulating the release of asbestos into the environment and protecting workers from exposure to airborne asbestos fibers.

US OSHA and MA DLS are responsible for the health and safety of workers who may be exposed in connection with their jobs including custodial activities, renovation work, and asbestos abatement. These agencies specify requirements for the work practices and engineering controls that must be utilized during asbestos abatement projects. They also require that ACM be repaired, removed, or otherwise appropriately abated before maintenance, renovation, or demolition work disturbs them. Thermal system insulation, surfacing materials, and floor tile installed before 1980 must be presumed to be ACM unless appropriate inspection and sampling analysis prove otherwise.

The EPA and MA DEP are responsible for developing and enforcing regulations necessary to protect the general public from airborne contaminants that are known to be hazardous to human health. They regulate ACM associated with renovation, demolition, and asbestos abatement projects via the NESHAP Title 40 CFR Part 61 regulation and MA DEP Chapter 141-E Asbestos Management and Control. These regulations require that buildings be inspected for ACM prior to renovation/demolition projects. They stipulate that all friable ACM as well as non-friable ACM that are in poor condition or will be made friable by renovation or demolition activity be removed or otherwise appropriately abated before they are disturbed.

1.3 Findings

SWA identified the following friable and non-friable *suspect* ACM:

• Pipe fitting insulation	• Window glazing compound
• Carpet mastic	• Ceiling glue daubs
• Floor tile/mastic	• Chalkboard/whiteboard glue
• Wall/window/canopy/fume hood panels	• Wall panel glue
• Vapor/moisture barriers	• Fireproofing
• Fire door insulation	• Plaster
• Mudded fittings	• Wall expansion
• Window caulking	• Ceiling tile
• Door caulking	• Window sill

SWA collected a total of 61 representative bulk samples of the above materials to determine asbestos content, of which 57 were analyzed via PLM. Four of the samples did not require analysis as the first sample in the homogeneous sampling group tested positive for asbestos (i.e. contain greater than one percent asbestos). In addition, 3 of the samples were further analyzed using the TEM method.

SWA has listed in **Table 1**, the location and estimated quantity, by square foot (sf), linear foot (lf), or other appropriate unit, of each type of ACBM identified at the site.

Table 1 • List of Materials Testing Positive for Asbestos			
Type of Material	Location	Quantity	Sample number
Tan/gray decorative upper panels	Throughout various upper walls of building additions (<i>see photos</i>)	6,800 sf	01A
Gray window panel (<i>painted red</i>) and associated gray glazing compound	Throughout building C (<i>Art/Tech/Music/Offices</i>)	26 window/panel systems	04A, 05A
Black window glazing compound (<i>1980's black metal frame replacement windows</i>)	Throughout classroom wings, front building sections and the main cafeteria	660 windows	07A
Transite ceiling panel board	Throughout exterior front canopy ceiling	3,400 sf	11A
Black wall/foundation vapor barrier	Assumed to be throughout school (<i>extensive intrusive investigation necessary</i>)	20,000 sf (<i>estimate</i>)	12A
Black foundation moisture barrier coating (<i>assumed</i>)	Throughout school	15,000 sf (<i>estimate</i>)	Assumed
Brown ceiling glue daubs associated with 1' x 1' ceiling tiles (<i>additional exploration under 1' x 1' ceiling tiles necessary to adequately confirm</i>)	Throughout school (<i>The original 1989 AHERA inspection results were positive & the Atlas reinspection calls out the glue daubs throughout</i>)	32,670 sf (<i>estimate</i>)	89A05291 (HIW-12), 89A05306 (HIW-27)
Off-white w/black & brown streaks 12" x 12" floor tile and associated black mastic adhesive & multiple color/same vintage 12" floor tiles/black mastic	Throughout school	44,263 sf	15A, 16A, 32A, 33A, 34A, 38A
Wall panel glue (<i>assumed</i>)	Main administration hall and large gym main hall	2,600 sf	Assumed
Transite fume hoods/lab counter tops (<i>assumed</i>)	Class D-105, D106, D-107 & D-108	910 sf	Assumed
Block insulation associated with wood doors (<i>fire doors</i>)	Throughout school	280 doors (<i>estimate</i>)	Assumed
Gray mudded pipe fittings associated with fiberglass insulated pipes	Throughout school (<i>observed</i>)	932 fittings	18A, 36A
Gray mudded pipe fittings associated with fiberglass insulated pipes	Throughout school (<i>observed in plenum areas & assumed behind fixed walls and ceilings</i>)	1,200 fittings (<i>assumed</i>)	18A, 36A

Table 1 • List of Materials Testing Positive for Asbestos			
Type of Material	Location	Quantity	Sample number
Salmon w/white & red streaks 9" x 9" floor tile and associated black mastic adhesive & multiple color/same vintage 9" floor tiles/black mastic	Throughout school <i>(primarily classroom wings)</i>	35,506 sf	23, 24A, 28A, 29A
Chalkboard/white board glue daubs <i>(assumed)</i>	Throughout school <i>(primarily in classroom wings)</i>	170 ea.	Assumed
Black mastic adhesive beneath carpet	Superintendent's office/hall areas	1,672 sf	Assumed
Roofing materials <i>(beneath newer roofing)</i>	Throughout school	175,000 sf <i>(estimate)</i>	Assumed
Window glazing compound associated with large original windows	Main large gym	16 windows	Assumed
Vapor barrier beneath wood floor	Assumed throughout main large gym	8,600 sf	Assumed
Vapor barrier beneath wood floor & mastic beneath rubber floor	Assumed throughout small gym <i>(based on our limited view, we observed a rubber floor beneath the wood floor)</i>	3,950 sf	Assumed
Gray window glazing compound <i>(associated with original windows)</i>	Small cafeteria, boiler room and general arts class	20 ea.	41A

In **Table 2**, SWA has listed all materials that tested negative for asbestos, including the locations where these materials were observed and the corresponding bulk sample reference number(s). Those sample #'s presented in *italics* were further analyzed using the TEM method.

Table 2 • List of Materials Testing Negative for Asbestos		
Type of Material	Location	Sample No.
Black wall/foundation vapor barrier	Throughout building C <i>(Art/Tech/Music/Offices)</i>	<i>02A, 02B</i>
Gray door caulking	Throughout building C exterior <i>(Art/Tech/Music/Offices)</i>	03A, 03B
Gray window caulking	Throughout building C exterior <i>(Art/Tech/Music/Offices)</i>	06A
Brown/tan wall expansion	1975 building exterior classroom wing	08A, 08B
Black window sill and foundation vapor barrier	1975 building exterior classroom wing	09A

Table 2 • List of Materials Testing Negative for Asbestos		
Type of Material	Location	Sample No.
Gray window caulking	B wing exterior	10A
Yellow/brown baseboard mastic adhesive	Class E -126, 133 and various locations throughout school	13A, 17A
White 2' x 4' ceiling tile	1975 building	14A, 14B
White 2' x 4' ceiling tile	Hall at E -17 and various locations throughout school	19A
White 2' x 2' ceiling tile	Floor 2 class E-218	20A, 20B
White/gray plaster walls	Throughout D & E-wing	21A, 21B, 21C, 25A, 25B
Black window sill	Throughout school	22A, 35A
White/gray 12" x 12" ceiling tile and associated glue daubs	Throughout school (<i>additional sampling necessary due to past asbestos positive analytical results</i>)	26A, 26B, 27A, 27B
Gray fireproofing	Throughout floor 1 classroom wing E	30A, 30B, 30C, 30D, 30E
Pink w/white & tan specks 12" x 12" floor tile (<i>treat as asbestos as the underlying mastic is asbestos containing and cannot be separated from the floor tile</i>)	Floor 1 classroom D-111	31A
Brown w/white 12" x 12" floor tile (<i>treat as asbestos as the underlying mastic is asbestos containing and cannot be separated from the floor tile</i>)	Throughout hall at maintenance, hall at auditorium and front of building classroom wing hall	37A
White joint compound	Throughout Art, Tech Ed, Music, offices	39A, 39B
White wall seam expansion	Throughout small gym interior	40A, 40B

1.4 Conclusions and Recommendations

On the basis of our findings, SWA offers the following conclusions and recommendations:

1. Both friable and non-friable ACM were identified at the site during SWA's limited inspection. A more comprehensive room by room and full exterior inspection, including intrusive investigations will be necessary prior to any renovation and or demolition activities. ACM that will be impacted by renovation or demolition work must be removed prior to being disturbed. SWA recommends that this work be conducted in accordance with a project design as prepared by a licensed Asbestos

Abatement Project Designer. *This report is not intended for use as an abatement design.*

2. Where conventional asbestos abatement cannot occur, the MA DEP requires that an application for "Non-Traditional Asbestos Abatement Work Practices Approval" be submitted in accordance with 310 CMR 7.00 and 310 7.15 regulations. There is a form to be completed along with a written Plan as to how the Non-Traditional Work Practice will be implemented. The MA DEP reviews and subsequently approves Plans if they meet their requirements. The potential for a NTWP scenario at this site would be for bulk-loading brick or CMU that is coated with a tar based damp proofing.
3. SWA reviewed the AHERA file that detailed what asbestos-containing materials were identified during development of the initial Management Plan. It also contained 3-year reinspection reports and other information pertaining to asbestos at the site. Only limited materials were sampled during the initial AHERA inspection.
4. Because SWA's inspection include only limited destructive investigation techniques using hand tools only, and due to inherent limitations of any building inspection, it is likely that some suspect ACBM is present that were not identified. Controlled demolition work should be performed in the event that suspect ACBM may be enclosed behind fixed components at the site. If suspect ACBM are identified at a later date that are not addressed in this inspection report, they should be assumed to be ACBM unless appropriate sampling and analysis demonstrate otherwise.
5. SWA believes the total cost estimate will likely be reduced because of the multiple assumptions related to suspect asbestos building materials. Those suspect building materials assumed to present and contain asbestos include fire doors, vapor/moisture barriers, chalkboard/whiteboard glue, wall panel glue, roofing, etc.

1.5 Cost Estimates

In **Table 3**, SWA has provided estimates of abatement costs associated with all identified ACBM in the inspected areas. These estimates are based on current industry standards that may fluctuate rapidly based on a variety of factors: the prevailing economic climate, seasonal differences, union labor considerations, scale of the abatement, occupancy of the building, and so on. SWA recommends that qualified abatement contractors be solicited to determine actual pricing involved. In addition to pricing for abatement, SWA has considered anticipated industrial hygiene costs associated with abatement, including air monitoring and oversight of the abatement.

Table 3 • Estimated Costs for Removal of ACBM		
Type of Material	Quantity/Unit cost (\$)	Total Cost (\$)
Tan/gray decorative upper panels	6,800 sf @ 7/sf	47,600.
Gray window panel (<i>painted red</i>) and associated gray glazing compound	26 window/panel systems @ 550/ea.	14,300.
Black window glazing compound (<i>1980's black metal frame replacement windows</i>)	660 windows @ 250/ea.	165,000.
Transite ceiling panel board	3,400 sf @ 7/sf	23,800.
Black wall/foundation vapor barrier	20,000 sf @ 10/sf <i>(estimate)</i>	200,000.
Black foundation moisture barrier coating (<i>assumed</i>)	15,000 sf @ 10/sf <i>(estimate)</i>	150,000.
Brown ceiling glue daubs associated with 1' x 1' ceiling tiles (<i>additional testing necessary to adequately confirm limits</i>)	32,670 sf @ 5/sf <i>(estimate)</i>	163,350.
Off-white w/black & brown streaks 12" x 12" floor tile and associated black mastic adhesive & multiple color/same vintage 12" floor tiles/black mastic	44,263 sf @ 4/sf	177,052.
Wall panel glue (<i>assumed</i>)	2,600 sf @ 6/sf	15,600.
Transite fume hoods/lab counter tops (<i>assumed</i>)	910 sf @ 12/sf	10,920.
Block insulation associated with wood doors (<i>fire doors</i>)	280 doors (<i>estimate</i>) @ 200/ea.	56,000.
Gray mudded pipe fittings associated with fiberglass insulated pipes	932 fittings @ 26/ea.	24,232.
Gray mudded pipe fittings associated with fiberglass insulated pipes	1,200 fittings (<i>assumed</i>) @ 26/ea.	31,200.
Salmon w/white & red streaks 9" x 9" floor tile and associated black mastic adhesive & multiple color/same vintage 9" floor tiles/black mastic	35,506 sf @ 4/sf	142,024.
Chalkboard/white board glue daubs (<i>assumed</i>)	170 ea. @ 230/ea.	39,100.
Black mastic adhesive beneath carpet	1,672 sf @ 5/sf	8,360.
Roofing materials (<i>assumed to be beneath newer roofing</i>)	175,000 sf @ 3/sf <i>(estimate)</i>	525,000.
Window glazing compound associated with large original windows	16 windows @ 600/ea.	9,600.
Vapor barrier beneath wood floor	8,600 sf @ 7/sf	60,200.
Vapor barrier beneath wood floor & mastic beneath rubber floor	3,950 sf @ 7/sf	27,650.

Table 3 • Estimated Costs for Removal of ACBM		
Type of Material	Quantity/Unit cost (\$)	Total Cost (\$)
Gray window glazing compound <i>(associated with original windows)</i>	20 ea. @ 350/ea.	7,000.
Total Abatement Cost		\$1,897,988.
Total Industrial Hygiene Fee		150,000.
Total Fee		\$ 2,047,988.

2.0 LEAD-BASED PAINTS

2.1 Scope of Work

SWA's accredited lead paint inspector tested limited representative painted surfaces throughout the school. SWA analyzed paints for lead content using the NITON XLS-303, X-ray fluorescence analyzer (XRFA) following the manufacturer's instructions for initial calibration and operation. The XRFA uses a radioactive source to excite the electrons of lead atoms (if present) in paint. As the lead atom electrons return to their normal state, they emit x-rays that are measured by the XRFA, then processed and the results converted to milligrams of lead per square centimeter of sampled surface area. On most substrates, the XRFA is precise to +0.1 mg/cm².

Surfaces tested included, but were not limited to walls, ceilings, columns, windows, doors, casings/jambs, trim, and other miscellaneous surfaces.

2.2 Regulatory Guidance

In all areas where LBP is disturbed by renovation work and where components covered by LBP are disposed of, applicable OSHA and EPA regulations apply.

OSHA

Renovation or demolition activities that disturb surfaces that contain lead must be conducted in accordance with the OSHA regulation 29 CFR 1926.62 "Lead Exposure in Construction: Interim Final Rule." This regulation requires that a site-specific health and safety plan be prepared before conducting activities that create airborne lead emissions. Such a plan should include the identification of lead components, an exposure assessment, and, if applicable, the required work procedures and personnel protection to be used.

An exposure assessment in the form of personal air monitoring must be performed if there is the potential for employees to be exposed to lead due to the renovation or demolition activity. If demolition is being conducted that will disturb lead-based paints, the employer must assume that employee exposure is in excess of the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$) until the exposure assessment is completed. If the PEL is exceeded, employees are required to use half-face mask respirators with HEPA filter cartridges. Furthermore, a written respirator program is required per 29 CFR 1910.134. The lead standard also requires the following protective measures be taken until the exposure assessment is completed:

- Isolation of the work area;
- appropriate personal protective clothing and equipment;
- change areas and hand washing facilities;

- biological monitoring; and
- training

The results of the initial exposure assessment will determine the protective measures that must be followed for the remainder of the project. OSHA may allow air-monitoring data from previous projects conducted under conditions closely resembling the present project to be used for the exposure assessment. If the exposure assessment indicates that exposure levels are below the Action Level of $30 \mu/m^3$, there are no additional requirements under the standard if the conditions remain the same.

EPA

In addition to the worker protection requirements stipulated by OSHA, MA DEP and the EPA regulate the disposal of wastes that are potentially hazardous. Such wastes may include paint chips and residue generated during abatement or repainting work, or whole components, such as wood windows, doors, and trim that are coated with LBP and that are disposed of as the result of renovation or demolition work. Metal components are not regulated if they will be recycled and not disposed of in a landfill.

To determine the required method for disposing of permeable items coated with LBP, the MA DEP and the EPA require representative sampling of the debris to determine the quantity of lead that would be expected to leach into the environment if the debris were disposed of in a landfill. The representative sample(s) must be analyzed by the Toxicity Characteristic Leaching Process (TCLP). If the result of this procedure indicates that the sample leaches a lead concentration below five parts per million (ppm), the debris is not regulated and can be disposed of in a traditional construction landfill. However, the debris must be disposed of as hazardous waste if the TCLP result exceeds 5 ppm. To minimize the total volume of hazardous waste, segregating hazardous from nonhazardous waste is advisable.

HUD

HUD has established a standard for lead-based paint, as tested using an XRF analyzer, of 1.0 mg/cm^2 . Although this standard only applies to housing funded by the federal government, it is a useful reference concentration for assessing hazards associated with lead in paint in other settings. Thus, when paint contains greater than 1.0 mg/cm^2 , special care should be taken when conducting activities that impact these paints. When conducting abrasive blasting, torch burning, or similar activities that generate significant dust or fume, hazards can be caused even at concentrations below the HUD standard.

2.3 Findings

Analysis of painted surfaces throughout the site indicate that lead levels range from $<0.1 \text{ mg/cm}^2$ to 3.8 mg/cm^2 . A summary of paints with elevated concentrations of lead (greater than 1.0 mg/cm^2) is presented in **Table 4**, and the results of all testing are presented in Appendix B.

Table 4 • Summary of Surfaces Coated With LBP				
Location	Substrate	Color	Component	Approx. Quantity
Exterior	Metal	Brown	Structural canopy	1.3
Classroom Wings (Floors 1 & 2)	Terracotta glaze	Multi-color	Walls	0.8 – 2.3
Cafeteria	Terracotta glaze	Blue	Walls	3.8

2.4 Conclusions and Recommendations

Based on our findings, SWA offers the following conclusions and recommendations:

1. Limited lead-based paint and lead in terracotta glaze is present at the site. Handling or impacting components that are covered by LBP may require compliance with the OSHA lead standard. To minimize exposure to airborne dust or fumes, torch burning, cutting, grinding, or similar high impact work on components covered by LBP should be avoided. Such work would need to be conducted by properly trained workers using appropriate worker protection and engineering controls.
2. For work activities that may generate airborne lead, the contractor(s) must perform an initial exposure assessment (personal air monitoring) for each individual task (e.g. demolition, abrasive blasting, and painting) that has the potential for causing worker exposure to be at or above the OSHA Action Level. In lieu of monitoring, historical data from similar operations may be used to comply with OSHA requirements.
3. In order to determine proper disposal requirements, samples of the building materials that will best represent the waste stream must be collected for TCLP testing to determine the level of lead that will leach into the landfill soil. Based on SWA's XRF test results, it is likely that all waste can be disposed as general construction debris.
4. SWA conducted limited testing for LBP at the site concentrating on large ticket items that if impacted could be of significant costs. If renovations and or demolition are proposed, a more comprehensive LBP inspection would be required.

2.5 Cost Estimates

SWA estimates that costs associated with OSHA and EPA compliance relative to lead paint at approximately **\$5,000** for this site.

3.0 POLYCHLORINATED BIPHENYLS (PCBs)

3.1 Scope of Work

SWA's investigation for PCBs in light fixture ballasts was visual only. Typically, ballasts installed after 1978 do not contain PCBs and are marked as such. Ballasts that do not have the "No PCBs" wording on the label are assumed to contain PCBs. SWA did not collect any suspect buildings materials for PCBs at this time.

3.2 Background/Regulatory Guidance

According to the EPA, PCBs are toxic and persistent chemicals that were used primarily as insulating fluid in heavy-duty electrical equipment. They were also utilized in a wide variety of products including paints, caulks, light fixture ballast, oils, plastics, adhesives, tapes, carbonless copy paper, floor finishes and related products. Because PCBs are suspected carcinogens and may cause other adverse health effects, the EPA banned their manufacture and installation starting in 1979.

Any materials containing PCBs equal to or greater than 50 parts per million (ppm) are regulated under the Toxic Substance Control Act and the PCB regulation found at 40 CFR Part 761. Further, EPA policy, as described in "Current Best Practices for PCBs in Caulk Fact Sheet" updated in September, 2009, is that PCBs at concentrations greater than 50 ppm are not authorized for use and must be removed and properly disposed of.

Additionally, where <50 ppm caulk or PCB remediation waste is present, it may be regulated for removal and/or cleanup unless the <50 ppm PCB caulk meets the definition of an Excluded PCB Product as defined under 40 CFR Part 761.3. Excluded products would include those legally installed before October 1, 1984 and the resulting PCBs concentration is not the result of dilution or leaks or spills from other products. Thus, if a formerly installed PCB caulk containing greater than 50 ppm had been removed and replaced by a non-PCB caulk, the non-PCB caulk could be contaminated from the residue of the former caulk. In this instance, if the non-PCB caulk tested at a concentration above one ppm, it would be regulated as PCB containing.

Further, because PCBs may have leached into surrounding substrates, such as brick, CMU, and cement, or may have degraded and contaminated adjacent soil, assessment of masonry and soils is necessary on instances where PCBs are present in caulk or other building materials. Where analysis indicates contaminant concentrations above one ppm in masonry or soils, remedial actions are required.

3.3 Findings

SWA inspected the labels on representative ballasts throughout the building. Those representative ballasts inspected did contain the "No PCBs" wording on their affixed

labels and therefore are assumed not contain PCBs in their capacitor oils. During renovations or demolition, all individual ballasts must be inspected for the "No PCB" wording on affixed labels to determine proper disposal/recycling requirements. One transformer at the exterior front of the school was observed that may contain PCB oils.

Those suspect PCB building materials observed at the school include window caulking, window glazing compound, wall expansion joint caulk and door caulking.

3.4 Conclusions and Recommendations

Based on our observations, SWA concludes the following:

1. Prior to renovation or demolition all ballasts should be inspected for the "No PCB" wording on the label to determine appropriate segregation and recycling requirements. The ballasts that do not contain the "No PCBs" wording on the affixed label are assumed to contain PCB oils and must be segregated for proper disposal/recycling.
2. SWA's inspector did not sample suspect PCB building materials at the site. Based on our observations, the only suspect materials that would be sampled for PCBs are window caulk, window glazing compound, wall expansion joint caulk and door caulk.
3. The transformer located exterior to the building may be the property of the local power company. If so, they would be responsible for the decommissioning of the transformer. If the city owns the transformer, it would be necessary to further research and or test to determine whether the dielectric fluids contain PCBs.

3.5 Cost Estimates

SWA estimates that the cost to inspect and remove individual ballasts and other components at the site should not exceed **\$10,000**. The fee for conducting further assessments and analysis for suspect PCBs building materials is expected to be in the range of **\$3,000** to **\$5,000**.

4.0 MERCURY COMPONENTS

4.1 Scope of Work

Typically, when fluorescent light fixtures, thermostats, or switches will be removed and disposed of, SWA makes a conservative assumption that they contain mercury and must be handled as a regulated waste. These materials are classified as "Universal Wastes" and must be appropriately handled and packaged for disposal or recycling. SWA inventoried these materials at the site. No confirmatory testing occurred.

4.2 Findings

SWA estimates that there are 2,565 (4') fluorescent bulbs that would require recycling or storage for reuse prior to renovation or demolition activities at the school. No heat regulating thermostats with associated mercury tubes were observed in at the site.

4.3 Conclusions and Recommendations

Based on our observations, SWA offers the following conclusions and recommendations.

1. Prior to being impacted, all fluorescent light bulbs must be collected and properly packaged for reuse or disposal/recycling in a facility permitted to accept Universal Wastes. If electrical switch-gears are decommissioned they must be assessed for mercury components and all identified materials recycled.

4.4 Cost Estimates

The cost to collect and dispose/recycle the fluorescent light bulbs at this site is not expected to exceed **\$8,000**.

5.0 MISCELLANEOUS HAZARDOUS MATERIALS

5.1 Scope of Work

SWA inspected for miscellaneous hazardous materials including, but not limited to, stored solvents, chlorofluorocarbons (CFCs), batteries, emergency exit signs, etc. No confirmatory sampling was conducted.

5.2 Findings

SWA observed miscellaneous materials throughout the school, some of which may be considered hazardous. However, it is assumed that most of these materials will remain on site to be used in their current locations.

SWA observed the following miscellaneous hazardous materials that would require special handling throughout the building:

- Exit signs = 48 each
- Emergency lights = 24 each
- Box air conditioners = 12 each
- Batteries = 2 each
- Fire extinguishers = 18 each
- Solvents/paints/cleaners = 55 each

5.3 Conclusions and Recommendations

Based on our observations, SWA offers the following conclusions and recommendations.

1. Miscellaneous hazardous materials are present at the site and must be collected and properly packaged for disposal or recycling in a facility permitted to accept hazardous waste if they do not remain on site to be used at their various locations.

5.4 Cost Estimates

The cost to collect and dispose/recycle the miscellaneous hazardous materials at this site is not expected to exceed **\$8,000**.

APPENDIX A

Certificates of Asbestos Bulk Sample Analysis (PLM & TEM)



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<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 132204442

Customer ID: SMIT50B

Customer PO:

Project ID:

Attention: Ted Sherry

Smith & Wessel Associates, Inc.

188 Greenville Street

Spencer, MA 01562

Phone: (978) 994-3643

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Received Date: 06/27/2022 8:55 AM

Analysis Date: 06/29/2022

Collected Date:

Project: 22054 / East Longmeadow High School; 180 Maple Street; East Longmeadow, MA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
01A 132204442-0001	Exterior C Wing at Dark Room - Tan/Gray Upper Panel Board	Gray Fibrous Homogeneous		82% Non-fibrous (Other)	18% Chrysotile
02A 132204442-0002	Exterior C Wing at Dark Room - Black Wall/Foundation VB	Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
02B 132204442-0003	Exterior C Wing at AC Condenser - Black Wall/Foundation VB	Black Fibrous Homogeneous	10% Cellulose 5% Glass	85% Non-fibrous (Other)	None Detected
03A 132204442-0004	Exterior C Wing at Dark Room - Gray Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
03B 132204442-0005	Exterior C Wing Main Entrance - Gray Door Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04A 132204442-0006	Exterior C Wing near Graphics Room - Gray Window Panel	White Fibrous Homogeneous		88% Non-fibrous (Other)	12% Chrysotile
05A 132204442-0007	Exterior C Wing at AC Condenser - Gray Window Glazing	Gray Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
05B 132204442-0008	Exterior C Wing Courtyard North Side - Gray Window Glazing				Positive Stop (Not Analyzed)
06A 132204442-0009	Exterior C Wing North Side - Gray Window Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07A 132204442-0010	Exterior B Wing South Side - Black Window Glazing	Black Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
07B 132204442-0011	Exterior 1975 Wing West Side - Black Window Glazing				Positive Stop (Not Analyzed)
08A 132204442-0012	Exterior 1975 Wing South Side - Brown Wall Expansion	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
08B 132204442-0013	Exterior 1975 Wing North - Brown Wall Expansion	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
09A 132204442-0014	Exterior 1975 Wing West Side - Black Sill & Foundation VB	Black Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
10A 132204442-0015	Exterior B Wing NW Corner - Gray Window Caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 06/29/2022 10:25:26



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

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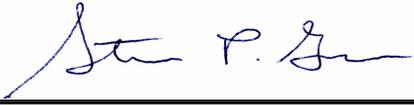
<http://www.EMSL.com/bostonlab@emsl.com>

EMSL Order: 132204442
Customer ID: SMIT50B
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
11A 132204442-0016	Exterior Front Canopy - White Ceiling Panel	Gray Fibrous Homogeneous		82% Non-fibrous (Other)	18% Chrysotile
12A 132204442-0017	Exterior Front at Left (E) Entrance - Black Wall/Foundation VB	Black Fibrous Homogeneous	15% Cellulose	82% Non-fibrous (Other)	3% Chrysotile
13A 132204442-0018	E-126 (SPED SC) 1st Floor - Yellow Baseboard Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14A 132204442-0019	Room E-126 (SPED SC) 1st Floor - 2x4 Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose	10% Perlite 35% Non-fibrous (Other)	None Detected
14B 132204442-0020	Room E-133 (Biology) - 2x4 Ceiling Tile	Gray/White Fibrous Homogeneous	55% Cellulose	10% Perlite 35% Non-fibrous (Other)	None Detected
15A 132204442-0021	Room E-130 (SPED Hearing) - 12x12 Off White w/ Black & Brown Streaks FT	White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
15B 132204442-0022	Room E-133 (Biology) - 12x12 Off White w/ Black & Brown Streaks FT				Positive Stop (Not Analyzed)
16A 132204442-0023	Room E-130 (SPED Hearing) - Black Mastic	Black Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
16B 132204442-0024	Room E-133 (Biology) - Black Mastic				Positive Stop (Not Analyzed)
17A 132204442-0025	Room E-133 (Biology) - Brown Baseboard Mastic	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Analyst(s)
Ramon Buenaventura (21)



Steve Grise, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 06/29/2022 10:25:26



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EMSL Order: 132204961

Customer ID: SMIT50B

Customer PO:

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Received Date: 07/18/2022 8:30 AM

Analysis Date: 07/19/2022

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Project: 22054 / East Longmeadow High School; 180 Maple Street; E. Longmeadow, MA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
18A 132204961-0001	Floor 2 - Hall at E17 - Gray Mud Fitting	Tan Fibrous Homogeneous	50% Min. Wool	30% Non-fibrous (Other)	20% Chrysotile
19A 132204961-0002	Floor 2 - Hall at E17 - 2'x4' White Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
20A 132204961-0003	Floor 2 - Class E218 - 2'x2' White Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
20B 132204961-0004	Floor 2 - Class E218 - 2'x2' White Ceiling Tile	Gray Fibrous Homogeneous	40% Cellulose 40% Min. Wool	20% Non-fibrous (Other)	None Detected
21A 132204961-0005	Floor 2 - Hall at E229 - White/Gray Plaster Wall	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21B 132204961-0006	Floor 2 - Class E219 - White/Gray Plaster Wall	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21C 132204961-0007	Floor 2 - Hall at E226 - White/Gray Plaster Wall	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22A 132204961-0008	Floor 2 - Class E223 - Black Window Sill	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23A 132204961-0009	Floor 2 - Class D213 - 9" Salmon FT w/ WT & Red Streaks	Tan Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
24A 132204961-0010	Floor 2 - Class D213 - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
25A 132204961-0011	Floor 2 - Class D205 - White/Gray Plaster Wall	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
25B 132204961-0012	Floor 2 - Hall at D213 - White/Gray Plaster Wall	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26A 132204961-0013	Floor 2 - Class D212 - 12"x12" White Ceiling Tile	White Fibrous Homogeneous	80% Min. Wool	20% Non-fibrous (Other)	None Detected
26B 132204961-0014	Floor 2 - Class D209 - 12"x12" White Ceiling Tile	White Fibrous Homogeneous	80% Min. Wool	20% Non-fibrous (Other)	None Detected
27A 132204961-0015	Floor 2 - Class D212 - Brown CT Glue Daubs	Brown Non-Fibrous Homogeneous	<1% Fibrous (Other)	100% Non-fibrous (Other)	None Detected
27B 132204961-0016	Floor 2 - Class D209 - Brown CT Glue Daubs	Brown Non-Fibrous Homogeneous	<1% Fibrous (Other)	100% Non-fibrous (Other)	None Detected

Initial report from: 07/21/2022 13:13:01



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EMSL Order: 132204961

Customer ID: SMIT50B

Customer PO:

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
28A 132204961-0017	Floor 2 - Class E220 - 9" Light Gray FT w/ WT Streaks	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
29A 132204961-0018	Floor 2 - Class E220 - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
30A 132204961-0019	Floor 1 - Jan Closet at E116 - Gray Fireproofing	Gray Fibrous Homogeneous	35% Cellulose 5% Glass	60% Non-fibrous (Other)	None Detected
30B 132204961-0020	Floor 1 - Hall at E117 - Gray Fireproofing	Gray Fibrous Homogeneous	35% Cellulose 5% Glass	60% Non-fibrous (Other)	None Detected
30C 132204961-0021	Floor 1 - Hall at E125 - Gray Fireproofing	Gray Fibrous Homogeneous	35% Cellulose 5% Glass	60% Non-fibrous (Other)	None Detected
30D 132204961-0022	Floor 1 - Class E125 - Gray Fireproofing	Gray Fibrous Homogeneous	35% Cellulose 5% Glass	60% Non-fibrous (Other)	None Detected
30E 132204961-0023	Floor 1 - Class E120 - Gray Fireproofing	Gray Fibrous Homogeneous	35% Cellulose 5% Min. Wool	60% Non-fibrous (Other)	None Detected
31A 132204961-0024	Floor 1 - Class D111 - 12" Pink w/ WT & Tan Speck FT	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
32A 132204961-0025	Floor 1 - Class D111 - Black/Yellow Mastic	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
33A 132204961-0026	Floor 1 - Class D109 - 12" Tan w/ BN & WT Streak FT	Tan Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
34A 132204961-0027	Floor 1 - Class D109 - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
35A 132204961-0028	Floor 1 - Class D106 - Black Window Sill	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36A 132204961-0029	Floor 1 - Hall at D114 - White Mud Fitting	White Fibrous Homogeneous		90% Non-fibrous (Other)	10% Amosite

Analyst(s)

Kevin Pine (29)

Steve Grise, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 07/21/2022 13:13:01



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EMSL Order: 132205137

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Received Date: 07/26/2022 9:50 AM

Analysis Date: 07/27/2022

Collected Date:

Project: 22054 / East Longmeadow High School; East Lognmeadow, MA

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
37A 132205137-0001	Floor 1 Hall at Maint. - Brown w/ WT 12" FT (Newer)	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38A 132205137-0002	Floor 1 Hall at Maint. - Black Mastic	Black Non-Fibrous Homogeneous		90% Non-fibrous (Other)	10% Chrysotile
39A 132205137-0003	Chorus Room - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
39B 132205137-0004	Admin Area - White Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
40A 132205137-0005	Small Gym Interior - White Wall Seam Exp.	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
40B 132205137-0006	Small Gym Interior - White Wall Seam Exp.	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
41A 132205137-0007	Small Caf Orig. Windows - Gray Window Glaze	Gray Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile

Analyst(s)

Kevin Pine (7)

Steve Grise, Laboratory Manager
or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA NVLAP Lab Code 101147-0, CT PH-0315, MA AA000188, RI AAL-139, VT AL998919, ME LB-0039

Initial report from: 07/27/2022 13:36:22



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Customer ID: SMIT50B

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Received Date: 06/27/2022 8:55 AM

Analysis Date: 07/27/2022

Collected Date:

Project: 22054 / East Longmeadow High School; 180 Maple Street; East Longmeadow, MA

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
02A 132204442-0002	Exterior C Wing at Dark Room - Black Wall/Foundation VB	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
10A 132204442-0015	Exterior B Wing NW Corner - Gray Window Caulking	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Steve Grise (2)

Steve Grise, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA

Initial report from: 07/27/2022 11:50:32



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EMSL Order: 132204961
Customer ID: SMIT50B
Customer PO:
Project ID:

Attention: Ted Sherry Smith & Wessel Associates, Inc. 188 Greenville Street Spencer, MA 01562	Phone: (978) 994-3643 Fax: (978) 346-7265 Received Date: 07/18/2022 8:30 AM Analysis Date: 07/27/2022 Collected Date:
Project: 22054 / East Longmeadow High School; 180 Maple Street; E. Longmeadow, MA	

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
27A 132204961-0015	Floor 2 - Class D212 - Brown CT Glue Daubs	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Steve Grise (1)

Steve Grise, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA

Initial report from: 07/27/2022 11:52:53

APPENDIX B

Results of Testing for Lead Based Paint (LBP)

Lead Based Paint Testing Results 180 Maple Street East Longmeadow, MA				
Location	Substrate	Color	Component	Result mg/cm ²
Exterior	Metal	Brown	Door/frame	<0.1
	Metal	Black	Window frames	<0.1
	Metal	Yellow	Upper flashing	<0.1
	Wood	Salmon	Doors	<0.1
	Metal	White	Sliding door	<0.1
	Metal	Brown	Structural canopy	1.3
	Metal	Black	Door/frame	<0.1
	Transite	Tan	Upper panel	0.2
	Transite	White	Canopy ceiling	0.4
Art/Tech. Ed/Music/Offices Wing	Cinderblock	Gray	Walls	<0.1
	Cinderblock	White	Walls	<0.1
	Sheetrock	White	Walls	<0.1
	Concrete	Gray	Floor	<0.1
	Metal	White	Structural steel	<0.1
Classroom Wings (Floors 1 & 2)	White	Plaster	Walls	<0.1 – 0.2
	Terracotta glaze	Multi-color	Walls	0.8 – 2.3
	Sheetrock	White	Walls	<0.1
	Metal	Black	Structural steel	<0.1 – 0.4
	Metal	Red	Structural steel	0.2 – 0.5
	Metal	Black	Window frames	<0.1
	Metal	Brown	Door frame	<0.1
	Wood	Tan	Doors	<0.1
	Metal	Blue	Door frames	<0.1
	Cinderblock	White	Walls	<0.1
	Plaster	Blue	Walls	<0.1
	Plaster	White	Walls	<0.1
	Plaster	Pink	Walls	<0.1
	Metal	Tan	Lockers	<0.1
Auditorium	Plaster	White	Ceiling	<0.1

Lead Based Paint Testing Results 180 Maple Street East Longmeadow, MA				
Location	Substrate	Color	Component	Result mg/cm ²
	Cinderblock	White	Walls	<0.1
Cafeteria	Terracotta	Blue	Walls	3.8
	Metal	Black	Door frame	<0.1
Gyms/halls/locker areas	Cinderblock	White	Walls	<0.1
	Wood	Tan	Walls	<0.1
	Metal	Black	Structural steel	<0.1
	Metal	Black	Structural steel	0.4
	Metal	Black/white	Window frames	<0.1

Note: Testing for lead was conducted using x-ray fluorescence analyzer. Limit of detection = 0.1 mg/cm².

:

APPENDIX C

Photographs

East Longmeadow High School – East Longmeadow, MA



Bldg. C asbestos upper panel walls



Bldg. C exposed vapor barrier, not asbestos



Bldg. C asbestos panel walls & window panel



Bldg. C view



Bldg. B, asbestos black glazing



Bldg. E, asbestos black glazing

East Longmeadow High School – East Longmeadow, MA



Front asbestos canopy



Front asbestos vapor barrier



Rear of building, asbestos upper panels



E-130 asbestos floor tile/mastic

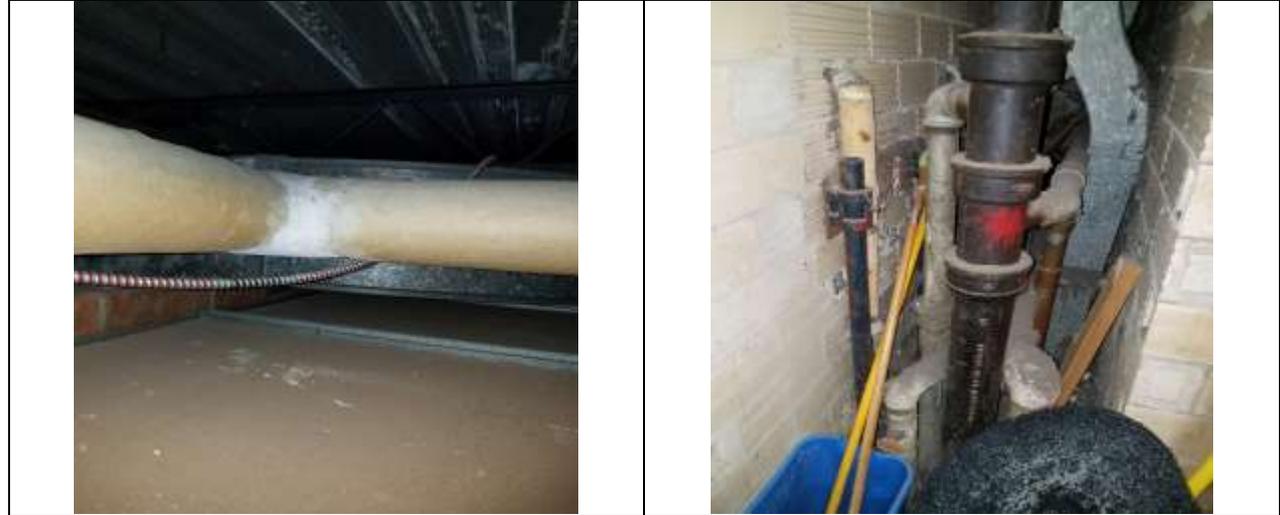


East Longmeadow High School – East Longmeadow, MA

E-130 asbestos floor tile/mastic	Wood door with assumed insulation
----------------------------------	-----------------------------------



Floor 2 class wing w/multi-color floor tile	Floor 2 classroom floor tile
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Fitting in plenum	Wet wall with fittings
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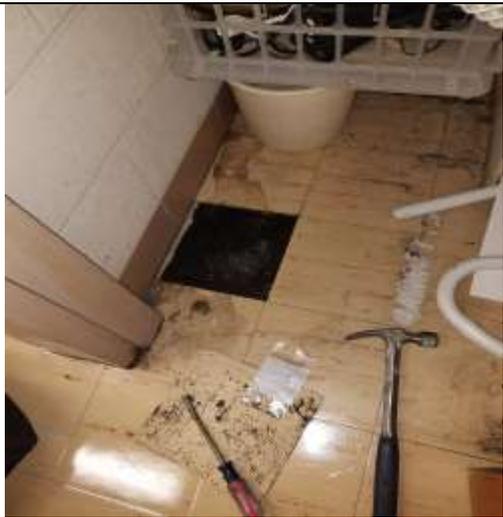
East Longmeadow High School – East Longmeadow, MA



2' x 2' ceiling tile in class



Older floor tile in class



9" floor tile/mastic, asbestos



Ceiling tile/glue daubs, tested negative



East Longmeadow High School – East Longmeadow, MA

Ceiling tile/glue daubs, tested negative	Floor 1 freshman wing, fireproofing
	
Fireproofing on beam, not asbestos	Fireproofing on beam, not asbestos

	
Wing with fireproofing, not asbestos	Floor tile, white board & door in class

East Longmeadow High School – East Longmeadow, MA



Asbestos floor tile in class



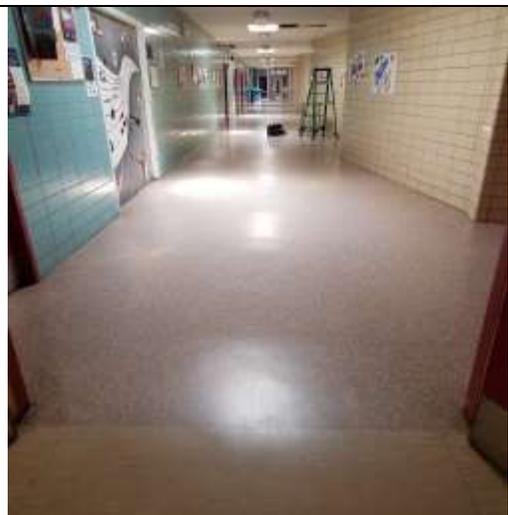
Hall, newer floor tile



9" floor tile in auditorium



Auditorium view



East Longmeadow High School – East Longmeadow, MA

<p>Pipe fitting in plenum hall at auditorium</p>	<p>Old floor tile below & newer in hall</p>
	
<p>Music room floor tile, asbestos</p>	<p>Fittings in plenum</p>
	
<p>Graphics, older 12" floor tile</p>	<p>Newer boilers</p>

East Longmeadow High School – East Longmeadow, MA



Fittings in plenum in cafeteria



Wall panel glue, assumed asbestos



Main cafeteria



Main gym, older upper windows & assumed VB



Original windows in small cafeteria