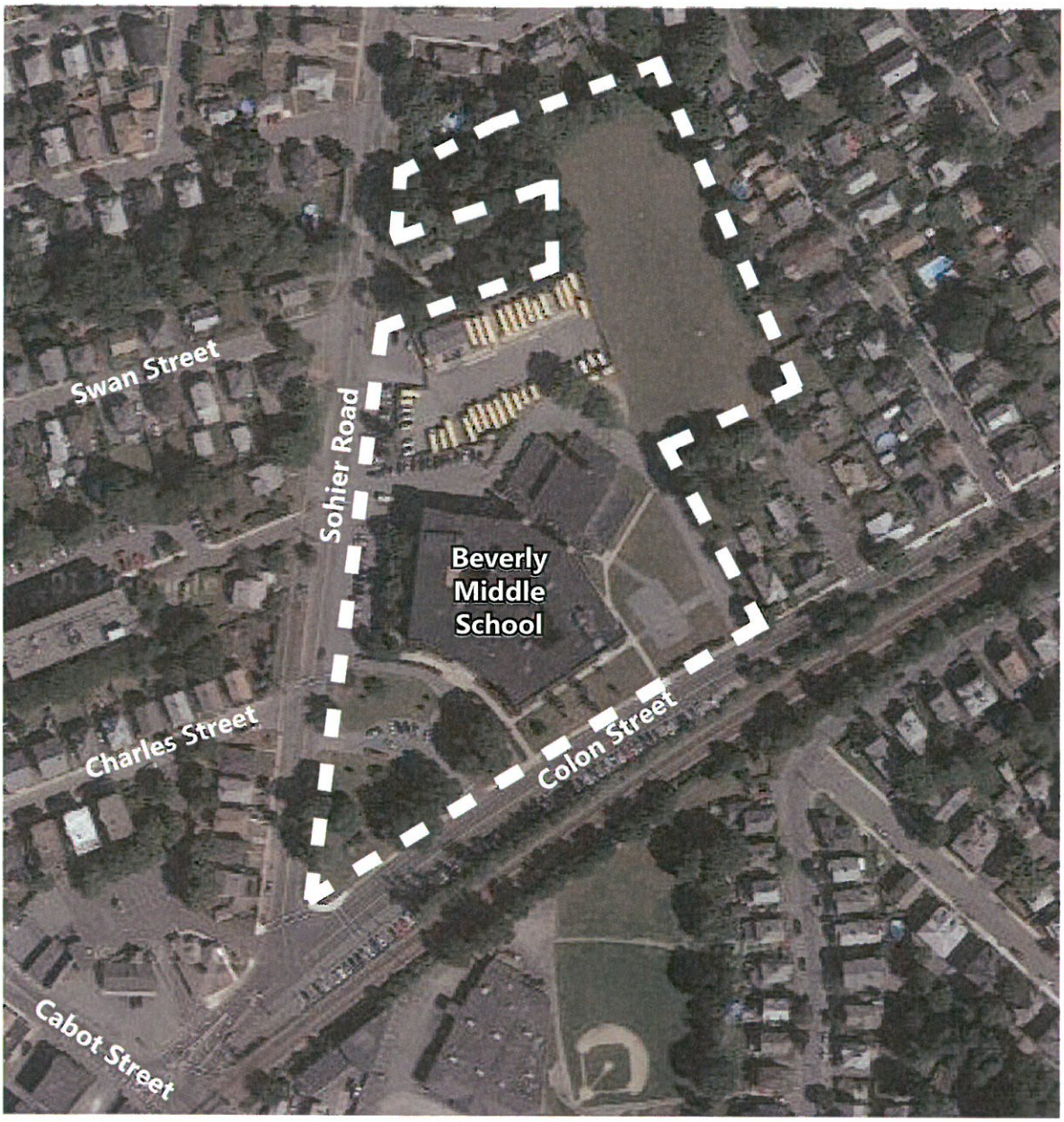
SITE PLAN


Swan Street
Sohier Road
Beverly
Middle
School
Charles Street
Colon Street
Cabot Street

RECORD OF TITLE TO THE PROPERTY

1921. Dec. 19.

Office of the Mayor.
December 19th, 1921.

To the Honorable Board of Aldermen,
City of Beverly.
Gentlemen:

827 Appro. Poor Dept. item Maintenance.

Under provisions of Section 21 of the City Charter, I hereby recommend that the order for the appropriation of twenty five hundred dollars ($2500.00) from unappropriated monies now in the hands of the City Treasurer for account 'Overseers of the Poor, item 'Maintenance' take all of its several readings at this meeting of the Board.

Respectfully yours,
Frank D. Tuttle, Mayor.

Order took its second reading and final passage and was adopted by a "yea and nay" vote.
Roll-call
Yea-Aldermen Daley, Drugan, Hanners, Hayes, Leighton, Linehan, Marshall, J.F. McNutt and Marshall Wm. 9
Nay-None 0
Absent-None 0

811 Transfer of appro. Inspector of Buildings. Maintenance.

The Committee on Finance and Property to whom was referred the matter of Transfer to Inspector of Buildings, have considered said matter and beg leave to submit the accompanying order and recommend its adoption.
Report accepted.
ORDERED:
That the sum of twenty five dollars ($25.00) be and the same is hereby transferred, in accordance with the recommendation of His Honor the Mayor, from account Memorial Day, Veterans of Foreign Wars, to account Inspector of Buildings item "Maintenance".
Order read once, passed to a second reading, laid over under charter provisions.

847 Transfer of Appro. Fire Dept.Main. to Departmental Apparatus.

The Committee on Finance and Property, to whom was referred the matter of transfer appropriation Fire Department account, Maintenance to Departmental Apparatus", have considered said matter and beg leave to submit the accompanying order and recommend its adoption.
Report accepted.
ORDERED:
That the sum of six hundred dollars ($600.00) be and the same is hereby transferred, in accordance with the recommendation of His Honor the Mayor, from account Fire Department, item Maintenance, to item "Departmental Apparatus.".
Order read once, passed to a second reading, laid over under charter provisions.

751 Removal of tree, Railroad Avenue. "Sullivan".

The Committee on Finance and Property, to whom was referred the matter Removal of tree, Sullivan, Railroad Avenue, have considered said matter and beg leave to recommend the adoption of the accompanying order.
Report accepted.
The order,(see page 358) was read once and adopted.

The Committee on Finance and Property to whom was referred the matter of acquiring of land on Sohier Road and Colon Street for New High School Building (see page 360) have considered said matter and beg leave to recommend that the subject matter be referred to the next City Government.
Alderman McNutt dissents.

Alderman McNutt offered minority report.
By Alderman McNutt:

79 Acquiring land for New High School.

ORDERED:
Whereas, the Board of Aldermen passed an order on July 18th, 1921, which was approved by His Honor, the Mayor, July 27th, 1921, that the City acquire by purchase or by right of eminent domain, land not exceeding seven (7) acres on Sohier Road and Colon Street for the purpose of constructing and equipping a High School thereon as shown on a plan hereinafter referred to andfor the purpose it is necessary to take certain parcels of land in Beverly belonging to or supposed to belong to Mary R. Mullaly 13475 square feet, with dwelling therein, Andrew M. Ober 21954 square feet, Solon Lovett 19130 square feet with garage thereon, Sarah J. Brooks, 4750 square feet with dwelling thereon, George P. Bowden 5000 square feet, Estate of Joshua S. Dodge, 1 acre and 4305 square feet, William W. Standley 2 acres and 23387

1921. Dec. 19.

square feet Edward A. Standley 1 acre and 1745 square feet and James J. Welch 33934 square feet all as shown on a plan hereinafter referred to, to which reference should be made for a more accurate description of each parcel.

The property as a whole being bounded and described as follows: to wit:-

Beginning at a point marked A on a plan made by A.H. Richardson, City Engineer and entitled "Plan of Land on Colon Street & Sohier Road for New High School Site, Beverly, Mass.," and dated December 3, 1921. (said plan may be referred to and hereby made a part of this order for all necessary purposes) thence running in a North-easterly direction along the North line of Colon Street and making an angle of 43° 30' with Sohier Road, a distance of 158.91 feet to point marked B on said plan, thence running in a slightly more easterly direction, along the North line of Colon Street, and making an angle of 174°9' with line AB a distance of 284.52 feet to a point marked C on said plan, thence running in a more easterly direction, along the North line of Colon Street and making an angle of 174°41' with line BC a distance of 243.36 feet to point marked D on said plan, thence turning and running in a Northerly direction by land belonging to Bertha E. Spear and making an angle of 90° with Colon Street a distance of 219.11 feet to a point marked E on said plan, thence running in an Easterly direction along land belonging to Bertha E. Spear and George F. Fielder and making an angle of 276° 16' with line DE a distance of 157.2 feet to point marked F on said plan thence running in a Northerly direction by land belonging to George F. Fielder and F. Louise Gove a distance of 297.03 feet to point marked G on said plan, thence turning and running in a Westerly direction by land belonging to Edward A. Standley and making an angle of 94° 48' with line GK, a distance of 456.06 feet to point marked H on the Easterly line of SohierRoad, thence turning and running in a Southerly direction along the East line of Sohier Road and making an angle of 118°16' with line GH a distance of 108.0 feet to point marked I on said plan, thence turning and running in an Westerly direction along Sohier Road and making an angle of 116° 56' with line HI a distance of 28.04 feet to a point marked J on said plan, thence turning and running in a Southerly direction along the East line of Sohier Road and making an angle of 243°4' with line IJ a distance of 632.85 feet to the point of beginning at Colon Street marked A on said plan. All trees upon said land are to be included in this taking.

WHEREAS:- this Board on the 17th day of October 1921, ORDERED; that due notice be given to Edward A. Standley, William W. Standley, James J. Welch, Estate of Joshua S. Dodge, George P. Bowden, Sarah J. Brooks, Solon Lovett, Andrew M. Ober, Angela L. Mullaly and all others interested that this Board intends to construct and maintain a High School before mentioned and to take such portionn of their land as may be necessary therefor as shown on a plan made by A. H. Richardson, City Engineer, which is on file in the office of the City Clerk of this City and that Monday the 31st day of October 1921, at 7.30 P. M. at the Board of Aldermen's Room, City Hall in Beverly is appointed as the time and place for public hearing in the matter.

Adopted October 17, 1921 and

WHEREAS, due notice has been given of the intention of this Board to take said parcel of land for the purpose of constructing and equipping a High School as appears by the return of the order of notice issued then and passed as aforesaid, and

WHEREAS, this Board did meet at the time and place appointed and notified as aforesaid and has heard all parties interested, claiming to be heard in the matter, it is therefore,

ORDERED AND DECREED, that the parcel of land before described be and the same hereby is taken for the purpose aforesaid, according to saidplan in the office of City Clerk, to which plan reference may be had, and we have considered and estimated the damages sustained in their property by the owners aforesaid by the taking of said parcels of land for the purposes aforesaid as shown on said plan, and we determine and award the same as follows:Viz:-

To Mary R. Mullaly the sum of	$4208
To Andrew M. Ober " " "	1125
To Solon Lovett " " "	906
To Sarah J. Brooks " " "	3510
To George P. Bowden " " "	541
To Estate ofJoshua S. Dodge the sum of	875
To James J. Welch the sum of	625
To William W. Standley " "	625
To Edward A. Standley " "	250

and it is further

1921. Dec. 19. ORDERED:
That in order to carry out the provisions of this order and to provide for the payment of the several sums of money as named in the awards aforesaid, the sum of twelve thousand six hundred sixty five dollars ($12,665.00) be taken from and charged to account "Acquiring Land and Erection and Equipment of New High School Building"

By Alderman Hayes:
That theminority report be substituted for the report of the Committee.

President Marshall withdrew and called Alderman McNutt to the Chair.

The minority report was substituted for report of committee.

The order was read once, passed to a second reading,

Office of the Mayor.
December 19th, 1921.

To the Honorable Board of Aldermen.
City of Beverly.
Gentlemen:
Under provisions of Section 21 of the City Charter, I hereby recommend that the order for the taking of the land on Sohier Road and Colon Street for the proposed High School take all of its several readings at this meeting of the Board.
Respectfully yours,
Frank D. Tuttle, Mayor.

The order took its second reading and was adopted by a "yea and nay" vote.
Roll-call
Yea-Aldermen Drugan, Hanners, Hayes, Leighton, Linehan, Marshall, J.F., McNutt. 7
Nay-Aldermen Daley and Marshall Wm. Jr. 2
Absent-None 0
At 9.00 o'clock on motion of Alderman Hayes a recess.Called to order at 9.07. P.M.
President Marshall resumed the Chair.

By Alderman Hayes:
That the action taken on the order relating to acquiring of land on Sohier Road and Colon Street for new High School Building. be reconsidered.
The motion was not agreed to.

30
Appro. & Loan. Fire Sta, Ward 3.
The Committee on Finance and Property to whom was referred the matter of Appropriation and Loan, Fire Station, Ward 3, have considered said matter and beg leave to recommend that thesubject matter be referred to the next City Government.
Report accepted and recommendations adopted.

31
To consider the Purchase Foster's Wharf.
The Committee on Finance and Property to whom was referred the matter to consider the purchase of Foster's Wharf, have considered said matter and beg leave to recommend that the subject matter be referred to the next City Government.
Report accepted and recommendations adopted.

The Committee on Finance and Property, to whom was referred the matter of appropriation repairs Police Station, haveconsideredtsaid matter and beg leave to recommend that the subject matter be referred to the next City Government.

By Alderman Hayes:
That the original order be substituted for the report of the Committee.
The motion was agreed to.

824
Appro. Police Department Repairs Police Station.
The order(see page 346) was read once and passed to a second reading.

Office of the Mayor.
December 19th, 1921.

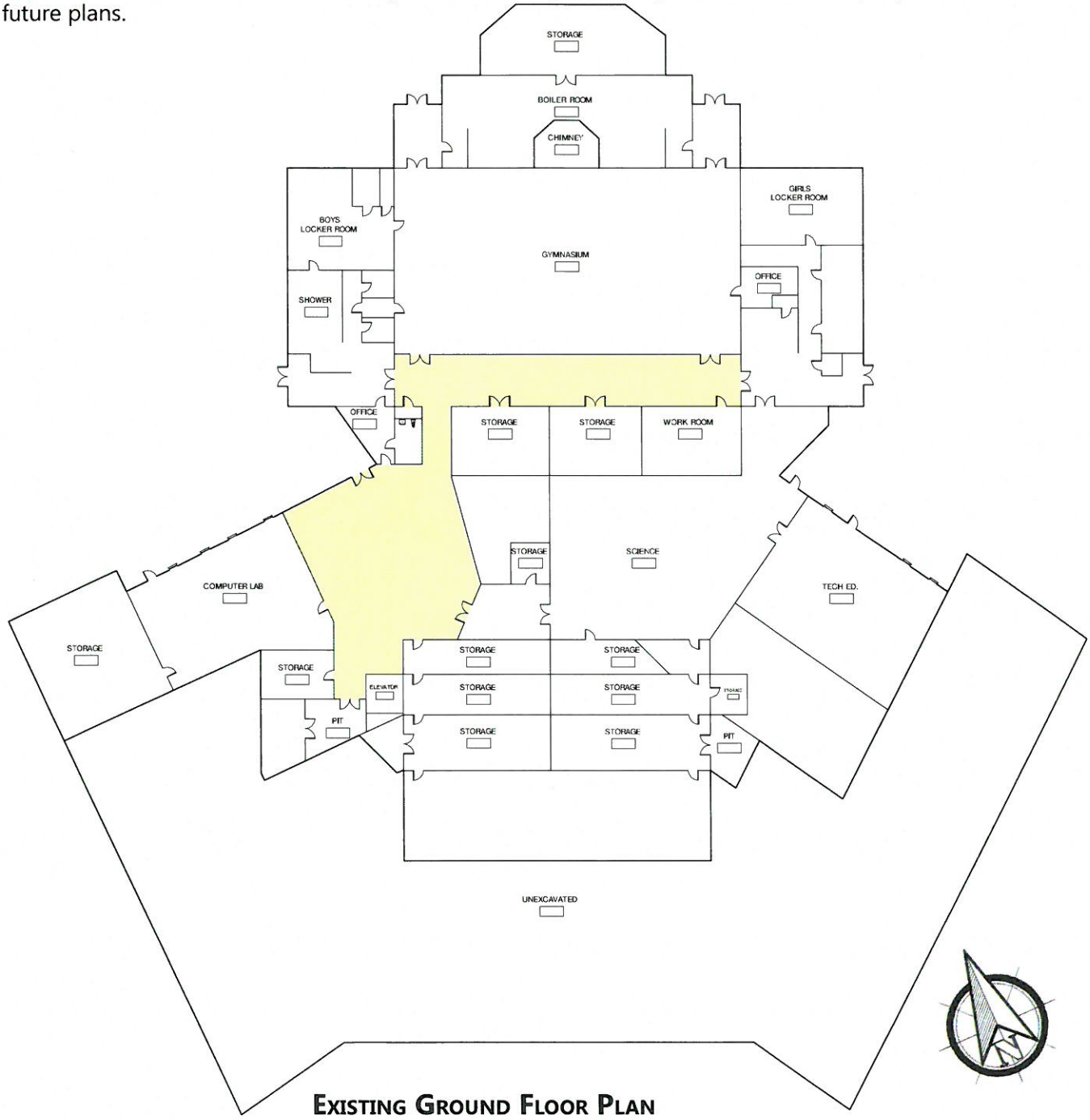
To the Honorable Board of Aldermen,
City of Beverly.
Gentlemen:
Under the provisions of Section 21 of the City Charter, I hereby recommend that the order for the appropriation of fifteen hundred dollars ($1500.00) for repairs 'Police Station' take all of its several readings at this meeting of the Board.
Respectfully yours, Frank D. Tuttle, Mayor.

PROPERTY OR DEVELOPMENT CONSTRAINTS

The OPM contacted the local Building Official/Zoning Official to discuss the project and a potential construction project at the existing Beverly Middle School site. The official confirmed that the site is available for a project. The official further clarified there were no restrictions to the construction of an educational facility on the site.

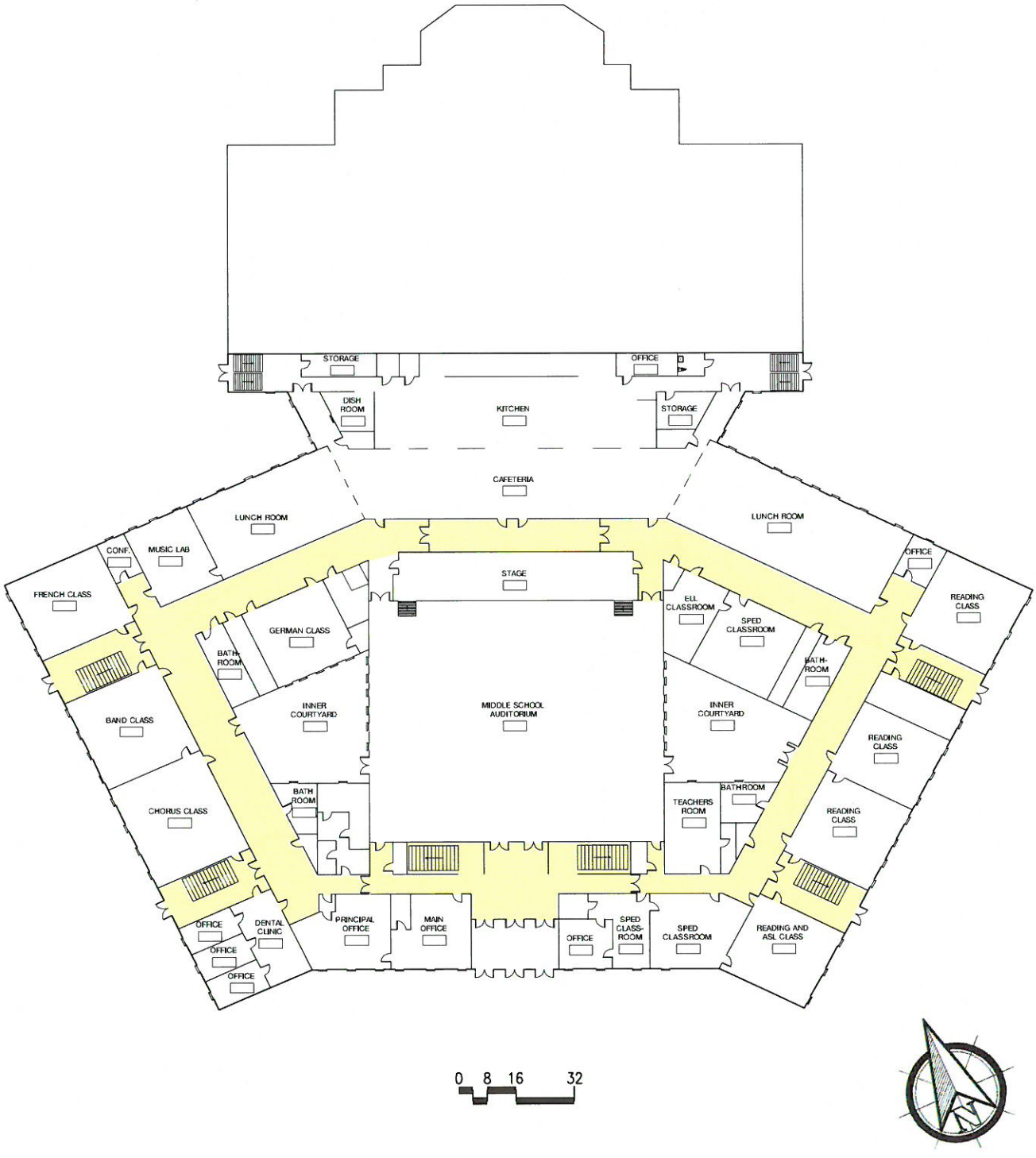
EXISTING FLOOR PLANS

For purposes of this report, the building's existing condition floor plans were generated. While we strive to ensure that the existing conditions are complete and whole, for the purposes of the Feasibility Study, a full on site existing conditions survey was not conducted to confirm exact locations and dimensions of every wall, door, or other element. What these plans do provide us with is a starting point to begin to evaluate the overall goals of the study within a given set of parameters which aid us and the City with evaluating current space allocation and proposed future plans.

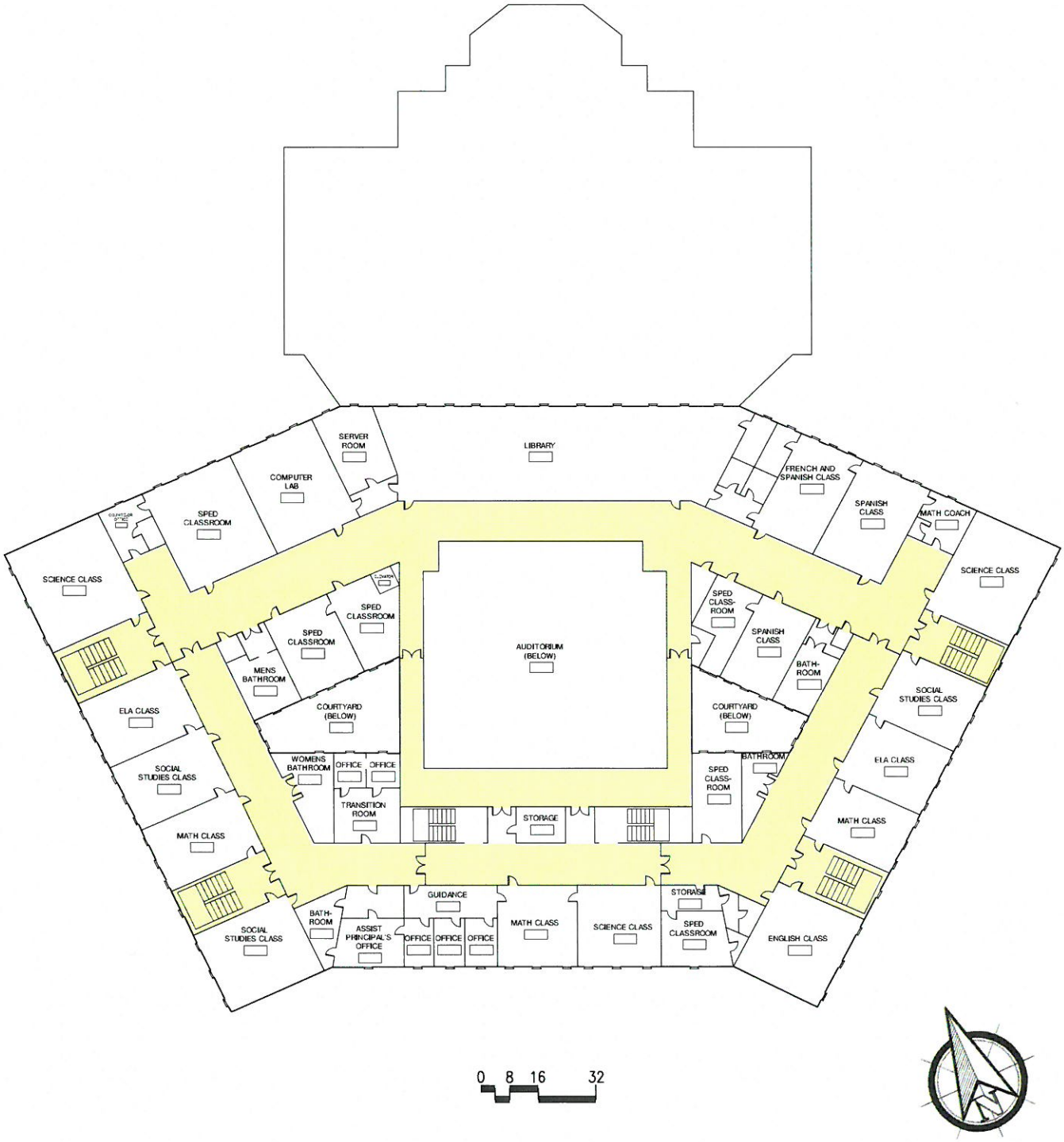


EXISTING GROUND FLOOR PLAN

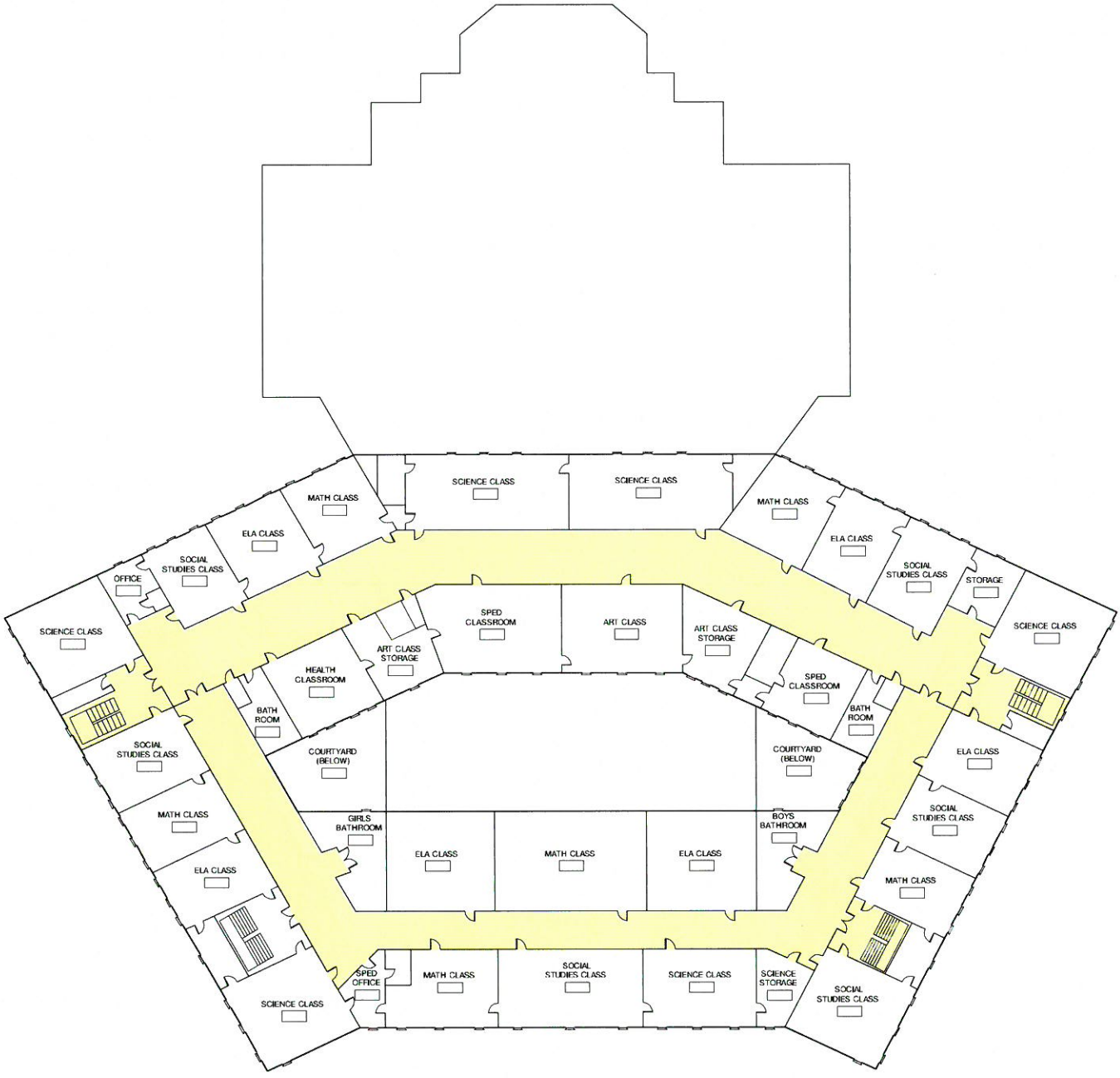
0 8 16 32



EXISTING FIRST FLOOR PLAN



EXISTING SECOND FLOOR PLAN



EXISTING THIRD FLOOR PLAN

EXISTING CONDITIONS

OVERVIEW

The existing Beverly Middle School is located on an irregularly shaped 8.14 acre site and surrounded by property which is restricted from future development. This includes dense privately owned property and major roadways. The school site is located at 7 Sohier Road, Beverly, Massachusetts and contains the existing 144,349 square foot building, insufficient parking areas, a small unenclosed play area, a bus parking area, and a small play field in the rear. The school was originally constructed in 1923, with most of the 90+ year-old original building, layout, infrastructure, and features remaining identical to the way they were in 1923. It contains three main levels and a lower basement level. Classrooms are grossly undersized based on the current educational guidelines and requirements. The building's masonry load bearing structural system and 2x12 wood floor framing, combined with modern structural code requirements, make modifications (movement of walls) to its configuration cost-prohibitive.

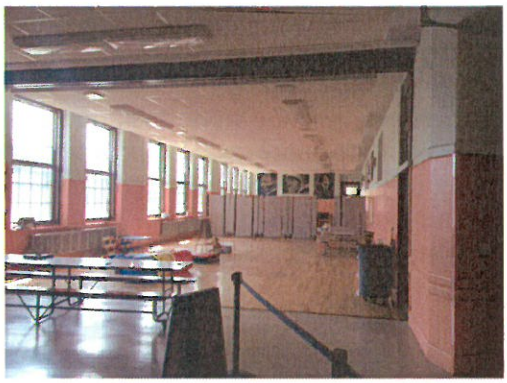
The 91-year-old building was designed and constructed at a time when educational environments were much different than they are today. It is important to understand that it represents a 90-year-old approach to education and its infrastructure systems are well beyond their intended life expectancy and are failing. The poor condition of these systems is detailed in the included fire protection, heating, ventilation, plumbing, electrical, and structural analysis. The school was designed and constructed at a time when there was much less known about 1) educational plan organization; 2) exterior envelope and wall construction; 3) energy conservation; 4) environmental quality factors such as ventilation, lighting, etc.; and 5) ideal middle school learning environments. The classrooms are grossly undersized, as they were designed at a time when crowding many small desks into tightly formed orthogonal rows facing a single teacher was the norm. Today, middle school students work in groups and teams, completing projects and utilizing technology that could never have been imagined in 1923. Unfortunately, the classrooms created in 1923 are extremely inadequate in providing necessary space, amenities, technology, acoustics, lighting, and security found in a modern middle school classroom.

The building requires a comprehensive renovation of the building systems and components that have not been addressed to date, and such renovations would trigger full accessibility requirements throughout the building. The required comprehensive renovation at the school is a significant project, and extends well beyond a series of capital improvements.

The Beverly Middle School is a 144,349 square foot, four story facility serving grades 6-8. The physical size and available classrooms suggest that it has a capacity of approximately 700 students under current educational standards and the MSBA (Massachusetts School Building Authority) guidelines, but recent enrollment has been in the range of 930-950 students. The four story facility includes a Cafeteria, Library/Media Center, Gymnasium, 1,200 seat Auditorium, Administration, and Academic Spaces.

The current building plan does not reflect a modern approach to effective middle school organization and design. Beyond inadequate classroom size, the classrooms are not organized in a manner to allow students to be broken down into functional teams/academies of approximately 120 students. Research indicates that breaking students down into smaller teams/academies in this manner allows teachers and facilitators to work directly with their team members (students and other teachers), allowing them to more closely monitor and foster student development. It also shows that a team arrangement enables teachers to combine classrooms to facilitate cross discipline instruction, so that students can better understand the interwoven relationships between subjects like math and science. Students within a team/academy also collaborate on the development of hands-on projects, which allows them to understand the practical application of the subjects they are studying. It also allows students who are tactile learners, who have been failed by a visual learning approach in the past, to excel in their academic pursuits. These hands-on projects are often completed in "Academic Project Labs" where activities can proceed simultaneously to classroom interaction, which requires dedicated space for each team. Over the past 20 years, middle schools across the country have been migrating to this proven, successful model. Even schools that have poorly organized facilities like Beverly Middle School do the best they can to organize their students and teachers in teams in order to take advantage of the benefits of this approach. Unfortunately, schools like Beverly Middle School that are divided into multiple floors, where classrooms cannot be grouped in teams and no space is available for team projects, provide insurmountable challenges to a truly functional team organization. The teachers and administrators should be commended for their efforts, but truly functional middle school team organization cannot be accommodated within the physical limitations of the 90-year-old Beverly Middle School facility and its current layout.

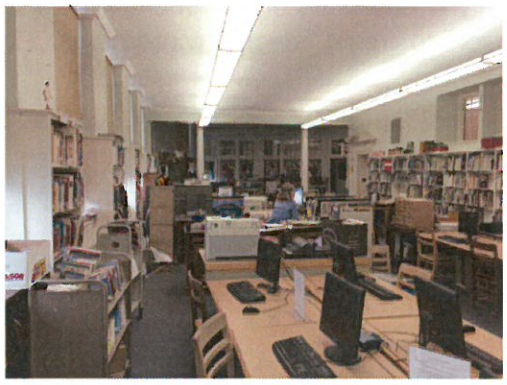
The Beverly Middle School lacks many of the support spaces affiliated with a modern middle school environment, including areas for student exhibits, and student presentations. The school also lacks small group work, study, and testing areas. The faculty and administrators currently use any space that is available for these functions, but the results are greatly compromised. A modern 21st Century middle school would include these required support areas.



view of existing Cafeteria

The Cafeteria is a long, narrow room located on the main level on the backside of the building with little acoustic treatment. This was a common approach 90 years ago, when the Cafeteria was viewed as a loud space where students were "herded" in and out as quickly as possible for daily meals. Today, student dining areas serve a much more comprehensive educational and social purpose, and are often made an integral and central part of dining, presentations, performances, parent and volunteer activities, social events, and numerous other school and Town activities. These spaces require an appropriate location, natural day-lighting,

acoustics, multi-media presentation systems, and numerous other amenities so that they can be effectively utilized for multiple functions throughout the day, evening, and weekends.



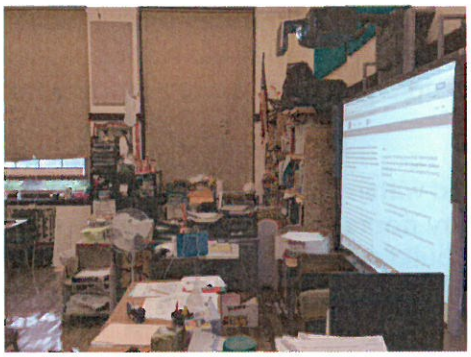
view of existing Library Media Center

The Library Media Center is located on the second floor, centrally located within the academic classrooms on that floor. This was also a popular approach 90 years ago, but today's Library Media Center seeks an even more central and convenient location for use by students, educators, parents, and the general public. Ninety years ago, the "Library" included several thousand volumes of hardcopy books and a card catalogue reference system. Today, it is a technology driven, data based, media retrieval center that promotes inquiry and research by teachers, students, parents, and the general public, with no limitations on subject matter or breadth of information. It is also a media and data distribution center where students create, direct, and broadcast information, presentations, and performances. In addition to being poorly located and lacking all modern amenities, the existing library is a quarter of the required program size of a modern middle school library.

The building's Administration area is centrally located within the academic wing on the main floor level, but its location away from the main entry doors does not provide the required observation and control of visitors entering the building. This was common 90 years ago, when school security was not an issue. Unfortunately, this has changed dramatically over the past ten years. Currently, the main office relies on a camera system for visual observation of the main entrance. This is a commendable effort considering the building's organizational challenges, but unfortunately potential security and safety hazards remain. Upon entering the building, visitors pass through a portion of the building's main circulation corridor to enter the Administrative office and have the potential to intermingle with staff and students prior to being greeted and checked in by the Main Office.

view of existing entry organization

The ideal middle school educational environment includes many key factors. Modern 21st Century middle schools include classrooms that utilize "Laboratories for Learning" where all of the necessary environmental factors, technology integration, and spatial configurations work to create "ideal" environments. These modern classrooms allow teachers to introduce "real world" examples of instructional material through the seamless integration of video internet technology. They also allow students to present and facilitate with their peers, giving them invaluable exposure to learning, presentation, and collaboration skills. Technology can be energized quickly and efficiently through teacher facilitator stations. Lighting, ventilation, and carbon dioxide levels are all monitored and adjusted automatically to create ideal environmental conditions. Teachers have collaborative planning and work areas that allow them to share critical planning and development ideas for their coursework. Team teaching and presentation areas are integrated into the academic environment in a manner similar to that of a corporate planning and work environment. Core facilities such as Library Media Centers have become highly advanced media retrieval centers and are located in close proximity to all academic functions to allow for key sharing of valuable resources. Academic zones are organized for quiet separation from noisier zones such as cafeterias and gymnasiums. "Academic Project Labs" are organized within smaller learning academies and indoor/outdoor educational connections to maximize hands-on project based learning opportunities. Their layouts and plan organizations are structured to allow flexible teaming and grade level configurations. Corridors and hallways are organized and designed to create "experience and exposure", in addition to providing functional movement patterns. Performing and practical arts facilities include highly advanced opportunities for students to explore their talents at a critical age when many of their future professional talents are evolving.



views of existing classroom

view of existing corridor

The Beverly Middle School is an old, "tired" building that has been well maintained. Capital expenditures at this facility have allowed it to exist in a usable condition for many years beyond its intended life expectancy. However the current building organization and layout of Beverly Middle School does not easily lend itself to conversion to a 21st Century middle school. Its walls cannot be efficiently relocated due to its inherent structural systems, and these same structural systems prohibit vertical expansion of the school. Additionally, its site layout does not allow for functional and effective expansion of the existing building.

Capacity at the middle school is calculated by multiplying the number of available general classrooms and support areas by the appropriate number of students in each classroom. The Beverly Middle School building has a calculated capacity of approximately 700 students under current educational standards, but recent enrollment has been in the range of 930-950 students for grades 6-8. The Beverly Middle School is obviously housing significantly more students than the calculated capacity based on modern educational standards. This has been achieved by converting spaces not originally intended as general classrooms into usable classroom space and overcrowding students in the current classrooms. It also requires that former storage rooms and closets be utilized as spaces for small group instruction, testing, and counseling. This creates a very stressful environment for students and educators, where it is difficult to deliver a modern educational program.

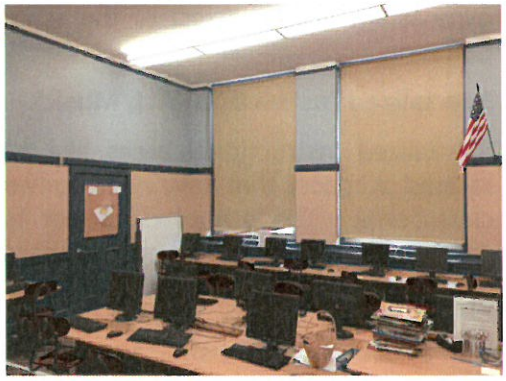
In addition to being overcrowded, the following conditions exist:

Main Office / Entrance

The Main Office currently sits down a corridor from the main lobby. Allowing visitors to enter the school and to directly interact with students prior to being physically greeted and checked in by the Main Office staff creates a security and safety issue.

Library Media Center

The Library Media Center is located on the second floor and is not centrally located. It is significantly undersized and lacks the modern amenities associated with a 21st Century education resource.



view of existing computer lab

Computer Lab

The Computer Lab is located on the second floor. This space is a converted classroom that does not have adequate cooling and is insufficiently sized. Equipment and devices within the lab are outdated.

Special Education

The current Special Education Program is extremely undersized and is utilizing inadequate space for instructional, tutorial, and testing areas. The program and associated spaces do not meet current state recommendations and guidelines.

view of existing classroom

General Classrooms

The existing Beverly Middle School does not have an adequate quantity of classroom spaces. The current instructional classrooms are all significantly undersized compared to current educational space standards. In an attempt to address the lack of classroom space, "larger" classrooms (larger, meaning, as compared to the typical classroom size of approximately 650 square feet) have been broken into two smaller, undersized classrooms. A portion of the Cafeteria was broken up and converted into a classroom space. This classroom space opens directly into the Cafeteria and during the lunch periods presents a significant acoustical distraction.

view of science classroom

Science Classrooms

The current science classrooms have limited plumbing (no hot water) and do not provide an adequate space for learning and science experiments. The existing spaces do not allow for a flexible learning environment to maximize hands-on small group / instructional educational activities. The plumbing in the classrooms is exposed and unprotected.

Gymnasium

The undersized and poorly ventilated Gymnasium is divided into two separate spaces by a movable partition. The Gymnasium is "underground" and does not provide any natural daylighting. Half of the gymnasium is used as traditional gymnasium space. The other half has been retrofitted with rubber floor and exercise equipment. The overall space of the Gymnasium is undersized in comparison to current state recommendations and guidelines. Access to the gymnasium from the rest of the school is through the Cafeteria.

view of existing Gymnasium

Specialized Instruction (Art/Music)

Specialized instructional areas like art and music are located in spaces that have been converted from general classrooms. The school does not have any culinary spaces and has limited vocational spaces.

Planning Space

Due to the significant shortage of available educational space, spaces that would normally be available for planning and storage rooms have become smaller instructional classrooms. The school has no dedicated conference rooms and one undersized teachers' work room.

Receiving & Storage

The receiving area for the school is serviced by a double door with no direct access to grade, making regular deliveries difficult. Storage space in the school is extremely limited.

view of existing receiving area

ARCHITECTURAL REVIEW

Foundation

The exterior poured concrete foundation walls appear to be in good condition with only minor cracking at a few locations. (Refer to structural evaluation for additional information.)

view of rotting window infills

Walls

The exterior envelope (exterior masonry wall construction) of the building is a 91-year-old envelope. It appears that mortar joint re-pointing has occurred over time. Additional re-pointing (majority of the exterior brick surface around the building), combined with masonry renovation would be required in order to prevent deterioration of the masonry exterior. Moisture penetration of the exterior veneer is visible. Based on review of the original construction drawings, it does not appear the building contains any insulation.

Window openings on the rear of the building have been infilled with painted plywood panels. Wood rot and cracking is visible.

The exterior detailing of the building including the precast cornices, door surrounds, sills and headers have significant deterioration and require replacement and / or restoration in many locations.

view of deteriorating exterior detailing

Roof

The building's roof consists of a black EPDM roof membrane. The roof membrane was installed in 1993. Overall, the roof appears to be in fair condition. Patching has occurred since the install to repair leaks. Additional patching is required. The roof system is beyond its warranty period and has approached its intended life-expectancy.

Windows

In 1995, the exterior windows of the building were replaced with a double pane aluminum window system. On the surface, the window systems appear to be in fair condition, but looking into them with greater detail, the years of exposure are apparent. A majority of the windows are inoperable due to failed spring balances. In 2009, spring balances were repaired/replaced in select window openings to allow at least one window in each classroom

view of window being held open due to inoperable balances

to be operable for ventilation purposes. The windows at the Auditorium have not been replaced and are assumed to be original to the construction of the building.

The caulking around the window system has been periodically maintained. However, the deterioration of the caulking in many locations results in significant heat loss and air and water infiltration.

view of exterior door well

Doors

A majority of the exterior doors for the building appear to have been replaced over the years. Overall the door systems are in fair condition.

There are a couple below grade doors that sit in wells. There is a potential for flooding of the wells and subsequent water infiltration at the doors during heavy rain events.

ADDITIONAL EXTERIOR DOCUMENTATION

Floors

There are numerous floor materials throughout the building. These finishes include the following: Vinyl Composition Tile (VCT), Hardwood, Painted Concrete, Carpet, Porcelain Tile and Vinyl Asbestos Tile (VAT) in the main lobby, corridors, classrooms, Cafeteria, Auditorium and Gymnasium. The floors in the toilet rooms are ceramic tile. The floors in the kitchen are quarry tile.

examples of flooring

The corridor and classroom floors are primarily VAT and VCT. Various locations have been patched with VCT. Select classrooms floors are hardwood. The floors in the corridor are in good condition and maintained. The floors in the classrooms are in poor condition and are damaged in numerous locations. The floor on the lower level is painted concrete and shows significant wear.

The wood flooring in the Gymnasium visually appears to be in fair condition, but closer examination reveals there are numerous "dead spots" in the floor, buckling, and signs of wear. The flooring system has exceeded its life expectancy.

The toilet room floors are ceramic and are in fair condition. There is minor damage from wear and tear. New ceramic tile has been installed in the gang toilet rooms.

The warming kitchen floor is quarry tile. This floor is in good condition and remains serviceable.

example of moisture damage

Walls

The majority of the walls within the classrooms are painted plaster with a wood chair rail and wood base. The age of the walls is apparent as modern retrofitted amenities are all exposed including wiring for power, light switches, technology, and interactive whiteboards. Many of the walls are damaged and in disrepair due to moisture damage from leaking windows and roof. Paint is also peeling from the wall due to the moisture damage.

The corridors contain plaster walls with wood base, but have a tile and/or locker base in various locations.

The walls within the Cafeteria are plaster with wood chair rail and wood base. They currently do not incorporate any acoustical treatment for absorbing sound in the space.

The walls in the Gymnasium are painted masonry. The moveable partition is used as a

permanent partition separating the gym space from a fitness area. The walls of the space do not have any acoustical treatment for absorbing or reflecting sound in the space.

The walls in the Auditorium are plaster with wood detailing. There is no acoustical treatment on the walls for absorbing or reflecting sound in the space.

damaged wood detailing

Doors

The interior wood doors and wood frames throughout the school are in very poor condition. Many of them are scratched and gouged. The wood frames of the doors are worn, weathered, dented, chipped, etc. The doors to classrooms have half glass window with clerestory lights above them. These do not provide a good acoustical separation between the corridor and classroom under current construction standards. The doors from the corridor to the egress stairs do not provide the necessary fire rating and contain excess glazing within the sidelights and a transom. These violate current fire separation requirements (based on the type of door frames and glazing installed).

Most door hardware appears to have been replaced over time. Although the hardware has been replaced, some of the door hardware remains non-compliant and is further discussed in the handicap accessibility portion of this report.

Ceilings

The building contains hard plaster ceilings, 2x4 acoustic ceiling tile and asbestos ceiling tiles. Water damage is apparent due to flaking of ceiling paint and bubbling of the plaster (punky).

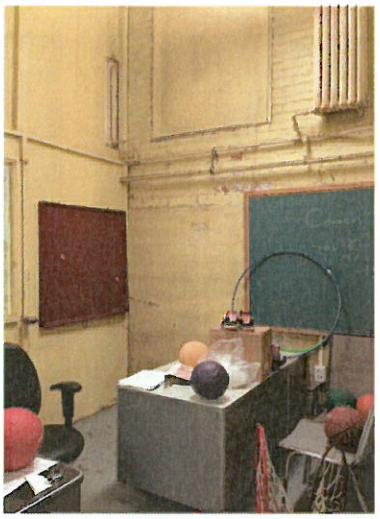
non-code compliant guardrail and handrails at stairs

Stairs

The egress stairs do not have an appropriate height guardrail (32") on the open side of the stair and the handrails are not continuous. One stair does not have the code required ceiling height clearance at the intermediate landing.

Elevator

The building does contain an elevator, but the elevator does not meet current elevator code. A medical stretcher would not be able to fit inside the cab during a medical emergency. The elevator does not meet current ADA standards.



RECENT CAPITAL IMPROVEMENTS

Roof
The roof was replaced in 1993 and has reached its intended 20 year life expectancy.

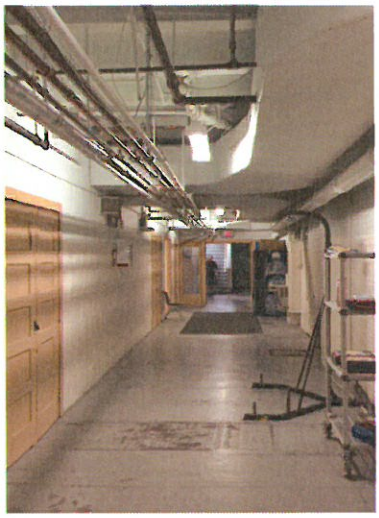
Masonry
Repointing of the exterior brick occurred in 1995.

Windows
Exterior windows were replaced in 1995. A majority of the windows are not operational at this time.

Door Hardware (where applicable)
Lever door hardware has been installed within the last ten years.





ADDITIONAL DOCUMENTATION OF EXISTING CONDITIONS

STRUCTURAL REVIEW

PURPOSE AND SCOPE

The purpose of this report is to describe, in broad terms, the structure of the existing building; to comment on the condition of the existing building; and on the feasibility of renovation and expansion of the school.

The scope includes:

1. Description of existing structure.
2. Comments on the existing condition.
3. Comments on the feasibility of renovation and expansion.

Basis of the Report

This report is based on our visual observations during our site visit on September 15, 2014 and a review of the available drawings of the original construction prepared by Adden and Parker Architects. The drawings were only a partial set of drawings of the original construction document set and were not dated.

During our site visit, we did not remove any finishes or take measurements, so our understanding of the structure is limited to the available drawings and observations of the exposed structure and the exterior facade.

BUILDING DESCRIPTION

The school is located on Sohier Road in Beverly, Massachusetts and was constructed in the 1920's. No major renovations or additions have been constructed since the original construction. The school is arranged in the shape of a pentagon, with a centrally located auditorium and two interior light wells. The gymnasium is located at the stage end of the auditorium.

The structure is supported on traditional reinforced concrete foundations. The lowest level slab in the partial basement area is a concrete slab on grade. The first floor slab above the basement and the crawl space above the remainder of the footprint of the structure is a reinforced concrete slab spanning between reinforced concrete beams, girders and columns. The upper level floors are either one way reinforced concrete ribbed slabs spanning between reinforced concrete beams supported on masonry walls and steel columns or wood floors supported on wood joists spanning between steel beams and exterior masonry walls. The auditorium balcony is wood framed structure supported on cantilevered steel beams and columns. The typical roof is wood framed with joists spanning between steel beams and masonry walls. The roof of the gymnasium and auditorium is wood planking supported on wood joists spanning between structural steel trusses spanning between steel columns.

Existing Conditions

Based on our observations, the school structure is functioning well. We observed signs of water leaks at a couple of locations. We observed signs of past repairs to the exterior façade. We did not observe any signs of foundation settlement. We did not observe or perceive any undue vibrations due to footfall on the floor slab. We did not observe any moisture related damage to the concrete structure above the crawl space.

Depending on the scope of the renovations to the school, it may be feasible to make modifications to the existing structure without requiring full compliance with the code requirements for new construction. We would recommend that any additions, if planned, be separated from the existing structure by way of expansion joints.

If any repairs, renovations, additions or change of occupancy or use are made to the existing structures, a check for compliance with 780 CMR, Chapter 34 "Existing Structures" (Massachusetts Amendments to The International Existing Building Code 2009) of the Massachusetts Amendments to the International Building Code 2009 (IBC 2009) and reference code "International Existing Building Code 2009" (IEBC 2009) is required. The intent of the IEBC and the related Massachusetts Amendments to IEBC is to provide alternative approaches to alterations, repairs, additions and/or a change of occupancy or use without requiring full compliance with the code requirements for new construction.

The IEBC provides three compliance methods for the repair, alteration, change of use or additions to an existing structure. Compliance is required with only one of the three compliance alternatives. Once the compliance alternative is selected, the project will have to comply with all requirements of that particular method. The requirements from the three compliance alternatives cannot be applied in combination with each other.

The three compliance methods are as follows:

1. Prescription Compliance Method.
2. Work Area Compliance Method.
3. Performance Compliance Method.

Comment

The approach is to evaluate the compliance requirements for each of the three methods and select the method that would yield the most cost effective solution for the structural scope of the project. The selection of the compliance method may have to be re-evaluated after the impact of the selected method is understood and after analyzing the compliance requirements of the other disciplines, Architectural, Mechanical, Fire Protection, Electrical and Plumbing.

Since the existing building contains un-reinforced masonry wall structures, the analysis and reinforcement of the existing structure would be governed by the requirements of Appendix A1 "Seismic Strengthening Provisions for Un-reinforced Masonry Bearing Wall Buildings" in the IEBC.

Prescriptive Compliance Method

In this method, compliance with Chapter 3 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of this chapter.

Additions

Based on the project scope, the following structural issues have to be addressed:

- All additions should comply with the code requirements for new construction in the IBC.
- For additions that are not structurally independent of an existing structure, the existing structure and its addition, acting as a single structure, shall meet the requirements of the code for new construction for resisting lateral loads, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.

Alterations

- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations that would increase the design lateral loads or cause a structural irregularity or decrease the capacity of any lateral load carrying structural element, the structure of the altered building shall meet the requirements of the code for new construction, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.

Work Area Compliance Method

In this method, compliance with Chapter 4 through 12 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of these chapters.

In this method, the extent of alterations has to be classified into LEVELS OF WORK based on the scope and extent of the alterations to the existing structure. The LEVEL OF WORK can be classified into LEVEL 1, LEVEL 2 or LEVEL 3 Alterations. In addition, there are requirements that have to be satisfied for additions to the existing structure.

The extent of the renovations (includes Architectural, FP and MEP renovations) for this project will exceed 50 percent of the aggregate area of the building, thus the LEVEL OF WORK for this project would be classified as LEVEL 3 Alterations. This would require compliance with provision of Chapter 6, 7 and 8 of the IEBC. If the scope of the project includes new additions to the existing structure; this would trigger compliance with provisions in Chapter 10 of the IEBC.

Level 3 Alterations

- Any existing gravity, load-carrying structural element for which an alteration causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations where more than 30 percent of the total floor area and roof areas of a building or structure have been or proposed to be involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building complies with the full design wind loads as per the code requirements for new construction and with reduced IBC level seismic forces.
- For alterations where not more than 30 percent of the total floor and roof areas of a building are involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the loads at the time of the original construction or the most recent substantial alteration (more than 30 percent of total floor and roof area). If these alterations increase the seismic demand-capacity ratio on any structural element by more than 10 percent, that particular structural element shall comply with reduced IBC level seismic forces.
- For alterations that involve structural alterations to more than 30 percent of the total floor and roof area of a building within a 12 month period, the evaluation and analysis shall demonstrate that the altered building structure complies with IBC for wind loading and with reduced IBC level seismic forces.
- For alterations where more than 25 percent of the roof is replaced for buildings assigned to seismic design category B, C, D, E or F, all un-reinforced masonry walls shall be anchored to the roof structure and un-reinforced masonry parapets shall be braced to the roof structure.

Additions

- All additions shall comply with the requirements for the code for new construction in the IBC.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For additions that are not structurally independent of any existing structures, the existing structure and its additions, acting as a single structure, shall meet the requirements of the code for new construction in the IBC for resisting wind loads and IBC Level Seismic Forces (may be lower than loads from the Code for New Construction in the IBC), except for small additions that would not increase the lateral force story shear in any story by more than 10 percent cumulative. In this case, the existing lateral load resisting system can remain unaltered.

Performance Compliance Method

Following the requirements of this method for the alterations and additions may be onerous on the project because this method requires that the altered existing structure and the additions meet the requirements for the code for new construction in the IBC.

For this project, in order to meet compliance with one of the two compliance methods "Prescriptive Compliance Method" or the "Work Area Compliance Method", we have to address the following:

Prescriptive Compliance Method

Additions

The proposed additions would be designed structurally independent of the existing structures, thus, would not impart any additional lateral loads on the existing structure.

If the proposed alterations are such that the alterations increase the design lateral loads on the existing building or cause any structural irregularity of decrease the lateral load carrying capacity of the building, the structure of the altered building shall meet the requirements of the Code for New Construction in the IBC.

If the proposed additions increase the design gravity load on portions of the existing roof members, these members would have to be reinforced and this incidental structural alteration of the existing structures would have to be accounted for in the scope of the alterations to the existing schools and would trigger requirements for alterations.

Alterations

Alterations that would increase the design gravity loads by more than 5 percent on any structural members would have to be reinforced.

If the proposed alterations of the structures increase the effective seismic weight on the existing structures due to the greater snow loads from the drifted snow against any proposed additions, or, by addition of equipment on the roof, the increase of the effective seismic weight from the drifted snow and the equipment would require that the existing lateral load resisting system comply with the requirements of the code for new construction in the IBC and it would increase the demand-capacity ratio on certain structural elements of the existing lateral load resisting system.

Work Area Compliance Method

Level 3 Alterations

If the proposed structural alterations of an existing structure are less than 30 percent of the total floor and roof areas of the existing structure, we have to demonstrate that the altered structure complies with the loads applicable at the time of the original construction and that the seismic demand-capacity ratio is not increased by more than 10 percent on any existing structural element. Those structural elements whose seismic demand-capacity ratio is increased by more than 10 percent shall comply with reduced IBC level seismic forces. The percentage increase in seismic demand-capacity ratio on any particular structural element from the added snowdrift load against the proposed addition would be fairly low, thus, this would not have any major impact on the existing lateral load resisting system, though we would have to verify that the increase in seismic demand-capacity ratio on any of those particular structural elements is not greater than 10 percent.

If the proposed structural alterations of an existing structure exceed 30 percent of the total floor and roof areas of an existing structure, we have to demonstrate that the altered structure complies with the IBC for wind loading and with reduced IBC level seismic forces.

The seismic design category (SDC) of the existing structures is 'B'; thus, the replacement of the existing roofs would trigger anchorage of un-reinforced masonry walls to the roof structures and bracing of un-reinforced masonry parapets to the roof structures. All un-reinforced masonry walls in the existing schools will have to be identified. These un-reinforced masonry walls are required to be anchored to the roof structures. Since there are no existing un-reinforced masonry parapets, this requirement does not have any impact on the structural scope of the project.

Additions

The proposed additions would be designed structurally independent of the existing structures, thus, they would not impart any additional lateral loads on the existing structures.

Comment

The compliance requirements of the two methods, in most respects, are very similar. The Work Area Compliance Method would trigger anchorage of un-reinforced masonry walls, if re-roofing of the existing structures is included as part of the scope for this project. The Prescriptive Compliance Method would require that the existing lateral load resisting systems meet the requirements of the code for new construction of the IBC, even for small increases of design lateral loads. We are required to comply with requirements of Appendix A1 of IEBC for either method, which requires anchorage of all existing masonry walls. Based on this, we would recommend the Work Area Compliance Method for the project.

The existing school structure appears to be performing well. All of the structural components that are visible appear in sound condition.

Any proposed renovations and additions would likely require that the structure be updated to meet the requirements for code for new construction. This may require addition of some shear walls, connecting the floor and roof diaphragms to the existing masonry walls and the clipping of non-structural masonry walls to the structure. All of the existing masonry walls would have to be adequately connected to the roof and floor structure.

FIRE PROTECTION REVIEW

EXISTING SYSTEM SUMMARY

There is no sprinkler or standpipe system in this building. A combined, wet-pipe sprinkler and standpipe system should be installed to protect all areas of the building.

PLUMBING REVIEW

EXISTING SYSTEM SUMMARY

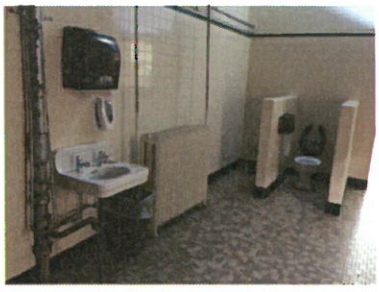
The building has a 6" domestic water servicer which runs to a 3" flange and then reduces to a 2" meter. The water pressure entering the building is 90 psi and it is reduced down to 75 psi through a 2½" pressure reducing valve. The piping beyond the service entrance is primarily threaded brass pipe which is original from 1923. The only copper piping in the building is where additions and alternations have been made such as the boiler room backflow preventer and science room improvements. The domestic water piping in the school is a constant source of leaks and is in need of a complete replacement.

Domestic hot water is generated by two (2) "Ever-Hot" tankless heaters. Both of these heaters are energized by steam from a separate boiler dedicated just to serve the tankless heaters. This boiler is a H.B. Smith 25 Mils unit with an input of 800 MBH. This hot water system serves only the kitchen and locker/shower areas. This system is recirculated with a 1¼ line having a pump. There is very little insulation of this hot water piping. The lavatories in the toilet rooms did not originally have hot water. Electric hot water heaters have been added in all toilet rooms where handicapped fixtures have been installed.

The sanitary, waste and vent system of this building flows by gravity to the municipal sewer system. This system is primarily of extra-heavy cast iron pipe with hub joints. This system is virtually all original, from 1923, and is close to reaching the end of it's useful life.

The kitchen area has a single interior grease interceptor which is reported to receive the flow from all the fixtures and drains in that space. The unit appears to have a capacity of approximately 50 gallons which is far too small for all the items connected to it.

The school had several toilet rooms upgraded with handicapped fixtures, approximately 10 to 15 years ago. All the other plumbing fixtures in the school are original from 1923. All the original fixtures are inefficient in water usage for flushing and hand washing and should be replaced. The newer handicapped fixtures meet current minimum standards, but still use more water than current LEED type fixtures.



Gas to the school enters at two (2) locations. One (1) in the boiler room, the other in the wood shop. The gas into the boiler room runs through an Eclipse gas booster and feeds the boilers. The other gas service has an interior meter and regulator. This service supplies the kitchen and science rooms.

The storm drainage of this building is via roof drains with interior rain leader drops combining on the lower levels and connecting to the municipal system. This piping is all of extra heavy cast iron pipe.

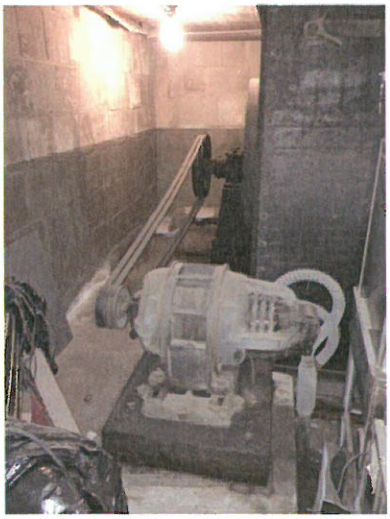
MECHANICAL REVIEW

Boiler Plant

The Beverly Middle School is heated by steam which is produced by two (2) low pressure firetube boilers manufactured by Burnham, Model BSM 150 and installed in 1955.

- Each boiler has a capacity of 150 Boiler Horsepower (BHP).
- Each boiler has been retrofitted with an Industrial Combustion burner firing on natural gas. The boilers were originally designed for oil but have now been converted to natural gas only.
- These boilers have been in continuous service since 1955, have been re-tubed multiple times and now suffer tube sheet stress issues as a result, which will prevent future re-tubing.

- Both boilers are required to fire on cold, near design days, which leaves no back-up or redundancy should a boiler failure occur.
- The Burnham boilers have far outlived their useful service life.



Boiler control is maintained by a dedicated control panel as manufactured by Heat Timer, Model MPC Platinum. This panel is fully functional.

The school also has two original 1923 vintage low pressure steam boilers which have been effectively abandoned in place and could not be put back in service to provide back-up to the Burnham boilers.

Steam condensate returns to the boiler room via gravity where it's collected in a Jennings condensate boiler feed system. The condensate receiver appears to be original vintage while the feed pumps appear to have been replaced sometime within the last twenty (20) years. The condensate boiler feed system and pumps have exceeded their service-life and should be replaced.

The boiler makeup air is accomplished through a large intake louver on the side wall. There are no automatic damper controls to close the damper when the boiler is not in operation.

Controls

The heating system has minimal operational controls. The control system is pneumatic. An Emglo duplex air compressor has been installed to replace the previous compressor. This unit is fairly new and is in excellent condition. The controls system is problematic and requires regular maintenance to locate air leaks and repair system components. The entire controls system has outlived its useful service life.

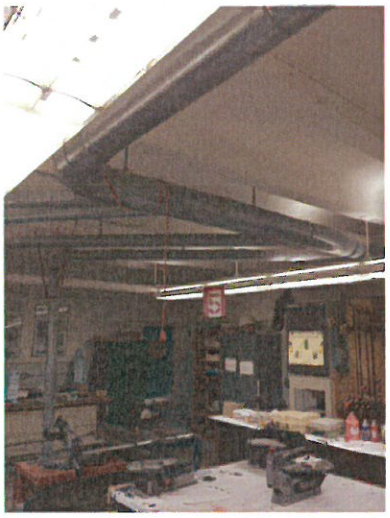
Heating System

The school is heated by a variety of cabinet heaters, exposed radiators, and fin-tube radiation of various configurations served by a system of steam distribution piping. This type of system is ancient, inefficient and hard to control. It should also be noted that exposed piping and radiators could be a burn hazard to the students.

For the most part, the existing steam and condensate distribution piping is original and dates back to 1923 and very susceptible to leaks.

Ventilation Systems

The school was originally constructed with two (2) large central fan rooms each featuring a large steam coil and fan that drew in outside air from the courtyard and distributed supply air through a system of ductwork and chases. This system has since been decommissioned and abandoned in place thus leaving the entire school with no ventilation system, which is in violation of current ventilation codes. Operable windows currently provide ventilation, which is not only impractical but also energy inefficient in the winter months.



General exhaust was accomplished by a combination of gravity vents and exhaust fans. The exhaust fans were installed when the school was constructed and have since been decommissioned and abandoned in place. The gravity vents are still present but not functional due to failed and rusted dampers.

Bathroom Exhaust Systems

The original bathroom exhaust fans installed when the school was built are no longer operational and the bathrooms have since been retrofitted with sidewall propeller fans, which are ineffective for use in school bathrooms.

Air Conditioning Systems

The original base building did not incorporate general space air-conditioning.

Some specific classrooms and offices have been furnished with dedicated window air-conditioning units. Window air conditioners typically generate excessive noise and vibration as well as being a source of drafts and leaks in the winter.

Summary

Based on the current condition and age of the HVAC systems present at the Beverly Middle School, it is our professional opinion that none of the existing HVAC systems are suitable for use or re-use in a modern educational setting where thermal comfort, indoor air quality and energy efficiency are important components of an effective school.

ELECTRICAL REVIEW

EXISTING SYSTEMS SUMMARY

The building's 1600 amp, 120/208 volt, three phase, four wire switchboard, as manufactured by Kelek Company, is located in the Basement and is fed by an underground electric service off of an electric utility co. pole located Sohier Road, via electric utility co. owned transformer in the Transformer Room. Transformer rooms within buildings are a hazard and electric utility companies are moving away from this type of installation. The electric service appears to be original to the building, is at the end of its life expectancy, and should be replaced with a new larger service to accommodate the Electrical needs of today's schools. The electric service appears to be in poor condition.

The 1600 amp pressure contact switch within the switchboard acts as the main disconnect switch for the building. The switchboard feeds panelboards throughout the building. The power distribution appears to be original to the building, is at the end of its life expectancy, and should be replaced with a new. The power distribution appears to be in poor condition.

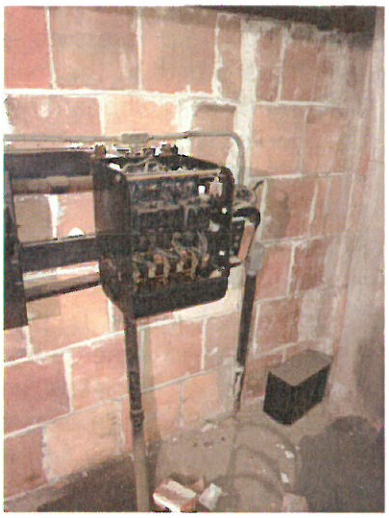
The building does not have an emergency generator. Emergency lighting is provided by exit signs with battery back-up, emergency battery units with integral light heads, combination emergency battery units/exit signs, and remote emergency light heads. Deficiencies include no emergency lighting outside of egress doors, emergency lighting not working, insufficient emergency lighting coverage, and insufficient exit signage marking paths of egress. The emergency lighting appears to be in poor condition.

The addressable Fire Lite MS-4 fire alarm control panel is located in the Main Office and appears to call the Fire Department via municipal master box. The system is limited to some pull stations and horns. A knox box is located adjacent to the Main Entrance to the building. Deficiencies of the fire alarm system include no heat detector coverage or sprinklers (full coverage is required throughout the building), points of egress without pull stations, pull stations not at ADA heights, no annunciator at the Main Entrance to the building, no smoke detector at the fire alarm control panel for survivability, no speaker/ strobes as required for voice evacuation throughout the building, and no strobes in Toilet, Conference rooms, or public spaces. The fire alarm system appears to be original to the building, is at the end of its life expectancy, and should be replaced with new. The fire alarm system appears to be in poor condition.

Interior lighting is mostly made up of wraparounds, 1'x4' surface lighting fixtures, traditional high bays, luminous bowls, linear pendants with baffles, porcelain sockets, RLM's, and striplights. The interior lighting appears to be in poor condition and should be replaced with new.

Exterior lighting is mostly made up of wall packs, surface ceiling lighting fixtures, electric utility co. owned flood lights on utility poles, and pole mounted globes by the Main Entrance to the building. The parking lots also appear to rely on electric utility co. owned cobra heads to light parking lots. The exterior lighting appears to be in poor condition and should be replaced with new.

Receptacles, switches, and wall plates are of various finishes and colors. Receptacles are ground type. Receptacles have been added over the years through the use of tele-power poles, conduit, plugmold, and wiremold. Receptacles and switches appear to be in poor condition and should be replaced with new. Automatic shutoff should be provided through use of occupancy sensors and lighting control panels to meet International Energy Code requirements. Additional receptacles to accommodate computers should be provided to meet the needs to today's Classrooms.



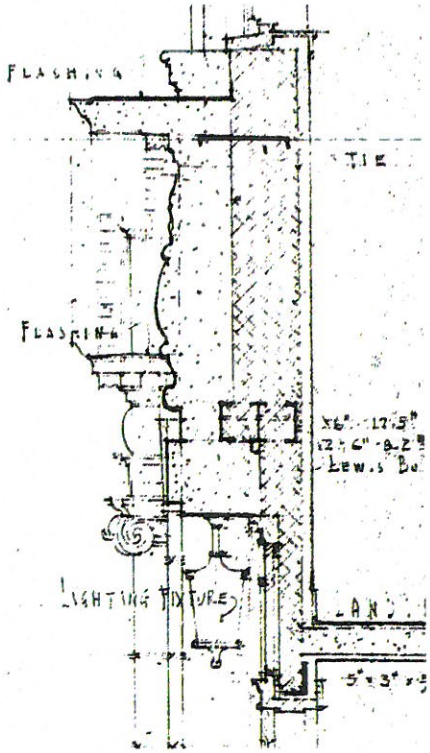
The building does not have a lightning protection system.

BUILDING CODE ANALYSIS

MASSACHUSETTS STATE BUILDING CODE

The Massachusetts State Building Code (780 CMR) has been updated and amended a number of times since the construction of the building. The State Board of Building Regulations and Standards regularly updates and amends its regulations. Based on these regulations, we found the following items to be in non-compliance:

- Occupied spaces (classrooms and offices) currently provide an entrance from within an egress stairway.
- Egress stairway enclosures, including door assemblies, require a minimum two-hour fire separation assembly.
- Boiler room does not have a one-hour rated fire separation assembly due to size of room and boilers.
- Two means of egress from spaces having an occupant load of greater than 50.
- Fire extinguishers.
- Fire separation assembly between Use Group E (Educational) and Use Group A-3 (Assembly – Cafeteria, Gymnasium, Auditorium) (one-hour fire separation required).
- Handrail and guardrail at egress stairways.
- Wood floor structure not allowed in building of this type and size.
- No sprinkler system.



ENERGY CONSERVATION

The Beverly Middle School was constructed in 1923, which was prior to the historic energy shortages of the 1970s and escalating oil prices of 2005. The emergence of a new energy code in 2000, which promoted an increased knowledge of exterior building envelope construction techniques and materials, has dramatically changed the way in which buildings respond to energy efficiency issues. The Beverly Middle School building does not include a single component, including the replacement windows (exterior walls, roof, etc.) that would meet the current energy code or any of the typical guidelines for conscientious energy consumption.

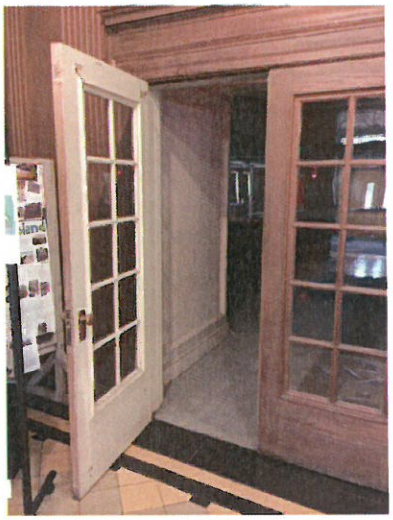
HANDICAP ACCESSIBILITY REVIEW

Requirements for handicap accessibility in building planning and design were non-existent in 1923 when this building was originally designed. However, on January 26, 1992, the Department of Justice implemented Title III of the Americans with Disabilities Act (ADA) into Public Law. Additionally, on September 1, 1996, the Commonwealth of Massachusetts developed its own accessibility regulations, 521 CMR Architectural Access Board (AAB), which in some instances is more restrictive than ADA guidelines. The ADA and AAB regularly update and amend their regulations.

These regulations "prohibit discrimination on the basis of disability by private entities in places of public accommodation." The regulations require all new places of public accommodation, including schools, to be designed and constructed so as to be readily accessible to and usable by persons with disabilities. Existing structures being renovated that exceed 30% of the equitized assessment of the building or its replacement value must fully comply with the regulations for new construction.

Beverly Middle School's assessed building value is $5,376,500, therefore any renovations or additions to the existing school that exceed the cost of $1,612,950 would require full compliance with the regulations for new construction. Beverly Middle School is identified as 20 Colon Street on the City of Beverly's assessors database.

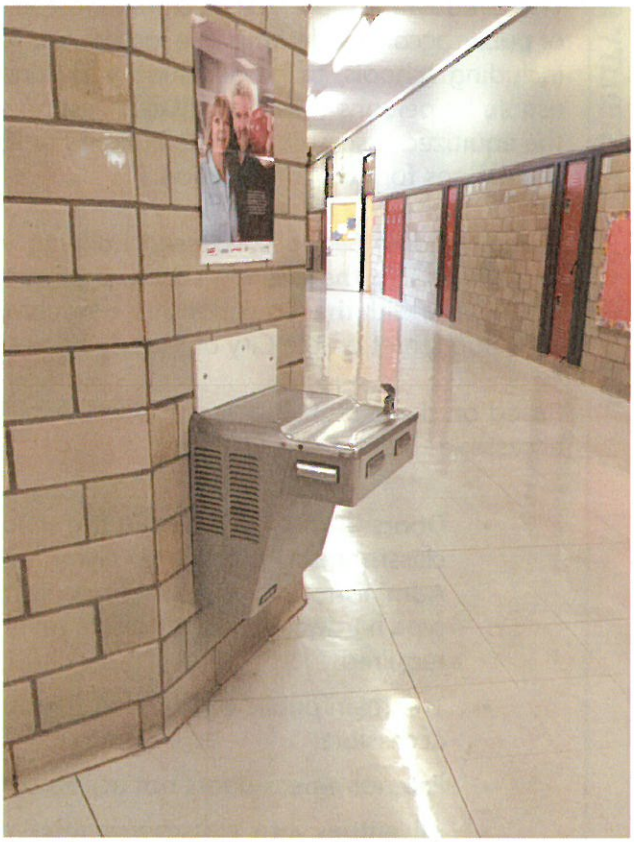
Based on these regulations, we found the following items to be in non-compliance or not accessible to the disabled:



- Doors leading to rooms in the school including classrooms, Auditorium, Gymnasium, Library, Administration, etc. Non-conforming knob-type hardware currently exist. Lever handles are required.
- The main public entrance to the building is not accessible.
- Exterior egress doors not accessible.
- All entries into classrooms require clear floor space adjacent to latch side of the door for entry and exit.
- Check-in counter at Administration Office.
- Lack of proper interior building signage (braille).
- Toilet rooms.
- Water fountains.
- Access to stage from the main floor within the Auditorium.
- Wheelchair and companion seating in the Auditorium.
- Library Circulation Desk.
- Accessible sink where provided.

- Ramps must be reconfigured for proper handicap slope and handrails.
- Floor level changes.
- All stairs (handrails and nosing).
- Alarms and strobes within classrooms.

Each of the inaccessible features listed above has an impact on the ability of disabled students or members of the community to access various spaces throughout the school independently. Disabled persons may include students with permanent handicap conditions, students that are temporarily disabled from athletic activity, and parents, staff or other visitors that could have any form of disability. Any future plans should incorporate as many items as possible to accommodate disabled people to the fullest extent possible.



HISTORICAL ANALYSIS

Beverly Middle School is not currently listed on the National Register of Historic Places and does not appear in the Massachusetts Cultural Resource Information System.

Although the property is not listed on either of these databases, it may not preclude it from a review by the Massachusetts Historical Commission.

Per 950 CMR 71.00, any project that is undertaken by a local government that seeks the provision of financial assistance by a state body (MSBA) is required to submit a "Project Notification Form."

As part of this process, either the state body or the local government is required to provide notice to the Massachusetts Historical Commission (MHC) of the project. After receipt of notice, the MHC will review any adverse effects, direct or indirect, from the proposed project on any property listed in the State Register of Historic Places. If the MHC determines that a project will have an adverse effect on a State Register property, then the MHS, the state body, and the local government will consult to discuss ways to eliminate, minimize, or mitigate the adverse effects. The local government must adopt all prudent and feasible means to eliminate, minimize, or mitigate the adverse effects.