

Wolcott High School



2 Executive Summary

Building Information

This section contains the executive summary, which provides an overview of the building and summarizes the survey results. Graphs are included to represent current conditions of the building's components and conformity with IBC, NFPA and ADA requirements. Photographs of various elevations of the building are provided for reference. This section also provides a summary of the opinion of probable costs, presenting a graphic comparison of the work required to address the deficiencies uncovered during the survey versus the cost of replacing the structure. At the end of Section 2, a chart provides an overview of the required work addressed by the building survey and potential replacement costs.

Wolcott High School

Stories	Two
Area	179,167
Address	457 Bound Line Road, Wolcott
Original Construction	1965
Addition(s)	1976
Grades	9-12
Description	School

Architectural Survey

The exterior skin of Wolcott High School is brick and painted wood, which are in fair to poor condition respectively. The roof consists of 4-ply built-up roofing, which is in poor condition.

Typical windows have aluminum frames; exterior doors are aluminum or painted metal. The windows are in fair condition and the exterior doors are in fair to good condition. The exterior sealants of the doors and windows are in fair condition.

The building interior is in good condition.

The work recommended to address exterior architectural conditions includes:

- Replace, repoint and/or repair all cracked brick masonry veneer
- Install waterproofing at all badly deteriorated brick wall veneers
- Clean out all weep vents and flashing cavities for proper masonry cavity drainage
- Replace all existing painted wood fascia, soffits and panels at the building exterior with new prefinished low maintenance finish material
- Seal all joints which are not properly sealed
- Paint all materials which are not properly painted, including steel lintels, hollow metal doors and frames
- Clean the existing masonry veneer at required locations
- Remove and rebuild existing roof overhang enclosure at the south and west sides of the original building's southwest wing
- Cut in brick expansion joints at all compressed expansion joints
- Repair all brick masonry parapet walls
- Install insulated garage door at the stage area
- Install new door assemblies at the Tech. Ed./Shop Area
- Replace louver/fan at the Kitchen Area
- Install EIFS system or Insulated Metal Panel system at all plywood opening enclosures
- Install new soffits and/or repair and paint soffits at stair towers, entrances and overhangs
- Replace VCT flooring
- Replace carpeted flooring
- Install new suspended acoustical tile ceiling systems and/or tiles
- Renovate all bathrooms and toilet rooms
- Install an additional elevator if future scope of work requires

The work recommended to address roof conditions includes:

- Complete tear off of the existing built-up tar and gravel roof system down to the structural roof decking
- Install new tapered roof insulation and cover board
- Install new roof drains and additional roof drains as required
- Install new overflow roof drains with associated overflow piping system
- Install new metal roof edge flashings, counter flashings, and flashings at all roof penetrations as required
- Install new 20-year EPDM single-ply roofing system (2020)
- The existing Built-Up roof requires immediate attention. The existing roof has approximately 4 years of useful life

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Structural Survey

The building is typically constructed of steel frame that is in good condition. The roof is supported by steel trusses and beams. The foundation consists of a concrete floor slab.

The work recommended to address structural conditions includes:

- Investigate the sagging structural steel hung lintel over the front entrance.
- Investigate the through bolted connection at the exterior wall mounted flagpoles.(2) and the associated cracking at the interior concrete masonry. The two flagpoles installed are on the exterior of the building near the front entrance. (Refer to Photo 86 of the Architectural Photos)

Mechanical Survey

The mechanical system is comprised of three gas-fired hot water boilers which are in excellent condition. There are window air conditioning units and ductless split units for cooling.

The work recommended to address mechanical systems conditions includes:

- Combustion air piping for boilers and water heaters shall be installed as per manufacturer's requirements
- Provide ventilation for building as required per 2003 IMC, section 401
- Install an air conditioning system for the building
- Provide make-up air for Kitchen hood as required per 2003 IMC, 508
- Provide cooling for CAD Server Room
- Install exhaust for all Custodial closets as required per 2003 IMC, section 510
- Install vehicle exhaust in Auto Shop as required per 2003 IMC, section 502.14
- Kitchen appliance hoods should be considered in the Life Skills Room
- Exhaust for the kilns shall be as required per 2003 IMC, section 923.1.1
- Smoke evacuation for the Stage shall be installed as required per 2003 NFPA 101, section 12.4.5.5.1
- Confirm classification of Science Labs, Exhaust shall be provided as required per 2003 IMC, section 510
- Exhaust shall be provided for the Chemical Storage/Prep Room as required per 2003 IMC, section 510
- Install mechanical exhaust in 2nd floor Boys Room per required per 2003 IMC, section 403
- Mitsubishi condensing unit: Safety rails are required per 2003 IMC, section 304.10
- Replace damaged radiator covers
- Consideration should be given to re-balance entire HVAC system

Electrical Survey

The electrical service is fed from a pad-mounted transformer. The service entrances are in good condition.

The work recommended to address electrical system conditions includes:

- Consider service upgrade if additional power requirements are needed.
- Receptacles are at there maximum usage, numerous power strips being utilized. Consider installation of additional receptacles.
- Replace damaged interior and exterior receptacles.
- Remediate general electrical issues (i.e.. open j-boxes, etc.)

Plumbing Survey

The plumbing system enters the building from Bound Line Road and is fed into a water storage tank. There are multiple sanitary lines that run from the building.

The work recommended to address plumbing systems conditions includes:

- Combustion air piping for water heaters shall be installed as per manufacturer's requirements
- Provide emergency eyewash station at all custodial closets with mop sinks per IPC 2012
- Provide ADA compliant toilet rooms per ANSI A117.1 2009
- Install air gaps at floor drains at prep sinks as required per IPC 2012
- Provide ADA compliant drinking fountains per ANSI 117.1 2009
- Upgrade plumbing fixtures as necessary to water conservation type
- Replace damaged roof drain covers/clear debris from roof drains

Fire Protection Survey

There is no fire protection system within this building.

The work recommended to address the lack of fire protection system includes:

- Install limited fire protection system to Boiler Room to provide protection
- Fire protection shall be installed at the Stage as per NFPA 101 2003, section 12.4.5.10 (Fire Protection) & 12.4.5.12 (Standpipe)
- Installation of a fire protection system throughout the building should be considered

Lighting Survey

The lighting service is comprised of fluorescent and CFL lighting fixtures which are in good condition.

The work recommended to address lighting system conditions includes:

- Replace lighting fixtures with energy efficient LED type as necessary.
- Replace existing emergency lighting fixtures.
- Replace exterior lighting (site & building) with LED type fixtures.

Fire Alarm Survey

The fire alarm service is an addressable, Honeywell E3 system with an audio voice generator and is in good condition.

The work recommended to address fire alarm system conditions includes:

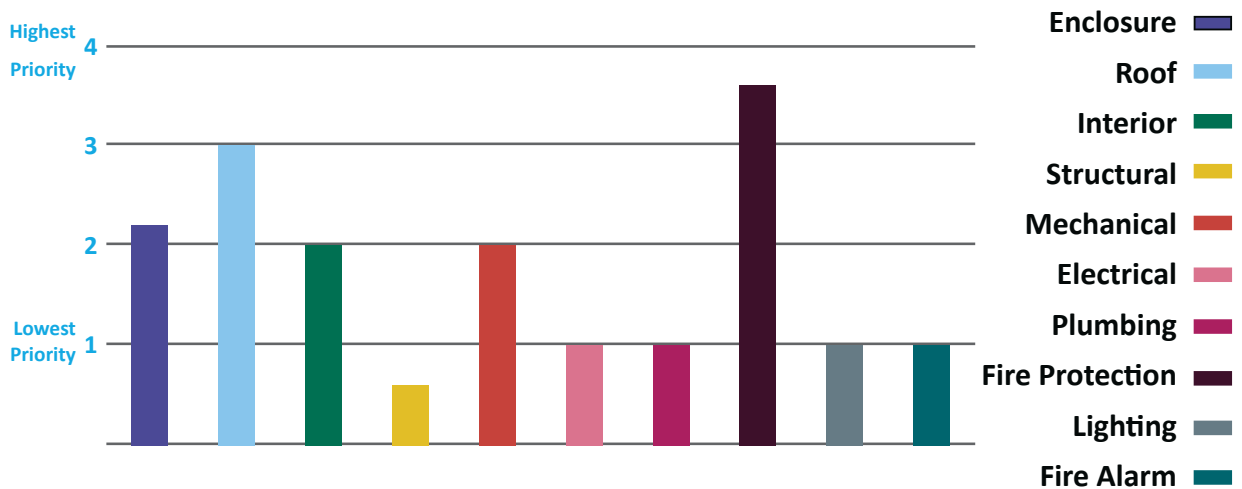
- Install horn/strobes to exterior of building
- Testing and service Fire Alarm system as required per NFPA 72, section 10.4.3
- Upgrade system to meet NFPA 101, IBC 2012, IFC 2012 & ANSI 117.1 2009
- Install additional devices to meet NFPA 101, IBC 2012 & IFC 2012
- Exercise voice evacuation system

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Survey Results

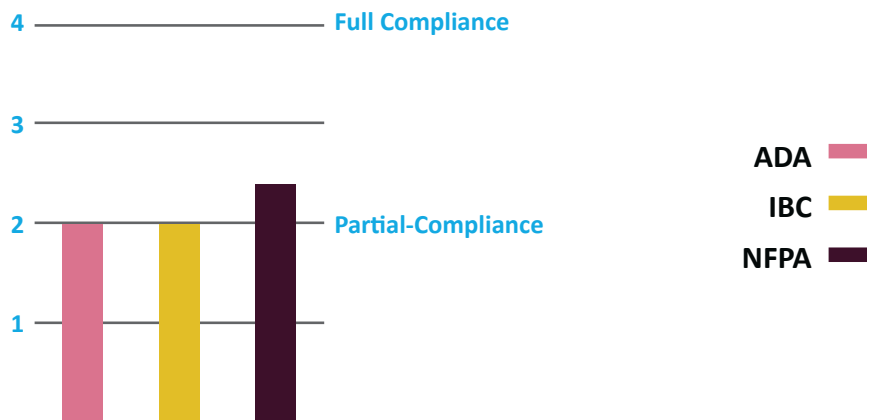
Each of the elements that were reviewed under this assessment was ranked on a scale of 1-4, with a 4 rating equating to the highest priority. Components that received a ranking of 3 should be considered to be moderate priorities, while rankings of 2 and 1 are considered to be low priorities. The following chart graphically presents the survey results (reference Section 4 for a detailed description for each category).

Prioritization of Required Work

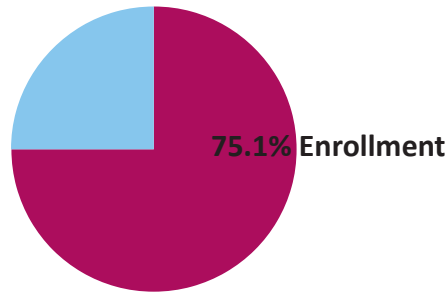


The graph below represents the building's overall conformity with IBC, NFPA and ADA requirements. Compliance was rated on a scale of 1-4, with a 4 rating equating to full compliance. A rating of 2 or under indicates that the building requires moderate to substantial code compliance updates in order to protect the safety of the building's occupants.

Code Compliance Evaluation



State Space Standards Capacity



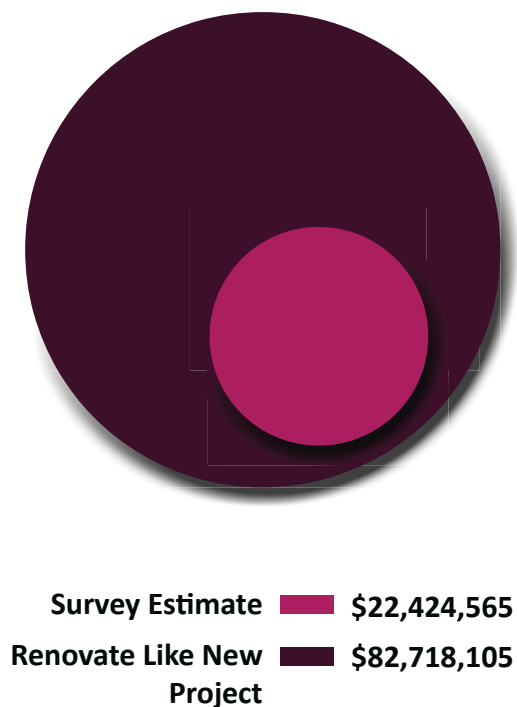
Summary of Recommendations

<p>Program and Conceptual Plan</p>	<p>Based upon the space utilization information gathered, a program accommodating the various functions of the building indicates the following minimum needs:</p> <ul style="list-style-type: none"> • Modernization of the existing elevator • Bringing all fire separation walls up to Code • Replacement of the roof and M/E/P systems past their useful life • Consideration of an electrical service upgrade <p>These program recommendations have been used to generate a conceptual plan (Section 10) which illustrates the program assessment and recommended improvements. The proposed plan is based on meeting the needs of the users and upgrades required to comply with current applicable code, while also meeting the overall goals and projected enrollment of Wolcott Board of Education.</p>
<p>Opinion of Probable Costs</p>	<p>The estimate of probable costs included in Section 8 of this report is designed as a planning tool for Wolcott Board of Education. Estimates do not account for a possible change of use.</p>
<p>Required Work</p>	<p>The estimates reflect bringing the building, in its present configuration, into compliance with current applicable codes and addressing the needs of the various building components (architectural, structural, mechanical / electrical / plumbing / fire protection and site). The projected renovations for these components would upgrade the building to a good condition.</p> <p>Based on analysis, over the next 10 years, the required work at this building will cost approximately \$22,424,565 At 179,167square feet, renovations at this building equate to approximately \$151 per square foot. This cost-per-square-foot figure falls within industry standards for renovations / upgrades of this nature.</p>
<p>Replacement Cost</p>	<p>A similarly constructed building would cost \$400 per square foot. Using this figure, the replacement cost for this building is approximately \$95,400,000, which follows state standards for structures of this type. The \$400 per square foot replacement cost was obtained from R.S. Means Construction Cost Data and current local market conditions for buildings of this type. The estimate includes hard construction costs, demolition costs, construction contingencies, design costs, and other “soft costs”.</p>
<p>State Reimbursement</p>	<p>The municipality’s current reimbursement from the State of Connecticut Department of Education for eligible items is 62.5%, and the building is at 75% capacity. These factors would effectively adjust the community’s portion of the costs from 37.5% to 53%.</p>

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Executive Summary Chart

The chart below indicates the estimated value of the required work addressed by the building survey alongside the potential replacement cost. The replacement cost is provided as a guideline for comparative purposes and is based on replacing the building as is, i.e. size and use. Information considered includes the type of structure, year built and existing area for the building.



The required Alteration work addressed in this survey equates to approximately 27% of the construction cost of a Renovate Like New project. Comparative Replacement costs for a new building would be \$95,400,000. Site acquisition costs were not factored into this comparison.