

ABBOT SCHOOL

25 Depot Street

Year Constructed: 1955
Year of Renovation/Addition: 2005 and Unknown
Building Type: E
Construction Type: IIIB
Fire sprinklers: No
Total Floor Area: 56,816 SF
Floors: Basement, First and Second.
Assessor Lot # 026 0086 0000



GENERAL:

One of the older school facilities it has numerous items that require repair or improvement. The cost of these items is far below the replacement cost of the building indicating that the repair approach is justified.

LIFE SAFETY:

4 Typical, borrowed lights with wired glass are located in the hallway walls of most class rooms are all covered to reduce visibility into classrooms. Remove for security reasons and infill wall areas.



2 Guardrail at Mezzanine at Stage is not OSHA compliant. Make rail 42" high and add 4" high toe kick at floor.



HEALTH:

HAZARDOUS MATERIALS:

Pipe insulation:

- Pump Room - 200 linear feet assumed to be Asbestos. Repair or remove as recommended by 2012 AHERA Report.
- Gymnasium - 25 linear feet assumed to be Asbestos. No Action Required as recommended by 2012 AHERA Report.



- Throughout the school - 5,000 linear feet assumed to be Asbestos. No Action Required as recommended by 2012 AHERA Report.

1 We recommend that all asbestos containing pipe insulation in occupied areas be removed and replaced. In areas such as the restroom the pipe insulation has been damaged and should be replaced and wrapped with plastic sheathing.

12" x 12" Vinyl floor tile under carpet:

- Throughout the school - 7,500 square feet assumed to be Asbestos.
 - Cafeteria - 7,500 square feet assumed to be Asbestos.
- No Action Required as recommended by 2012 AHERA Report.

12" x 12" Vinyl floor tile:

- Office Area - 100 square feet assumed to be Asbestos.
- Stage Areas - 250 square feet assumed to be Asbestos.

No Action Required as recommended by 2012 AHERA Report.



9" x 9" Vinyl floor tile:

- Office Area - 100 square feet assumed to be Asbestos.
- Stage Areas - 250 square feet assumed to be Asbestos.

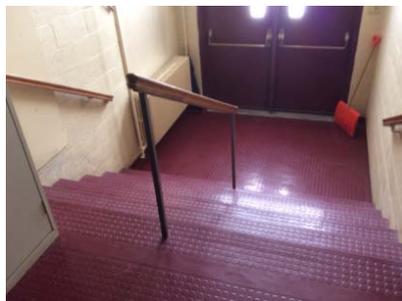
No Action Required as recommended by 2012 AHERA Report.

1 Any exposed asbestos containing floor tile in occupied spaces should be removed and replaced.

Ceiling panels are not listed in the AHERA report but could be adhered with asbestos containing cement. Their replacement is recommended under interiors.

ADA COMPLIANCE:

3 Main stairs not ADA compliant, low guardrail, no handrail, no handrail extensions and nosing's exist on the treads. Similarly, stairs in halls to Stage are not ADA compliant. Increase height of guardrail, add continuous handrail with top and bottom extensions in accordance with ADA. Infill area beneath



projecting nosings and vinyl treads and risers.

- 3 Corridor doors at stairs are too narrow similarly halls to and from stage have narrow doors. Replace with new asymmetrical pairs of doors with one leaf 36" wide. It was noted that a number of corridor doors are kept open with magnetic hold-open devices which provides accessibility during normal day to day operations, but these door will close during a fire alarm creating a barrier to persons with disabilities.



- 3 All Classrooms doors to adjoining rooms have knob set hardware. Similarly the follow doors have knob set hardware: Staff room, Copy room (4 doors), Storage room and Workshop off Stage. Remove knob sets and install lever hardware.



- 3 Staff Room, and rooms 6 and 7 sinks are not ADA accessible. Replace with accessible sinks and cabinets.



- 3 Nurses suite restroom needs to have insulation on the pipes below the sink.



- Narrow door with knob set to Phone booth. Pay phone too high, not ADA accessible. We assume the phone booth is abandoned and do not recommend any action.



3

Kitchen Office door too narrow. Doors need to be a minimum of 2'-10" wide.

Back of stage toilets are not ADA accessible. New toilets in most recent addition are available to this area.

3

Gym Bleachers have no designated area for wheelchair users. Modify bleachers to provide space for wheelchairs.

3

Handrails on exterior steps do not meet ADA. Replace with handrails with correct extensions.



3

In three locations steps from the building do not have handrails. ADA compliant handrails need to be added.



3

Rear ramp should be provided with handrails.



SITE:

4

Joint in slabs at exterior south door needs to be cleaned out, concrete patching applied to create a straight joint and sealant added.



3

Exterior paving at west entrances has missing or loose mortar. Rake out joints and re-point. Similarly, re-point granite steps where mortar is loose or missing.



EXTERIORS:

In December 2011 a Sika Sarnafil Roofing PVC system was installed on approximately 3,500 square feet of roofing above the Education & Culture Area of the school and is warranted for 20 years expiring in December of 2021. There were no other records for warranties.



- 4 PVC roof has raised sections that follow the lines of joints in the insulation below. Normally this could be caused by internal air pressure but this is unlikely in a school. We recommend that under the warranty the manufacturer be requested to send someone out to rectify the problem.

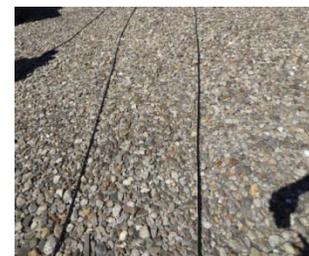
- 1 The higher south roof has a ballasted Carlisle EPDM membrane. Wind has blown smaller stones on to the lower roof but of most concern is the west end of the roof where wind has been lifting the roof membrane and has moved stone away from the perimeter of the roof. In the right wind condition this could cause a catastrophic failure of the roof as the membrane is not attached. As a minimum the stone should be redistributed over the loose membrane, but preferable ASTM D448 size 2 (2.5" dia.) stone should be installed for the first four feet of roof at 13 pounds per square foot.



- 3 Stone appears to have been blown off the south roof onto the lower roof. We believe this is caused by the gravel stop being too low. Replace north gravel stop with a higher type to retain stone.



- 4 Loose cables run across roof. These will not damage the roof but could deteriorate from rubbing on the stone. It is recommended that they be placed in conduits with stands to raise them above the roof surface.



- 3 Chimney needs to have top three courses re-pointed inside the flue and the cement wash replaced with a metal cap.



- 3 Base flashing around chimney needs to be replaced.

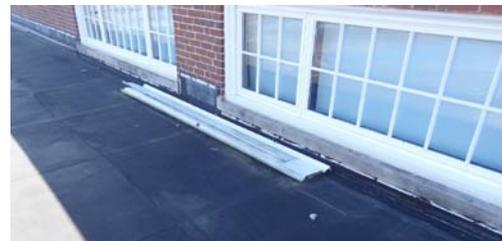


- 2 Roof drains on southern fully adhered section of EPDM roof are old type with sheet metal baskets that are damaged and need to be replaced with cast iron drains.



- 3 Roof drains have plastic gratings that need to be replaced with cast iron type. The plastic type can deteriorate in UV light blow away in wind and are easily broken.

- 4 Wall flashing at the lower north end EPDM roof has only a termination bar at the top of the membrane. Add a cap flashing that is cut into the wall and sealed to prevent reliance on a soft joint to keep the flashing from leaking.



- 3 Edges of seams in membrane (north roof) are starting to lift. The membrane appears to be in good condition. Seams should be redone to extend the life of the roof.



- 3 Roof edging on the north wing has started to come loose. Re-secure to cleat.



- 3 Leaks are reported at the cupola. Visual inspection from the ground suggests this may be caused by loose siding on the cupola. Repair or replace siding to ensure a secure installation. Further investigation should be made during this work to determine if other factors are causing the leaks and appropriate repairs made.



- 4 The historic wind vane appears to be rusting. Exterior surfaces should be refinished.

- 4 There are a number of louvers that are damaged and need sealant at the perimeter. Replace severely damaged units, rake out perimeter joint and apply new sealant and backer rod. Most unit ventilator louvers need replacement.



- 2 Brick and mortar is damaged at the steel lintels at various locations around the building but most uniformly on the north addition. The steel lintels in the exterior facade should be cleaned with a wire brush and painted to resist further corrosion. Repointing of the masonry joints and replacement of select bricks is required at all loose or deteriorated masonry locations.



3 At the concrete foundation walls remove any loose material, clean and prepare the existing surface with a bonding agent, and replace spalled areas with concrete.
We would recommend that shrinkage cracks in the foundation walls be repaired with caulking to resist water infiltration.



3 At the two retaining walls adjacent to the loading dock, clean any exposed and corroding reinforcing bars with a wire brush and patch the concrete with a bonding agent and cementitious material to resist further water infiltration and deterioration to the wall structure. A similar repair should be applied at any spalled concrete and exposed reinforcing in the building façade in the location of the boiler room.



4 West facing entrance surrounds are peeling. Scrape and re-paint entrances.



3 Ice dams are evident on the building occurring at the roof then creating icicles on windows sills below. These are typically caused by gaps in the insulation of the attic allowing heat from the building to melt roof snow. It is recommended that spray foam insulation replace the insulation at the buildings perimeter.



- 2 Loading dock area should have a removable railing and handrails on steps.



INTERIORS:

- 4 There are large areas of the building that have 12x12 or 24 x 24 adhered ceiling panels. Panel adhesive may contain asbestos. These should all be replaced with suspended acoustical panels. Spaces include: Closets off of Main Office (80SF), Rm M5, Custodial room (50SF), Gymnasium, Stage including a portion of Mezzanine, Cafeteria, two Practice rooms (290 SF), Storage room (150 SF), Workshop (off stage).



- 4 Typical all Classrooms, doors are not lockable except from the outside and no clearance on jamb side. A "refrigerator magnet" is removed from between the door and jamb to quickly lock doors. A more permanent solution would be to replace the locksets (see next item).



- 3 Most doors are in poor condition. Replace wood doors and upgrade locksets to provide levers in classrooms.

Boys and girls main restrooms have a number of minor issues:

- 4 Exhaust grilles behind toilets are corroded and need to be re-painted.
- 4 There are various holes on glazed block walls that need to be sealed.



- 4 There are a few cracks in the walls that need to be caulked.



- 4 Walls need to be painted in Nurses suite.



- 4 Threshold at main entrance doors has been damaged by salts. Patch concrete threshold.



- 4 At stair well, a 6 foot section of floor tiles are cracked at corridor doors and need to be replaced cracked at doors. Prior to replacement the slab edges should be ground down.



- 3 Lockers throughout school are old and rusted. Replace with new.

- 4 Throughout the school there are areas of acoustical 2x4 ceiling panels that are dirty, sagging or the grid has become loose. Repair damaged grid, replace badly sagging tiles and re-finish aged 2x4 ceilings.



4 Room 26, Repair holes in wall where equipment was removed.

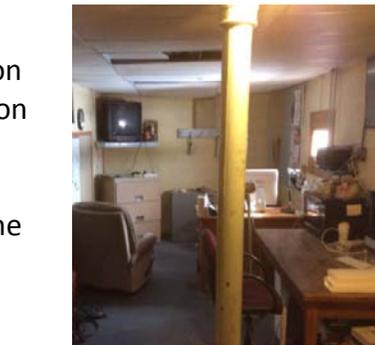
3 Where interior partitions meet the east side exterior walls cracks have developed. This has also occurred in the delivery area. Repair cracks with caulking and re-paint.



3 Lobby in kitchen area by the freezer has about 20SF of wall (at floor) that needs to be repaired and repainted.



4 Stage and workshop next to stage have floors that are in poor condition, Strip and re-finish wood stage floor.



2 There is an enclosed Office on the Mezzanine level. This is not permitted by code. A new location for the office needs to be found on the main floor.

4 Fiberboard panels over Mezzanine stair need to be repaired and re-painted.



2 Ladder is available for students to climb. Add a solid door at base with padlock to prevent this occurrence.

4 Insulation in Attic is in good condition but disturbed in a couple of areas. Verify and repair disturbed areas to form a tight thermal barrier to the spaces below. (Also see exterior notes).



3 Install a steel angle lintel over the 2nd floor boys' restroom door and repair the related cracking in the masonry.

3 At the attic ladder, we would recommend grouting the masonry solid at bolt locations and replacing the bolts.

4 In the attic, we would recommend installing hardware (Simpson Strong-Tie) to reinforce the connections (especially at toe-nailed locations) to resist uplift due to wind loads.



ENERGY & WATER CONSERVATION:

4 Most of the original exhaust fans (16) located in the attic are operational. These fans could be upgraded with premium efficiency motors.

4 Boiler room piping is un-insulated due to boiler replacement. Insulate piping.

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION: (see individual reports for detailed description).

2 The building does not have a fire sprinkler system. This should be added to the building.

3 Main toilet rooms are not ADA compliant and do not appear to have adequate space to achieve compliance. Provide MAAB/ADA compliant single toilet rooms on each floor adjacent to main toilet rooms

3 Renovate a minimum of two staff toilet rooms to provide adequate accessible staff restrooms.

2 Replace removed dishwasher booster in kitchen to provide adequate water temperature for sanitizing.

2 There is no hot water expansion compensation device in the boiler room. Install bladder type expansion tank.

2 Domestic water pressure is about 90 PSIG. Install main pressure reducing valve set at 70 PSIG.

1 There is no make up air for the water heater. Provide make up air system.

- Drinking fountains throughout building are not ADA compliant. Provide drinking fountains that serve both heights (2).
- 4 There is approximately 500 LF of pipe insulation missing from domestic water throughout building. Add insulation.
- 3 Wall hydrants are non-functioning or do not provide cross connection control. Provide new non-freeze type wall hydrants with integral vacuum breakers.
- 3 There is severe corrosion on lower level domestic water valves. Replace approximately 30 valves.
- 2 There is no main tempering valve for domestic hot water. Provide new main tempering valve to regulate temperature to fixtures.
- VFD have not been installed on emergency back-up pumps and may be added if full control is desired.
- There are a number of mechanical issues for which further investigation is necessary to determine the actual cause of the problems. A budget is included more as a place holder until such investigation can occur:
- Older unit ventilators regularly require air to be manually vented.
 - Music room may not have adequate natural ventilation and a mechanical system may be required.
 - FTR control valves and/or thermostats are not functioning properly. These need further evaluation.
 - The new 2005 classrooms do not have exhaust systems to relieve pressurization and may be causing reduction of outdoor ventilation.
 - Copper and steel heating pipes throughout building lack isolation valves resulting in challenging repair and maintenance issues. System should be evaluated to determine distribution of new valves.
- 4 Branch piping to FTR is generally exposed in classrooms creating a potential burn hazard. Insulate exposed piping.
- 4 Air handling unit over stage is noisy and in need of replacement. It should be noted that unit is difficult to access and is built into the building.

- 2 Ductwork for the kitchen hood does not meet the code for grease laden hood duty and needs to be replaced with code compliant duct.
- 4 A pneumatic control system is provided for the building and there are reports of occasional pneumatic and thermostat failures. Replace with DDC system/electric actuation.
- 2 Conduit, wiring & equipment partially demo'd throughout and/or appear to be in poor condition. Remove and/or replace
- 3 Distribution panels throughout appear that parts of distribution system is partially in use or not in use. Consolidation of distribution system is suggested.
- 4 60 kw Generator and Emergency lighting on generator appears to be in poor condition. Repair or Replace
- 3 Stage lighting controls are outdated and in poor condition. Replace stage lighting control with updated system is suggested
- 4 Appears that not enough general use receptacles throughout building. Adding receptacles is suggested.
- 2 120V 20 A receptacles in kitchen & within six feet of sinks are not GFCI protected. Install GFCI protection for 120V 20A receptacles.
- 3 Toggle & Occupancy sensors. The addition of occupancy sensors in all remaining applicable areas is suggested.