

## Buffalo Lake-Hector-Stewart Public Schools

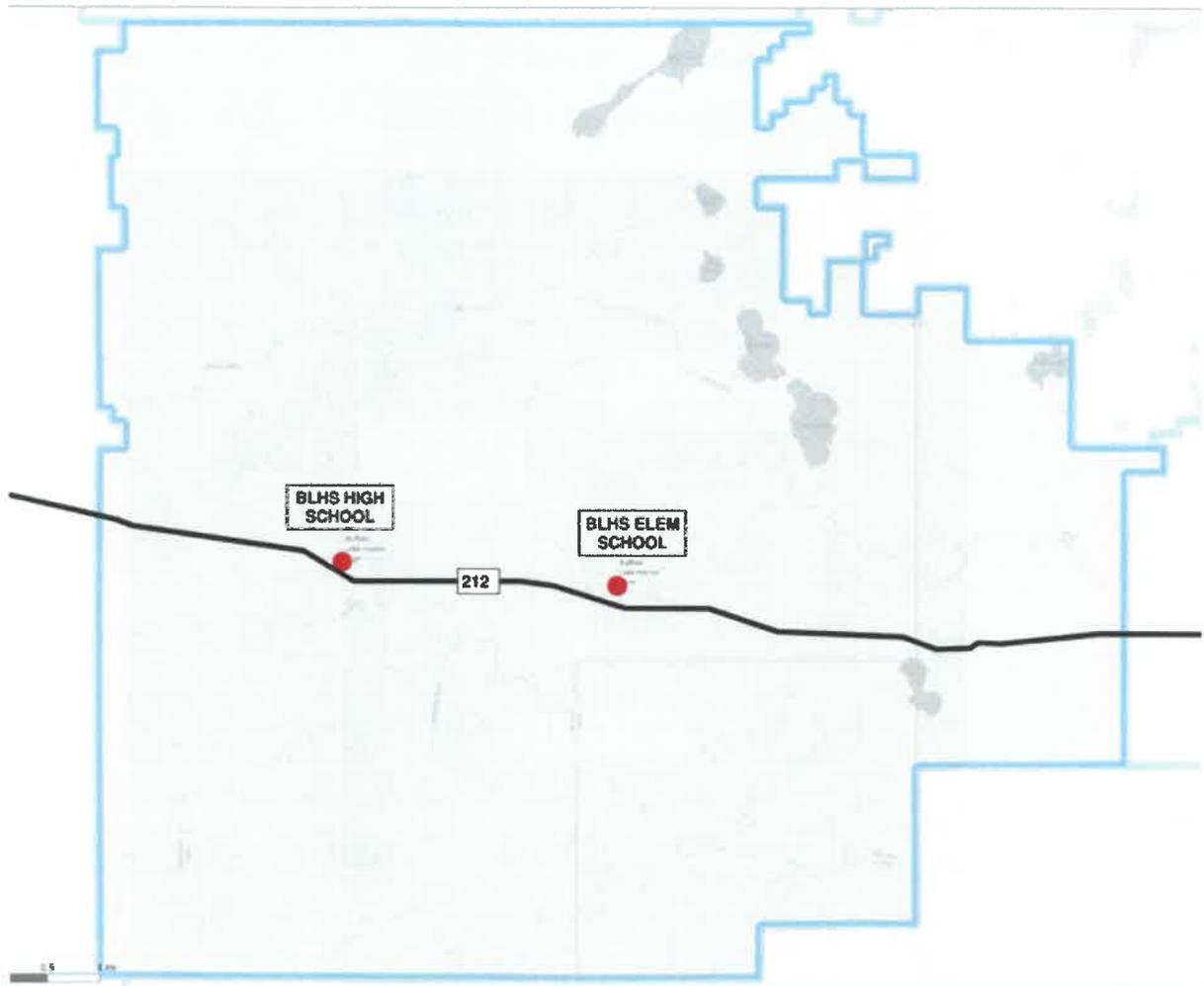
### Facility Assessment Report April 19, 2021 –Draft 2

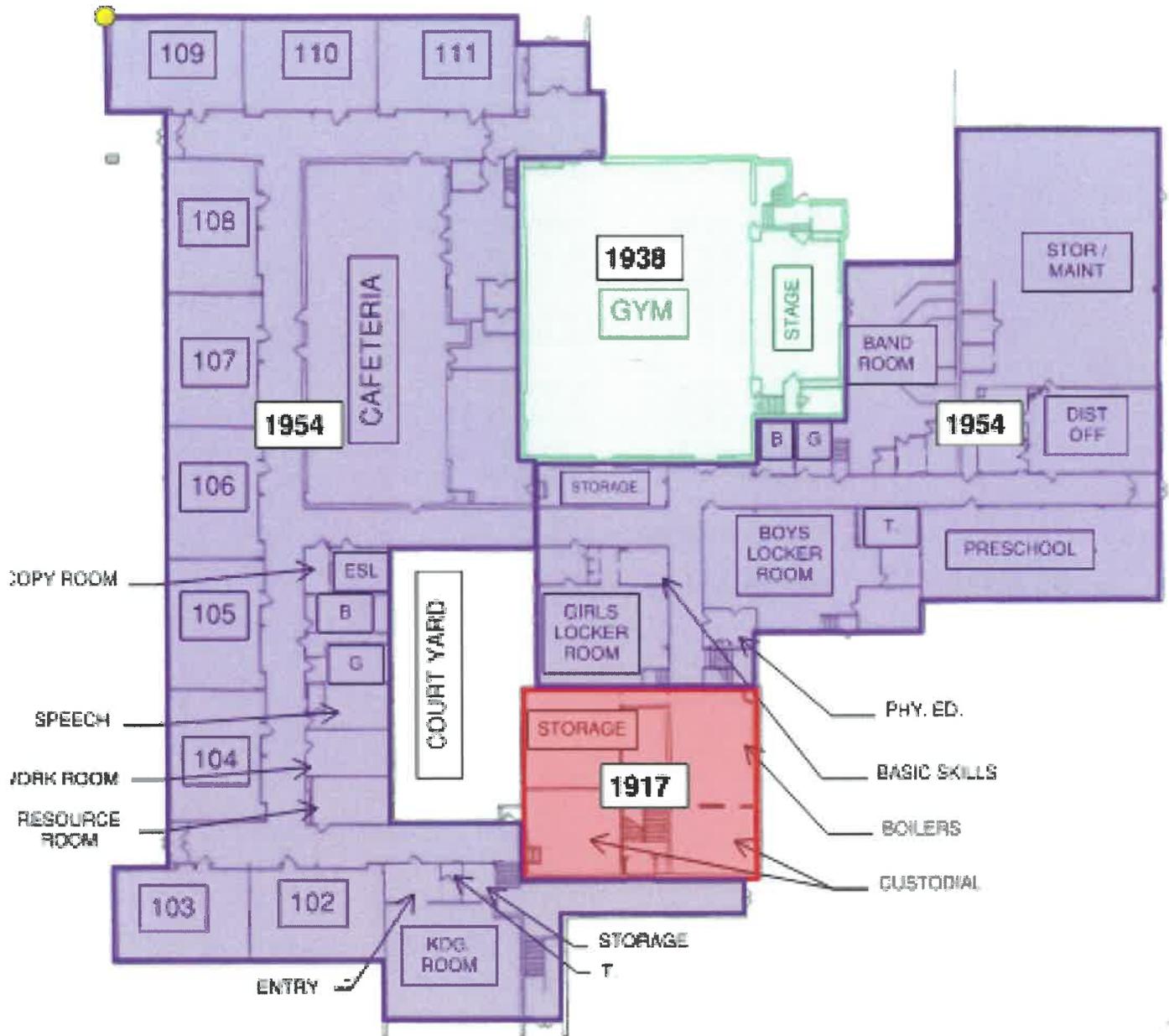
Wendel Architecture was retained in association with RA Morton Construction Managers by the BLHS Public School District to perform a facility assessment of its existing school facilities in Buffalo Lake and Hector. The intent of this assessment is to provide a basis to evaluate and make recommendations related to possible facility improvements. On March 9, 2021 members of the team toured the district's facilities.

The BLHS School District currently operates two facilities:

- Preschool/K-5 Elementary School (approximately 220 students) in Buffalo Lake
- 6-12 High School (approximately 240 students) in Hector.

The district office is located in the Elementary School on the Buffalo Lake campus.  
The district's athletic fields and bus garage are located on the Hector campus.





BLHS Elementary School - Building Age Diagram



BLHS High School - Hector Campus



## Building Deficiency Report

The existing buildings were reviewed for deficiencies in the following areas:

- Regulatory Issues: Accessibility, Fire Marshal/Building Code (including Indoor Air Quality), Health Code, Title IX, etc.
- Building Maintenance Issues: Roofs, windows, mechanical and electrical systems, etc.
- Educational Issues.

Deficiencies are noted, with recommended solutions to the deficiency noted where appropriate for consideration in the planning process.

### BLHS Elementary School (Buffalo Lake)

#### A. Regulatory Issues

##### 1. Barrier-Free Accessibility (ADA)

###### a. Accessible route

BLHS Elementary School utilizes space on three stories; Ground Floor, Floors 1 and 2. There is no elevator in the building, so Floors 1 and 2 are not accessible at all.

The majority of the Ground Floor is on one level, and is accessible, with the following exceptions:

- Cafeteria Stage
- Gymnasium Stage
- Music Room and adjacent spaces.
- 1917 Ground Level. \*Current use as storage/mechanical is acceptable in non-accessible space.

###### b. Toilets / Showers

One single-occupant toilet room (across the hall from the Music Room) has been upgraded to meet accessibility requirements. All of the other toilets in the building are not accessibility compliant.

The former locker room spaces in the building are currently used for storage. Upgrades would be required if they are used as locker rooms in the future.

###### c. Other accessibility issues

The following is a summary of additional accessibility issues that should be addressed by any facility project:

- Several doors still have knobs. Any project should include replacement with levers.

##### 2. Fire Marshal / Building Code / Life Safety

The building does not have a fire protection sprinkler system, and is not in compliance for building area or number of floors. Any significant work on the building (additions or remodeling) will require addition of a sprinkler system.

### 3. Other Regulatory Issues:

- a. Classroom sinks (where provided) are not accessible. Kindergarten sink with bubbler does not meet health code.
- b. The majority of the steam piping in the building still has asbestos insulation and fittings.
- c. It was noted that the emergency lighting system is powered by battery packs which appeared to be outdated and unable to meet the 90-minute emergency lighting requirement.
- d. It was noted that clear floor space was blocked by stored materials in front of several electrical panels.

## B. Building Maintenance Issues

### 1. Mechanical Systems

- a. The heating system consists of two (2) low pressure steam boilers (1950's) which run on natural gas. There is no secondary fuel source. All HVAC equipment has steam heating coils.
- b. Per the HVAC equipment list above, the majority of the building is served by unit ventilators which do not provide adequate fresh air to the spaces they are serving. All systems appear to be original to the building area they are located in and are beyond their typical life expectancy; for some, replacement parts are no longer available to adequately service the equipment. In addition, in most cases the systems are not energy efficient.
- c. No centralized cooling systems exist in the building. There are a variety of through-the-wall air-conditioning units and mini-split systems that serve specific administrative, or specialized (IT, computer lab...) areas of the building.
- d. There is no central building automation system. The controls consist of individual pneumatic control systems throughout. Some pneumatic-electric components exist but are also at the end of their anticipated service life.
- e. The original plumbing distribution piping is galvanized pipe. Lead levels are recommended to be tested and verified due to the age of the piping and deterioration.

### 2. Electrical Systems

#### a. Electrical Service

The electrical service is located in the ground level Custodial Room adjacent to the Boiler Room. The service is a 208Y/120V, 3PH service with a 1000A disconnect switch feeding several main fuse panelboards in the Custodial Room and Boiler Room.

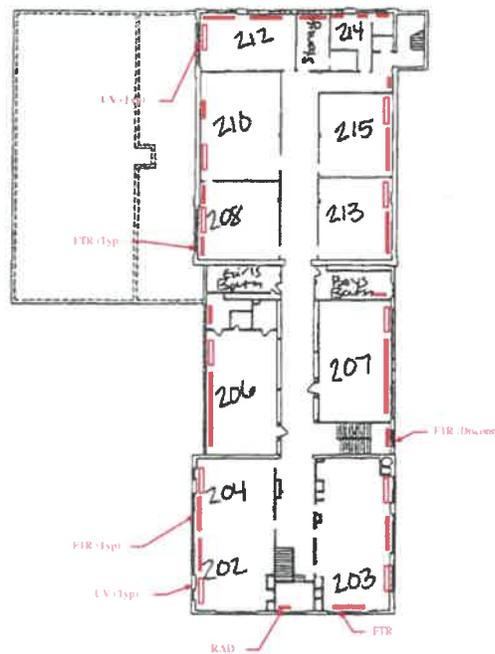
The main panelboards and distribution panels are a combination of circuit breaker and fuse type panels, and all are outdated and beyond their useful life. Many of the panels are unlabeled or mis-labeled with incomplete or incorrect circuit schedules. Refer to Life Safety note above regarding blocked clearance at some panels.

#### b. Outlets

Like almost every school building more than 10 years old, many areas have a shortage of outlets to meet current needs for audio/visual and computing devices. In addition, many of the outlets have an older plug layout and replacement is recommended.



Floor 1 HVAC Plan



Floor 2 HVAC Plan

b. Walls

The exterior building walls are generally brick with masonry back-up.

- The walls appeared to be in good condition, although the upper walls of the 3-story building were observed only from the ground.
- The plaster on the north wall of the upper floor showed signs of water damage, but it is not known if this is a roof, wall or window issue.
- Drawings for the 1917 and 1936 areas do not indicate any wall insulation.
- Drawings of the 1951 building were not available, but it is assumed that there is not insulation in these walls based on standard practice at that time.

c. Windows

Windows are in good condition, but are generally outdated and not energy efficient.

- Windows in the 1917 and 1936 buildings are 2-track slider windows with single-pane glazing. Transoms are insulated metal panels.
- Windows of the 1951 building are 4-track slider windows with single-pane glazing. Transoms are glass block but have been covered with FRP on the interior.

d. Doors

Exterior entrances are generally aluminum framing in good condition.

4. Interior Finishes and Equipment

a. Ceilings

Ceilings vary with no consistency. Almost all are in fair to poor condition with several areas that are stained from previous water damage or sagging due to humidity.

- Many are 1x1 glue-on acoustic tile with suspended light fixtures.
- Some areas have 2x4 lay-in tile with 2x4 lights.
- At least one room has acoustic spray. It is unknown if this is over plaster or 1x1 tile.
- The cafeteria has rough plaster where 1x1 tile has been removed.

b. Walls

Wall surfaces are in generally good condition and have been replaced or well maintained.

c. Flooring

Flooring is in varying condition.

- Hallways are generally terrazzo flooring in very good condition.
- Classrooms are a combination of carpet and VAT. It is assumed that carpet was installed over the VAT in most locations.
- The Cafeteria is a resinous epoxy floor in good condition.

d. Casework / other

There is minimal built-in casework, which is in fair condition.

5. Other Maintenance Issues

- a. Toilet room flooring, walls and partitions are outdated and in fair condition.

## BLHS High School (Hector)

### B. Regulatory Issues

#### 4. Barrier-Free Accessibility (ADA)

##### a. Accessible route

BLHS High School utilizes space on three stories; Ground Floor, Floors 1 and 2. Each story of the building contains multiple floor levels. There is a 5-stop elevator in the center of the building which provides access to most levels and a 2-stop wheelchair lift which provides access to the main Gymnasium / Locker Room level. There are, however, several spaces which are not accessible at all.

- Cafeteria Storage room
- 'Old' locker rooms (currently used for storage)
- Stage at old Gym.
- Auditorium and Auditorium balcony.
- Career Tech shops and classrooms (temporary ramp provided from walking track).
- Wrestling Room
- Raised teaching area at the Computer Lab.
- \*\*Note that Floor 2 southeast classroom wing is only accessible passing through the Band Room.

##### b. Toilets / Showers

There are no toilets in the building that are fully compliant for accessibility. A few toilet rooms have been modified to provide a wider stall, but do not fully comply for grab bars and clearances.

None of the toilet or shower facilities in the 3 locker rooms that are utilized are compliant for accessibility. (In addition, the shower facilities do not meet current health code for separation).

##### c. Other accessibility issues

The following is a summary of additional accessibility issues that should be addressed by any facility project:

- Science labs do not have an accessible lab station.
- Concession counter does not comply for height.
- Kitchen counters and sink at Special Ed are not accessible.
- Classroom sinks (where provided) are not accessible.
- A few doors still have knobs. Any project should include replacement with levers.

#### 5. Fire Marshal / Building Code / Life Safety

The building has a full fire protection sprinkler system, and it appears to be in compliance for building area and number of floors.

## B. Building Maintenance Issues

### 1. Mechanical Systems

- a. The heating system consists of two (2) low pressure steam boilers (1950's) which run on natural gas with fuel oil back-up. The fuel oil tank is a 1000-gallon above-ground tank on the north side of the building.
- b. The unit ventilators and cabinet unit heaters in the 'finger wing (west) have hot water heating coils served by a steam/hot water heat exchanger located in the Boiler Room. All other HVAC equipment has steam heating coils served by low pressure steam and condensate return piping.
- c. Per the HVAC equipment list above, the majority of the building is served by unit ventilators which do not provide adequate fresh air to the spaces they are serving. All systems appear to be original to the building area they are located in and are beyond their typical life expectancy; for some, replacement parts are no longer available to adequately service the equipment. In addition, in most cases the systems are not energy efficient.
- d. No centralized cooling systems exist in the building. There are a variety of through-the-wall air-conditioning units and mini-split systems that serve specific administrative, or specialized (IT, computer lab...) areas of the building.
- e. There is no central building automation system. The controls consist of individual pneumatic control systems throughout. Some pneumatic-electric components exist but are also at the end of their anticipated service life.
- f. The original plumbing distribution piping is galvanized pipe. Lead levels are recommended to be tested and verified due to the age of the piping and deterioration.
- g. It has been noted that there are possible blockages or broken storm water piping below the locker room floor and/or in the courtyard just west of the locker rooms causing high groundwater levels. This has led to moisture below the Gym floor, which has caused warping and buckling of the wood gym flooring. Refer to separate Design Tree report dated 2/4/21.

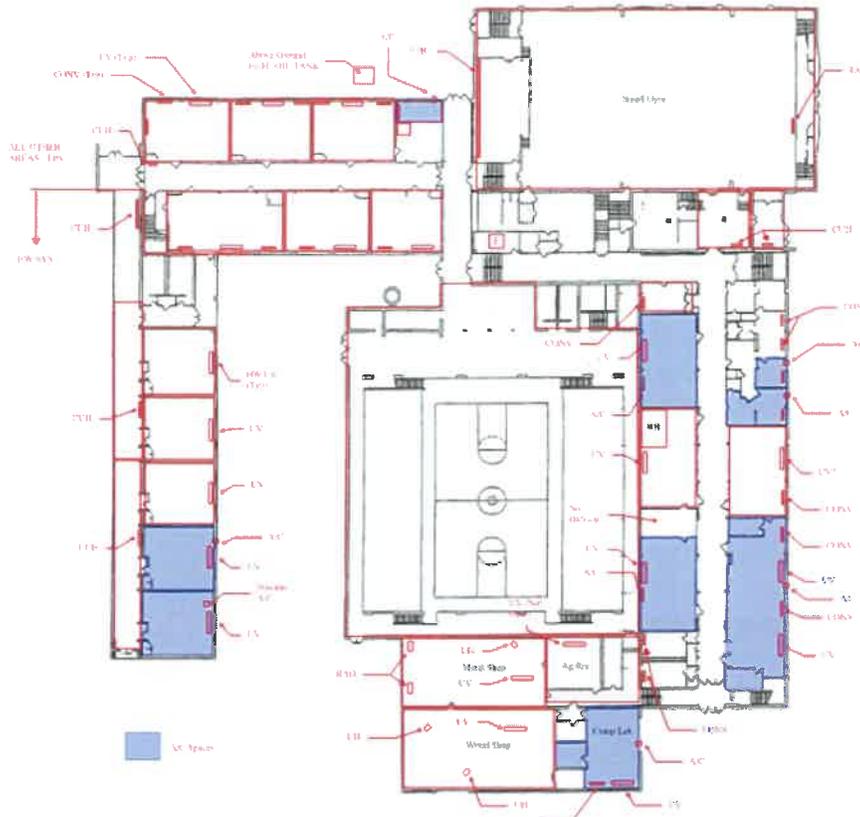
### 6. Electrical Systems

#### a. Electrical Service

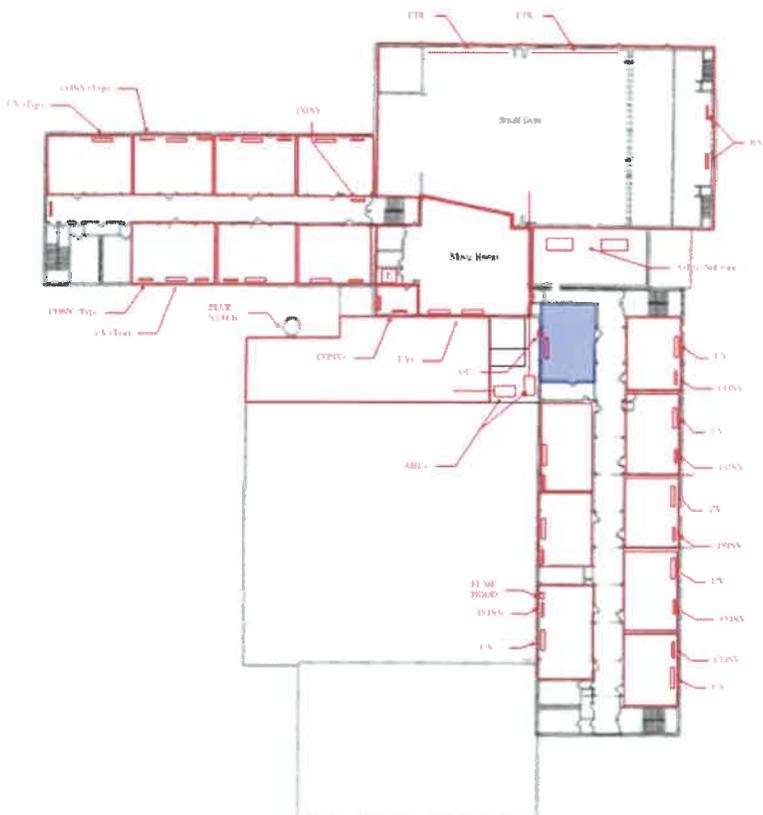
The electrical service is located in the ground level Boiler Room. The service is a 208Y/120V, 3PH service with an 800A switchboard. The Boiler Room has been reported to have flooded in the past, and the lower portion of the switchboard is very rusted.

There are 2 service disconnect switches at the switchboard; one 800-amp switch and one 400-amp switch (which is believed to serve the 1974 addition).

The distribution panels are a combination of circuit breaker and fuse type panels. The panels in the classroom wings have been updated and are in good condition. Many of the panels are unlabeled or mis-labeled with incomplete or incorrect circuit schedules. Refer to Life Safety note above regarding blocked clearance at some panels.



Floor 1 HVAC Plan



Floor 2 HVAC Plan

f. Walls

The exterior building walls are generally brick with masonry back-up.

- The walls appeared to be in good condition, although walls were observed only from the ground.
- None of the exterior walls indicate any wall insulation, except at the 1974 Gym addition.

g. Windows

Windows are in good condition, but are generally outdated and not energy efficient.

- Windows are 4-track slider windows with single-pane glazing. Transoms are glass block but have been covered with FRP or painted on the interior.

h. Doors

Exterior entrances are generally aluminum framing in good condition. The exterior doors at the north end of the 1961 addition are hollow metal in fair condition.

8. Interior Finishes and Equipment

e. Ceilings

Ceilings vary with no consistency. Almost all are in fair to poor condition with several areas that are stained from previous water damage or sagging due to humidity.

- Many are 1x1 glue-on acoustic tile with suspended light fixtures.
- Some areas have 2x4 lay-in tile with 2x4 lights.
- The west classrooms at the Floor 2 high school wing was the only area noted to have newer lay-in ceilings with LED fixtures.

f. Walls

Wall surfaces are in generally good condition and have been replaced or well maintained.

g. Flooring

Flooring is in varying condition.

- Hallways are generally terrazzo flooring or epoxy resin in very good condition.
- Classrooms are a combination of carpet, VCT and VAT. It is assumed that carpet was installed over the VAT in most locations.
- The Cafeteria is a resinous epoxy floor in good condition.
- The wood Gym floor has been water-damaged and has areas that are warped/buckled.

h. Casework / other

- Most built-in casework is in fair condition.
- Lockers in the Locker Rooms are in fair condition.

9. Other Maintenance Issues

- a. Toilet room flooring, walls and partitions are outdated and in fair condition.
- b. Paving at the parking lot is in poor to fair condition.