

# BUILDING EVALUATION REPORT

**DATE:** June 3<sup>rd</sup>, 2015

**PROJECT NUMBER:** FRK-1013A09

**PROPERTY ADDRESS:** 415 Antique City Dr, Walnut, IA 51577

**OWNER:** Walnut Community School District

**PREPARED BY:** **FRK Architects + Engineers**  
2600 Westown Parkway, Suite 340  
West Des Moines, IA 50266  
Telephone: 515-223-5100  
Fax: 515-223-7226

**FRK M/E CONSULTANT:** **FARRIS ENGINEERING**  
12700 West Dodge Road  
Omaha, NE 68154  
Telephone: 402-330-5900  
Fax: 402-330-5902

## EXECUTIVE SUMMARY

School Facility comprises of the following fairly distinct building units:

1. Unit A: 1910's 3-story "split-level" building, approximate gross area: 17,300SF;
2. Unit B: 1920's single-story Gymnasium/Stage building with partial basement level, approximate gross area: 10,400SF (including basement);
3. Unit C: 1950's 2-story "split-level" building, approximate gross area: 8,000SF;
4. Unit D: 1960's 2-story "split-level" building, approximate gross area: 16,500SF;
5. Unit E: 1980's 2-story addition to the 1960's building, approximate gross area: 2,400SF;
6. Unit F: 1990's Gymnasium building with infill addition to the 1920's and 1980's structures, approximate gross area: 23,000SF.

All structures are interconnected and form a single complex with approximate total gross area of 77,600SF, which is only partially ADA accessible. The building shell and interior show "wear & tear" typical for building stock of similar vintage. Some major MEPT systems (see details further below) are outdated and beyond their useful life. The complex seems adequately maintained with the following exceptions:

- Unit C: The roof of the single story mechanical room on the south side of the addition has deflected a significant amount and is beginning to pull apart at the perimeter. This likely requires immediate replacement if this area is to remain in use and to be an occupiable space.
- Unit D: Edges of underlying roof insulation boards have started curling and uplifting. Distinct  $\pm 0.5''$ -high ridges have formed between insulation fasteners. The effect is more pronounced at the north end of the roof section and requires further investigation.
- Unit F: Cold joints between Gym stoops and abutting sidewalks have opened to 2"+. The area requires continuous monitoring to determine if the process is still active. In the interim, gaps should be filled or sidewalk panels replaced in order to eliminate trip hazard along the path of egress.

### MEPT System Overview:

Steam Boiler System #1: This single gas fired steam boiler was most likely installed in the 1950's and has recently been repaired (new bottom). This boiler is presently serving the 1910 to 1950 building areas. The entire system is presently functional, but should not be reused in this building if it is upgraded. All steam system components are beyond their normal useful life and should be removed.

Steam Boiler System #2: This single gas fired cast iron sectional boiler was most likely installed in the 1960's. This boiler is presently serving the 1960 and 1980 building areas. The condensate tank for this boiler is presently not operational. The entire system is beyond its normal useful life and should not be reused in this building if it is upgraded.

Hot Water Boiler System: Three gas-fired hot water boilers were installed in the 1998 addition. These 3 boilers are 18 years old. Normal expected life of these boilers is 30 years. These boilers and associated hot water heating systems should be able to be reused in a reuse of this building.

1900 to 1980's HVAC System: These areas of the building have outdated steam systems, outdated pneumataic controls, no code ventilation systems and window air conditioners. These systems are not reuseable.

1998 HVAC System: These areas of the building have hot water systems, direct digital controls (DDC), forced ventilation and air conditioning in some areas. These systems are reuseable with some updates recommended.

The Owner has inquired into the option of removal of Unit C (1950's structure). At this time we do not foresee major implications from general construction standpoint. Building demolition should be fairly straight forward process with the following comments:

1. Procure environmental assessment to evaluate the potential and cost of hazardous materials abatement, which would add to demolition costs;
2. Recommend demolition contractor salvage the original large-span floor and roof wood joist. Such deep joists made from old-growth trees are difficult to come by today. They might have some value on the market for environmentally cautious/green projects;
3. The interface between the demolished building and the 1910's building requires careful consideration of how the 1910's façade would be restored, especially if the 1910's building is of historic importance to the local community;
4. Removal of the building should not substantially affect MEPT systems serving other parts of the complex. Lines/branches serving the demolished building would have to be capped or removed.

## INTRODUCTION

### 1. PURPOSE

The team of FRK Architects & Engineers and Farris Engineering was retained to conduct a basic Building Condition Assessment of the subject property. The purpose of the assessment is to provide objective and independent professional opinion of the present building condition as part of the discussion between the City of Walnut and Walnut CSD for the future of the property.

The following readily available documents were reviewed:

- As-designed drawings of the existing building dated 1998;
- Roofing Report dated 2013.

FRK provided the Owner with a pre-survey questionnaire, and conducted on-site interviews with an Owner-designated maintenance personnel. Reliance was placed on the accuracy and disclosure of Owner's representatives. Site visual observation was conducted on 05/06/2015. Observations were limited to "representative" property features including exterior building surfaces, accessible areas of the roof, representative classrooms, mechanical rooms, staff rooms, vacant and common areas. No inspection or investigation behind walls, inside plenums or in any other generally inaccessible areas was performed. The investigation of the building facade was performed from street and/or adjacent roof level. No physical tests were made nor were any samples for engineering analysis collected. As such, FRK makes no warranties regarding building skin conditions that would not be readily observable and would, therefore, be considered outside the scope of this assignment.

### 2. EXCLUSIONS:

- a. Property/Site features;
- b. Regulatory or code compliance audit of the facility;
- c. Environmental Assessment

### 3. LIMITATIONS

The A/E consultants, their respective officers and employees have no present or contemplated interest in the property. Our employment and compensation for preparing this report are not contingent upon our observations or conclusions.

Information in this report, concerning equipment operation, condition of spaces and concealed areas not observed or viewable and for the disclosure of known problems, if any, is from sources deemed to be reliable, such as maintenance personnel; however, no representation or warranty is made as to the accuracy thereof. A user should only rely on the assessment for the point in time at which the consultant's observations and research were conducted.

No assessment can eliminate the uncertainty regarding the presence of physical deficiencies and the performance of a subject property's building systems. It is also generally recognized that consultant's opinions as to such issues as workmanship, quality of original installation, and estimating the Remaining Useful Life (RUL) of any given component or system has an inherent subjective nature. It is further recognized that a consultant's suggested remedy (e.g. replace a system) may be determined under time constraints, formed without the aid of engineering calculations, testing, exploratory probing, removal of materials, or design. Furthermore, there may be other alternate or more appropriate schemes or methods to remedy the physical deficiency.

- UNIT A: 1910'S BUILDING
- UNIT B: 1920'S BUILDING
- UNIT C: 1950'S BUILDING
- UNIT D: 1960'S BUILDING
- UNIT E: 1980'S BUILDING
- UNIT F: 1990'S BUILDING

SECOND FLOOR PLAN

PART. BASEMENT PLAN

GROUND FLOOR PLAN

SECOND FLOOR PLAN

LOWER LEVEL FLOOR PLAN

## **UNIT A (1910's building):**

### **1. STRUCTURAL SYSTEM**

Three story structure with structural clay tile foundation walls, load-bearing multiwythe brick & clay tile masonry exterior walls with steel lintels over openings. Interior walls are load-bearing masonry walls supporting rough-sawn lumber floor joists w/ wood deck boards. The roof consists of wood decking over rough-sawn roof rafters, girts and timber beams & posts supported by interior masonry columns and steel beams. Stairs are steel pan treads with lumber landings. All system components seem to be in fairly good shape for the age of the building.

### **2. BUILDING SHELL**

#### **a. ROOF**

Asphalt shingles (2009) on estimated 1:2 slope hip roof seem in fairly good condition. Roof was observed from adjacent lower roofs; the top low-slope section was not observed (unable to open roof hatch). Owner reported a roof leak near the chimney. Roof drains to perimeter gutters and downspouts (replaced in 2009). They seem to be in good condition. Overall we agree with RL Craft roofing report. Downspouts at the SE & SW corners have been addressed per RL Craft comment. We recommend extending some of the remaining downspouts down to grade and providing splash blocks at downspout termination.

#### **b. EXTERIOR WALLS**

Modular face brick set in colored mortar is in fairly good shape for the age of the building. Some tuck-pointing (2008) has been done and held well. Color matching is fair. Water damage was observed near the SE and SW corners. These areas require tuck-pointing at the earliest convenience. Water infiltration into the wall has caused face brick bulging below the top-floor window sills at the SE corner. Proper repair in this area will require replacing damaged brick. Some lintels exhibit light sagging.

Limestone detailwork seems in good condition for the age of the building. A couple pieces at the SE corner show water damage and will require repair/replacement.

Below-grade walls on the east side show water damage (plaster delamination & paint blistering) on the interior. Below grade walls on the east side are furred out and water damage, if any, could not be observed. Interior water damage was observed at upper floors at locations noted above.

#### **c. WINDOWS & DOORS**

Clear anodized aluminum framing with sliding windows with clear insulating glass in the bottom section and opaque panels in the upper sections are in fair shape. Opaque panels show blistering & sagging of the exterior skin as well as paint peeling. Gasketing shows normal wear & tear for the age of the windows. Perimeter sealants are in fair shape but will require replacement fairly soon. Most ground-level windows on the South & East are boarded up.

Wood exterior doors are in poor condition. Glass block transom and sidelites are in fair condition. We recommend replacing both elements.

d. TRIM

Wood cornice, soffit and trim are in fairly good shape for the age of the building. Short sections at gables show water damage and will require repair/replacement. Painting is recommended (last paint job reported in 2009).

**INTERIOR**

e. PARTITIONS

Majority of interior partitions are masonry with plaster and paint finish. There are also some limited wood-framed gypsum wallboard or plaster partitions. No major cracks were observed.

f. FINISHES

Lower Level flooring varies by room: composition tile in NW classroom and storage off Girls RR (poor condition), carpet in SW classroom (poor condition); sheet vynil in common spaces (fair condition) and RRs (fair to poor condition); newer carpet in east classroom (good condition).

Main Level & Upper Level flooring is solid wood throughout with heavy high-gloss clear coat. Flooring is in fair condition for its age. Broadloom carpet has been installed over wood flooring in some classrooms. Carpet is poor condition.

Typical ceilings are painted hard ceilings, either plaster or adhered acoustic tile. Some lower level classrooms have newer 2'x4' acoustic panel ceilings (APC) suspended below the older hard ceilings. Water damaged observed at Lower Level SW classroom and Upper Level east classroom ceilings.

Girls RR on Lower Level has car siding which seems recently installed and in fair condition.

g. DOORS, MILLWORK, TRIM

Most of the Lower Level original wood panel doors have been replaced with newer typically flush wood doors. Most of the Main & Upper Level original wood panel doors and original millwork (wall base, window trim, chair rail, built-ins) are preserved and in fairly good shape for their age. Some sections have been painted over but most have retained original stain color. Doors have transoms and sidelites of frosted single pane glass.

h. ACCESSIBILITY

Building is not ADA accessible. Decommissioned chair lift had provided limited Lower Level accessibility from the 1990's addition.

i. EXITING

Building does not meet current exiting requirements for new construction. Any change of occupancy classification will require exiting evaluation and potentially changes. The existing fire escape is in fair condition. It requires periodic maintenance to prevent corrosion. Should it be neglected to a point of structural issues, it is likely it would have to be replaced with full exterior staircase.

### **3. MECHANICAL**

#### **a. HEATING**

Areas are served by a steam system with a boiler installed in the 1950's project. Entire boiler, piping and control system is outdated and needs replaced. The combustion air system does not meet code.

#### **b. AIR CONDITIONING**

Areas are served by window air conditioners. These units are outdated and should be replaced by a forced air conditioning system.

#### **c. VENTILATION**

There are no ventilation systems. The only ventilation is achievable from open windows. These windows are not useable in cold and hot weather seasons. Code approved systems are needed.

### **4. PLUMBING**

Areas are served by cast iron sanitary piping below grade and galvanized piping above grade, with galvanized domestic piping. The cast iron can be reused, but all galvanized piping needs replaced with copper or cast iron. The domestic water heater is beyond its normal life and needs replaced.

### **5. FIRE PROTECTION & DETECTION**

A sprinkler system is not installed in this building. The existing fire alarm system provides detection throughout the building and both visual and audio notification. Current Codes would require a voice system due to the occupancies of gymnasiums so any work done to the fire alarm system may trigger bringing the whole system up to current Codes.

### **6. ELECTRICAL**

#### **a. POWER**

The gear from previous additions should be replaced when remodels take place in the building. It would be expected to perform under similar conditions but if the usage of the buildings changes it should be replaced. The existing power is routed in surface raceway and has been added to over time. It is recommended that any modifications to the building usage replace and upgrade the existing power systems.

#### **b. LIGHTING**

It appears that many of the lamps and ballasts in older portions of the building have also been replaced with T-8 lamps and electronic ballasts. Where lamps and ballasts were replaced, these fixtures should provide many additional years of service however most fixtures are showing their age and may be required to be replaced for aesthetic reasons. Emergency lighting is provided with stand alone battery pack type units. There is not currently any exterior emergency egress lighting from the exits in this portion of the building.



## **7. TECHNOLOGY**

### **a. IT**

The building has been cabled through out for both wired connections and wireless. Depending on the new usage additional data or phone cabling may be required to provide adequate functionality.

### **b. ACCESS CONTROL**

Access control is currently limited to the main entrance of the school. The other doors remain closed and locked and there are door contacts on the exterior doors to indicate their position.

### **c. SECURITY**

Camera coverage seems to cover all of the corridors and entrances to the building. Cameras are also located around the exterior perimeter of the building to provide coverage of the site.













## UNIT B (1920's building)

### 1. STRUCTURAL SYSTEM

Single-story structure with partial basement and multi-level ground floor. Walls are load bearing masonry & clay tile with masonry pilasters. East end of the building appears to be a later addition to the original 1920's structure. Owner has no information about the year of this addition. The barrel-vaulted roof structure is of undetermined material at this time due to being covered by the existing ceiling.

### 2. BUILDING SHELL

#### a. ROOF

Fully adhered EPDM system (1994) over barrel roof seems in fair overall condition. Many field flashings/patches have started to delaminate and curl. Patches appear to cover insulation plate & fasteners. This is not a standard detail. It might have been repair to provide additional securement for buckling insulation. It is recommended peeling patches are replaced per manufacturer's requirements. One membrane patch seems to be punctured and requires immediate fix. A few "popping" fasteners underneath membrane and loose substrate were observed at several locations. Wall membrane flashings seem in good condition – some recent repairs are visible. Top of wall pre-finished sheet metal caps look newer and in fair condition but low craftsmanship – cap drip edge is loose, potentially due to a detached receiver or lack thereof. Attempted repairs with expanding foam may have worsened the condition by further opening caps. Newer gutter and downspouts on the south side are in good condition; their north side counterparts show substantial rust but are still functional. This roof section is near the end of its functional life and should be replaced in the near future. Sheet metal work should also be replaced at time of re-roofing. Recommend providing splash blocks at down spout terminations at lower roofs.

Wood cupola vents are showing their age – some trim pieces near base have water damage and need replacement. Units need new paint.

Roofing over Lobby (west side) is mechanically attached TPO membrane under RL Craft warranty (2013). TPO wall flashings are done well.

#### b. EXTERIOR WALLS

Most of the exterior walls have been surrounded by additions over the years. Sections above lower roofs remain functioning as exterior walls as well as street frontage wall. The visible portion of such walls appears to be of multiwythe clay brick masonry construction. Water damage is observed at brick mortar joints (~25% of total wall area) with the most prominent damage at the chimney. It will require extensive tuck-pointing and some selective brick replacement. Noted chimney damage is both exterior and at the interior liner brick. Replacing the chimney cap with a new cap providing protection of the interior of the chimney from rainwater is recommended. Similar water damage was observed at the NW corner, originating at the parapet wall. Further investigation of the area is recommended. Recent tuck-pointing at brick pilasters is holding well. Pilasters are nicely capped with sheet metal.

c. **WINDOWS & DOORS**

Street-side windows were replaced in 2009 with clear anodized aluminum storefront framing with insulating opaque panels and clear insulating glass aluminum hung window inserts. Fenestration system is in good condition.

**3. INTERIOR**

a. **PARTITIONS**

Masonry partitions are typical. Glazed structural clay tile is used at lobby. Construction looks in fair condition for its age.

b. **FINISHES**

Different level of finishes for the main level and basement:

Main level: Walls are plastered and painted. Ceilings are typically hard ceilings: textured finish in lobby, adhered ACT in gym, new unfinished drywall ceiling in stage. Gym ceiling shows some stains from roof leaks and limited tiles have started delaminating from the substrate. Current codes require smoke vents at stage, if used as such. It is unclear if any smoke vents have been removed/covered by the new ceiling. Terrazzo floor in Lobby; solid wood flooring in gym; older composition floor tile on most of the stage level spaces.

Basement: Ceilings and walls are painted, floors are concrete. Floor mats and wall pads in wrestling room may not be code compliant – cut fabric at corners expose unprotected foam. Water damage on basement mechanical room walls. Substantial water

Finishes are in fair shape for the age of construction.

c. **ELEVATOR**

Building had been served by chair lift in the 1990's building. Lift is out of service and abandoned.

d. **ACCESSIBILITY**

Building main level seems to be partially ADA accessible. Basement and spaces on Stage level are not ADA accessible.

e. **EXITING**

Number of exits seems adequate. ADA accessible exiting is inadequate.

**4. MECHANICAL**

a. **HEATING**

Areas are served by a steam system with a boiler installed in the 1950's project. Entire boiler, piping and control system is outdated and needs replaced. The combustion air system does not meet code.

b. **AIR CONDITIONING**

Areas are served by window air conditioners. These units are outdated and should be replaced by a forced air conditioning system.

c. **VENTILATION**

There are no ventilation systems. The only ventilation is achievable from open windows. These windows are not useable in cold and hot weather seasons. Code approved systems are needed.

**5. PLUMBING**

Areas are served by cast iron sanitary piping below grade and galvanized piping above grade with galvanized domestic piping. The cast iron can be reused, but all galvanized piping needs replaced with copper or cast iron. The domestic water heater is beyond its normal life and needs replaced.

**6. FIRE PROTECTION & DETECTION**

A sprinkler system is not installed in this building. The existing fire alarm system provides detection throughout the building and both visual and audio notification. Current Codes would require a voice system due to the occupancies of gymnasiums so any work done to the fire alarm system may trigger bringing the whole system up to current Codes.

**7. ELECTRICAL**

a. **POWER**

The existing power is routed in surface raceway and has been added to over time. It is recommended that any modifications to the building usage replace and upgrade the existing power systems.

b. **LIGHTING**

It appears that many of the lamps and ballasts in older portions of the building have also been replaced with T-8 lamps and electronic ballasts. Where lamps and ballasts were replaced, these fixtures should provide many additional years of service however most fixtures are showing their age and may be required to be replaced for asthetic reasons. Emergency lighting is provided with stand alone battery pack type units. There is not currently any exterior emergency egress lighting from the exits in this portion of the building.

**8. TECHNOLOGY**

a. **IT**

The building has been cabled through out for both wired connections and wireless. Depending on the new usage additional data and phone cabling may be required to provide adequate functionality.

b. **ACCESS CONTROL**

Access control is currently limited to the main entrance of the school. The other doors remain closed and locked and there are door contacts on the exterior doors to indicate their position.

c. **SECURITY**

Camera coverage seems to cover all of the corridors and entrances to the building. Cameras are also located around the exterior perimeter of the building to provide coverage of the site.









**8. STRUCTURAL SYSTEM**

Building is a two-story structure with predominantly concrete masonry unit (CMU) foundation walls (some basement walls in the dining suite & restrooms are glazed structural clay tile); load-bearing multiwythe masonry exterior walls with steel lintels over large strip windows. Interior walls are load-bearing masonry on the ground floor and wooden stud framed walls above the first floor. Floor and roof structures are rough sawn wooden joists w/ wood decking. Stairs and landings are cast-in-place concrete. The majority of the structure appeared to be in adequate condition for the age with the following exceptions: Second floor lintels appear to have corroded to the point where they have begun to lift the brick above, resulting in diagonal cracks emanating upwards from the ends of the lintels. Repair or replacement should be considered in the next few years if prolonged use of the structure is desired. The roof of the single story mechanical room on the east side of the addition has deflected a significant amount and is beginning to pull apart at the perimeter. This likely requires immediate replacement if this area is to remain in use and as an occupiable space. At a minimum, shoring should be provided as a temporary solution.

**9. BUILDING SHELL****a. ROOF**

Main roof is low-slope roof with mechanically attached TPO membrane (2014) under warranty by RL Craft. Roofing appears to be in good condition. There is evidence of ponding water near the roof drain. Roof drain strainer is substantially corroded and detached from base. Sheet metal on rooftop mechanical equipment shows significant corrosion. Pre-finished sheet-metal top of wall copings are in good condition.

Water damage was observed at the wooden canopy over the North Entrance. Canopy soffit is damaged and requires replacement. Canopy roofing and flashings should be checked and canopy roof drain & downspout should be restored.

Fully adhered EPDM membrane on lower flat roof section on the east side has failed due to the structural damage noted above. Roof needs immediate replacement.

**b. EXTERIOR WALLS**

Exterior walls are multi-wythe masonry (see structural system description above). Building exterior (face brick, pre-cast sills, and opaque window panels) is painted (2012). Paint is in good condition but masks possible problems and hinders observation of true exterior wall condition.

Stairstep cracks were observed at the NW & SW corners of the building, likely caused by corrosion of the lintels over the windows "lifting" the masonry above as noted in the Structural System Description. Cracks were also observed in masonry pilasters at North Entrance. Pilasters are out of plumb. Significant lime run was observed at pilaster mortar joints, indicating water intrusion into the walls. Area should be tuck-pointed & painted. See notes above about entrance canopy.

Cracks were observed at the single story structure on the east side.

All lintels exhibit corrosion most likely from moisture within wall mass. Lime run was evident at face brick joints near lintels and moisture damage was observed on exterior walls below grade.

c. WINDOWS & DOORS

Most original ground level single-glazed wood hung windows have been replaced with vinyl hung windows with insulating glass. New windows appear to be in fair condition. Wood-frame metal-wiremesh security screens over ground level windows are in fair or below fair condition.

First story fenestrations are metal framing compound assemblies with aluminum window mid-section, full-width glass block transom, and opaque side lite panels. Windows & glass block seem in fair condition whereas side panels are failing.

Exterior Hollow Metal (HM) doors & frames (2008) are in good condition. They are set in what appears to be light gage infill wall in place of the original larger fenestration. Wall infill is finished with faux brick panels in good shape.

**10. INTERIOR**

a. PARTITIONS

Masonry partitions on ground floor; wood-framed partitions with drywall finish on first floor.

b. FINISHES

Exterior walls are plastered and painted. Substantial water damage visible at first-floor above-window exterior walls (sections of plaster are missing). Interior drywall partitions are painted and in good condition. Glazed structural clay tile in RRs and dining suite is in good condition.

Flooring on ground floor varies: VCT tile in corridor (good condition); older composition tile in storage rooms & dining (fair to below fair condition); quarry tile in RRs (fair condition). Solid hardwood floors in fair condition for their age throughout the first floor. Sealed concrete on stairs & landing looks in good condition.

Ceilings are typically hard ceilings (adhered acoustic tile) in fair condition.

c. DOORS, MILLWORK, TRIM

Level of millwork is similar to the 1900's building and comprises of tall wall base, chair rail, wood panel doors, built-in storage closet doors, marker board trim. Most millwork has been painted. It is in fair condition for its age.

d. ACCESSIBILITY

Building is not ADA accessible. Lower level might have been partially ADA accessible through the adjacent 1900's building lower level chair lift.

e. EXITING

Building seems to have adequate exits. However it does not meet the requirement for ADA accessible exits.

## **11. MECHANICAL**

### **a. HEATING**

Areas are served by a steam sysem with a boiler installed in the 1950's project. Entire boiler, piping and control system is outdated and needs replaced. The combustion air system does not meet code

### **b. AIR CONDITIONING**

Areas are served by window air conditioners. These units are outdated and should be replaced by a forced air conditioning system.

### **c. VENTILATION**

There are no ventilation systems. The only ventilation is achievable from open windows. These windows are not useable in cold and hot weather seasons. Code approved systems are needed.

## **12. PLUMBING**

Areas are served by cast iron sanitary piping below grade and galvanized piping above grade with galvanized domestic piping. The cast iron can be reused, but all galvanized piping needs replaced with copper or cast iron. The domestic water heater is beyond its normal life and needs replaced. The kitchen is located in this addition. There is no internal or external grease interceptor to serve the kitchen. There are also no solid interceptors at the art room sinks.

## **13. FIRE PROTECTION & DETECTION**

A sprinkler system is not installed in this building. The kitchen hood in this building does not meet code and is not fire protected. The existing fire alarm system provides detection throughout the building and both visual and audio notification. Current Codes would require a voice system due to the occupancies of gymnasiums so any work done to the fire alarm system may trigger bringing the whole system up to current Codes.

## **14. ELECTRICAL**

### **a. POWER**

The existing power is routed in surface raceway and has been added to over time. It is recommended that any modifications to the building usage replace and upgrade the existing power systems.

### **b. LIGHTING**

It appears that many of the lamps and ballasts in older portions of the building have also been replaced with T-8 lamps and electronic ballasts. Where lamps and ballasts were replaced, these fixtures should provide many additional years of service however most fixtures are showing their age and may be required to be replaced for asthetic reasons. Emergency lighting is provided with stand alone battery pack type units. There is not currently any exterior emergency egress lighting from the exits in this portion of the building.

## **15. TECHNOLOGY**

### **a. IT**

The building has been cabled through out for both wired connections and wireless. Depending on the new usage additional data and phone cabling may be required to provide adequate functionality.

### **b. ACCESS CONTROL**

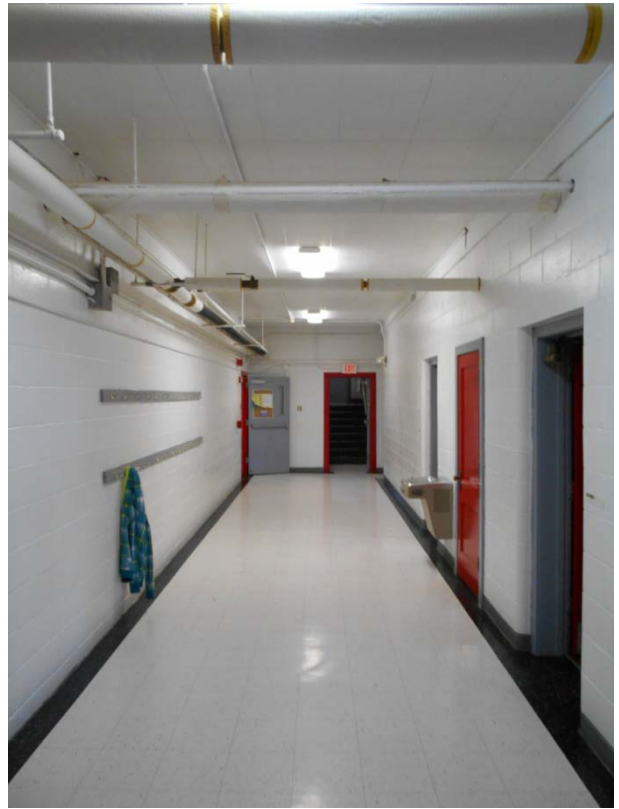
Access control is currently limited to the main entrance of the school. The other doors remain closed and locked and there are door contacts on the exterior doors to indicate their position.

### **c. SECURITY**

Camera coverage seems to cover all of the corridors and entrances to the building. Cameras are also located around the exterior perimeter of the building to provide coverage of the site.

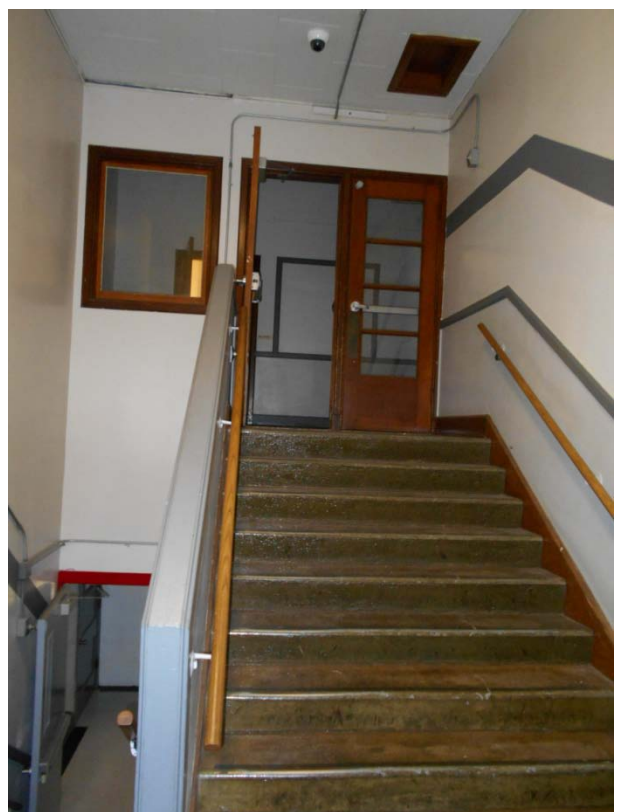
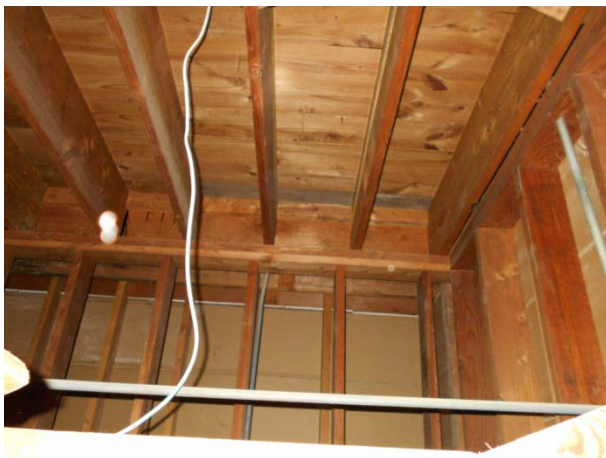












**1. STRUCTURAL SYSTEM**

Two-story split-level structure with load bearing CMU exterior and interior corridor walls below first floor; precast concrete double tee first floor structure. Structure above 2<sup>nd</sup> floor was difficult to determine due to existing finishes & hard ceiling. Exterior walls above first floor appeared to be CMU bearing walls, Roof is likely a steel deck and steel bar joist.

**2. BUILDING SHELL****a. ROOF**

Mechanically attached TPO membrane is under warranty by RL Craft (2014). Edges of roof insulation boards are curling and uplifting - forming distinct  $\pm 0.5''$  ridges between insulation fasteners. The effect is more pronounced at the north end of the roof section and requires further investigation. A section of ductwork is lying loose on the roof. It should be removed at the earliest convenience to prevent wind driven damage from sharp corners. Roof is single-slope and drains to gutters and downspouts along the west edge. Gutter system is in good condition. Roof edge fascia & extender seem in good condition as well.

**b. EXTERIOR WALLS**

Multiwythe exterior walls (modular face brick over CMU) are in fairly good shape for the age of the building. Some efflorescence was observed near the main entry, below windows, at south façade, and at first floor walls above lower roofs on the east side. Evidence of through-wall moisture at below-grade walls is more prominent on the west side. Affected areas will require tuck-pointing. Brick repair is required at opening at south wall where fixture had been removed.

**c. WINDOWS & DOORS**

The original window system comprises of clear anodized aluminum framing with single-glass fixed panels, single-glass awning inserts, and uninsulated opaque/spandrel panels. Over the years, attempts have been made to improve thermal performance by applying insulation behind the glass. In addition, on the east side, most of the windows have been covered on the outside with single-skin exposed-fastener metal panels likely to mitigate leaks. Overall window system is failing and complete replacement should be considered.

Exterior doors are typically hollow metal doors in hollow metal frames in below fair condition - replacement is recommended. Debris must be cleaned from SE exit door of the shop area. Overhead sectional door seem in fairly good condition. Main entrance doors have been replaced in 2009 and are in good condition.

**3. INTERIOR****a. PARTITIONS**

Masonry partitions are typical (CMU and glazed structural clay tile). Minor cracks observed on the ground floor, more prominent cracks on the upper floor along corridor walls.

b. FINISHES

Ground floor finishes: Limited area terrazzo flooring, older composition floor tile in corridors. Dominant flooring type is sealed concrete (locker rooms, classroom, shop). CMU walls are painted and water damage was observed, typically at below-grade portions of exterior walls. Ceilings are open to precast structural T's and painted.

First floor finishes: Terrazzo floors are typical in the common spaces except for VCT in RRs and work room; carpet is typical for classrooms. Typical wall finish in common spaces is glazed clay tile up to roughly seven feet. Typical classroom walls are painted. Hard ceilings have popcorn finish with water damage observed in the main stair area. This should be monitored to determine if this is evidence of roof leaks that have occurred since the 2014 re-roofing. Interior side of exterior windows (90%+) are covered with insulation and finish fabric.

Finishes are in good overall condition. Original building design had provided for plenty of daylight at the expense of energy efficiency. Later in-place window refurbishment addressed thermal performance at the expense of daylighting. At present classrooms rely almost entirely on artificial lighting.

d. DOORS, MILLWORK, TRIM

Hollow metal frames and wood doors are typical. First floor corridor walls incorporate ribbon borrowed lites of single-pane wire glass. Built-in millwork is fairly eclectic, but in a condition typical for buildings of a similar age & function.

c. ELEVATOR

The building is not equipped with elevator.

d. ACCESSIBILITY

The building is not ADA accessible except for the main entrance.

e. EXITING

Building seems to have adequate exits. However it does not meet requirement for ADA accessible exits. Second exit from shop must be cleaned from debris and maintained operational.

**4. MECHANICAL**

a. HEATING

Areas are served by a steam system with a boiler installed in the 1960's project. This original steam boiler was most likely replaced in the 1998 addition with a cast iron sectional boiler. Entire boiler, piping and control system is outdated and needs replaced. The combustion air system does not meet code.

b. AIR CONDITIONING

Areas are served by window air conditioners. These units are outdated and should be replaced by a forced air conditioning system.



c. **VENTILATION**

There are no ventilation systems. The only ventilation is achievable from open windows. These windows are not useable in cold and hot weather seasons. Code approved systems are needed. This addition has the original high school wood shop and industrial arts area. There is no dust collector for the wood shop.

**5. PLUMBING**

Areas are served by cast iron sanitary piping below grade and galvanized piping above grade with galvanized domestic piping. The cast iron can be reused, but all galvanized piping needs replaced with copper or cast iron. The domestic water heater is beyond its normal life and needs replaced.

**6. FIRE PROTECTION & DETECTION**

A sprinkler system is not installed in this building. The existing fire alarm system provides detection throughout the building and both visual and audio notification. Current Codes would require a voice system due to the occupancies of gymnasiums so any work done to the fire alarm system may trigger bringing the whole system up to current Codes.

**7. ELECTRICAL**

a. **POWER**

The existing power is routed in surface raceway and has been added to over time. It is recommended that any modifications to the building usage replace and upgrade the existing power systems.

b. **LIGHTING**

It appears that many of the lamps and ballasts in older portions of the building have also been replaced with T-8 lamps and electronic ballasts. Where lamps and ballasts were replaced, these fixtures should provide many additional years of service however most fixtures are showing their age and may be required to be replaced for asthetic reasons. Emergency lighting is provided with stand alone battery pack type units. There is not currently any exterior emergency egress lighting from the exits in this portion of the building.

**8. TECHNOLOGY**

a. **IT**

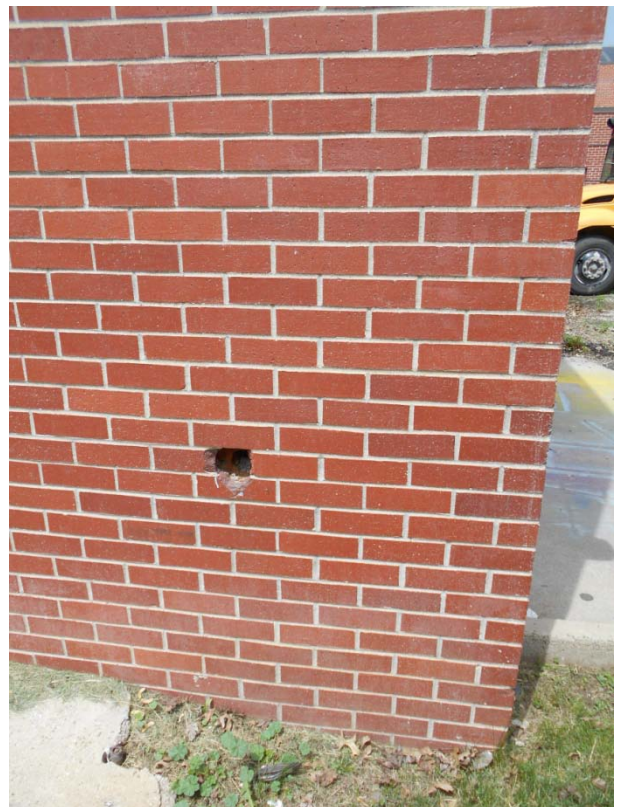
The building has been cabled through out for both wired connections and wireless. Depending on the new usage additional data and phone cabling may be required to provide adequate functionality. Much of the cabling is routed in surface raceway.

b. **ACCESS CONTROL**

Access control is currently limited to the main entrance of the school. The other doors remain closed and locked and there are door contacts on the exterior doors to indicate their position.

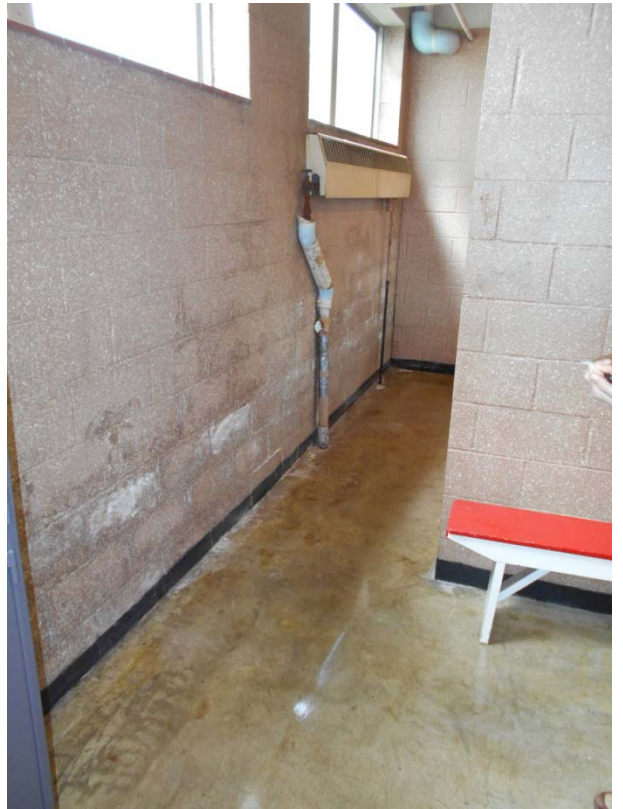
c. **SECURITY**

Camera coverage seems to cover all of the corridors and entrances to the building. Cameras are also located around the exterior perimeter of the building to provide coverage of the site.













## **UNIT E (1980's addition)**

### **1. STRUCTURAL SYSTEM**

Building is a two-story and single story additions with load bearing CMU exterior walls. First floor framing is hollowcore precast concrete planks spanning from the exterior walls to steel beams and columns near the existing building. Both roof sections are framed with steel bar joists and metal deck.

### **2. BUILDING SHELL**

#### **a. ROOF**

Fully adhered EPDM membrane over the two-story section appears to be in good condition. Ballasted EPDM over the single-story section appears to be in good condition. Both sections are drained by internal roof drains.

#### **b. EXTERIOR WALLS**

Most of the exterior walls have been surrounded by additions over the years. Sections above lower roofs remain functioning as exterior walls. They appear to be multiwythe masonry walls (modular face brick over CMU backup) in good overall condition.

#### **c. WINDOWS & DOORS**

Hollow metal doors in HM frames are in good condition. The original window system comprises of clear anodized aluminum framing with single-glass fixed panels, single-glass awning inserts, and uninsulated opaque/spandrel panels. Over the years, attempts have been made to improve thermal performance by applying insulation behind the glass. In addition, windows have been covered on the outside with single-skin metal panels with exposed-fasteners, likely to mitigate leaks. Overall window system is failing and complete replacement should be considered.

### **3. INTERIOR**

#### **a. PARTITIONS**

Ground floor partitions are masonry. First floor partitions are gypsum wallboard over steel studs. Partitions are in good condition.

#### **b. FINISHES**

Typical ground floor finish is sealed concrete. Majority of the first floor is carpeted. Walls are typically painted. Ground floor ceilings are open to structure and painted. First floor ceilings are 2'x4' suspended acoustical tile ceiling in offices, and painted drywall in the corridors, with painted open structure in the storage room. It appears that not all penetrations in first floor corridor walls have been fire stopped. Finishes are in good condition. Water stained ceiling tiles were noted in the Superintendent's office from condensate forming on uninsulated roof drain piping, as reported by maintenance personnel.

#### **c. ACCESSIBILITY**

Ground floor is ADA accessible through the accessible 1990's addition. First floor is not ADA accessible as part of the inaccessible 1960's first floor.

d. EXITING

Building seems to have adequate exiting. Under current codes, first floor corridor (which is part of the office suite) may be considered as dead-end corridor.

**4. MECHANICAL**

a. HEATING

Areas are served by a steam system with a boiler installed in the 1950's project. This original steam boiler was most likely replaced in the 1998 addition with a cast iron sectional boiler. Entire boiler, piping and control system is outdated and needs replaced. The combustion air system does not meet code.

b. AIR CONDITIONING

Areas are served by window air conditioners. These units are outdated and should be replaced by a forced air conditioning system.

c. VENTILATION

There are no ventilation systems. The only ventilation is achievable from open windows. These windows are not useable in cold and hot weather seasons. Code approved systems are needed.

**5. PLUMBING**

Areas are served by cast iron sanitary piping below grade and cast iron piping above grade with copper domestic piping. The domestic water heater is beyond its normal life and needs replaced.

**6. FIRE PROTECTION & DETECTION**

A sprinkler system is not installed in this building. The existing fire alarm system provides detection throughout the building and both visual and audio notification. Current Codes would require a voice system due to the occupancies of gymnasiums so any work done to the fire alarm system may trigger bringing the whole system up to current Codes.

**7. ELECTRICAL**

a. POWER

Power for this addition appears that it was fed from the 1960s addition.

b. LIGHTING

It appears that many of the lamps and ballasts in older portions of the building have also been replaced with T-8 lamps and electronic ballasts. Where lamps and ballasts were replaced, these fixtures should provide many additional years of service however most fixtures are showing their age and may be required to be replaced for aesthetic reasons. Emergency lighting is provided with stand alone battery pack type units.

## **8. TECHNOLOGY**

### **a. IT**

The building has been cabled through out for both wired connections and wireless. Depending on the new usage additional phone and data cabling may be required to provide adequate functionality.

### **b. ACCESS CONTROL**

Access control is currently limited to the main entrance of the school. The other doors remain closed and locked and there are door contacts on the exterior doors to indicate their position.

### **c. SECURITY**

Camera coverage seems to cover all of the corridors and entrances to the building. Cameras are also located around the exterior perimeter of the building to provide coverage of the site.





**1. STRUCTURAL SYSTEM**

Typical foundations are concrete trench footings & underpinned spread column footings at the interface with existing building.

There are two distinct superstructures. The typical classroom areas are load-bearing CMU walls with steel joists & steel beams supporting metal roof deck or cementitious wood fiber roof deck (at Music suite). The Gymnasium structure consists of load-bearing insulated precast concrete wall panels with long-span steel joists supporting cementitious wood fiber roof deck.

On the east side of the gymnasium, the modular block retaining walls appear to be in good condition. The Owner indicated that retaining wall repairs were done in 2013. However, cold joints between concrete stoops and abutting sidewalk paving were observed of roughly two inches. This may have been present prior to retaining wall repairs, or due to potential movement of the new modular wall. Erosion was evident in this area and had exposed the top of footing at the Gym SE corner. The area should be monitored and periodically measured to determine if movement is still active. In the interim, gaps in the sidewalk should be filled or sidewalk panels replaced in order to eliminate tripping hazards along the path of egress.

**2. BUILDING SHELL****a. ROOF**

Gymnasium roof and music suite roof are both ballasted EPDM membrane installed in 1999. Drainage is by roof drains and overflow drains or scuppers. Roof appears to be in good condition, but is nearing the end of the typical life of similar roofing systems. Replacement should be expected in the next 5-7 years.

The balance of the roofing is mechanically attached TPO membrane under RL Craft warranty (2013). Drainage is by roof drains and overflow roof drains. Roof appears to be in good overall condition. An active roof leak was reported at the preschool classroom section near a rooftop unit curb.

The roof edge sheet metal fascia appears to be in good condition.

**b. EXTERIOR WALLS**

The two typical exterior wall types are masonry cavity walls, comprised of CMU block and modular face brick with dampproofing, rigid insulation, and air space between them, and precast concrete insulated wall panels. The precast panels are limited to the Gym area. The walls appear to be in good condition. Flexible flashings at the base of the cavity walls are not trimmed near the face of wall; some extend couple of inches beyond face of wall, but this does not affect wall performance. Some minor concrete shrinkage cracks were observed in the precast flues, but appear to be superficial and should not affect panel performance. Sealant joints at precast panels are in fairly good shape for their age.

The sealant at the interface between 1990's addition and the 1910's building must be replaced.

c. **WINDOWS & DOORS**

The sliding aluminum windows with insulating glass are in good condition. Hollow metal doors in hollow metal frames are also in good condition. Most metal doors need fresh paint. The perimeter sealant at the south-facing fenestration will require replacement in the near future.

**3. INTERIOR**

a. **PARTITIONS**

CMU partitions are typical throughout and in good condition.

b. **FINISHES**

Flooring finishes vary: terrazzo in main corridors; VCT in classrooms and smaller corridors; sealed concrete in locker rooms & storage rooms; ceramic tile in showers; solid wood flooring in Gym. Walls are typically painted. 2'x2' suspended acoustic panel ceilings are typical throughout. Gym, music suite & storage rooms are open to structure and painted where space is occupied.

Finishes are in good condition for the age of the building. Ceiling tile water stains noted at the interface of 1990's addition and the 1920's building.

c. **ELEVATOR**

Chair lift has been decommissioned and abandoned.

d. **ACCESSIBILITY**

Building appears ADA accessible. The abandoned chair lift had provided accessibility for 1920's building.

e. **EXITING**

Building has adequate existing.

**4. MECHANICAL**

a. **HEATING**

This area of the building has hot water heating systems with three boilers providing the hot water. The heating system presently does not have any glycol mixture, which is a risk since some of the piping system is exposed above the roof. Freeze protection is only provided by having constant water flow which would be off with a loss of power. The heating water is served by two inline pumps. These pumps have had repairs, but presently seem to be in good working order. All systems are reuseable. The boilers are working fine, but have had some parts replacements over the years.

b. AIR CONDITIONING

All areas of this building are served by air handlers. The VAV air handling system has cooling and serves several areas. The gym AHU does not have any cooling. Some areas have single zone rooftops to provide cooling. All systems are reuseable.

The main electrical room is too warm and needs air conditioned.

The Johnson Controls system is having problems and the main head end for this system is not web accessible. The controls need updated. There are two rooms that have new Ecobee micro controllers. These controllers are web accessible standalone units. Two more areas will have control upgrades soon.

c. VENTILATION

All of the air handlers serving these areas have outside air ventilation systems, forcing a certain amount of ventilation air to all areas of the building.

**5. PLUMBING**

Piping systems appear to be cast iron (sanitary and storm) and copper (domestic hot and cold water) piping systems. The domestic water heater is still operable. The storage tank for this water heater is valved off, but is operable. All systems are reuseable.

**6. FIRE PROTECTION & DETECTION**

A sprinkler system is not installed in this building. The existing fire alarm system provides detection throughout the building and both visual and audio notification. Current Codes would require a voice system due to the occupancies of gymnasiums so any work done to the fire alarm system may trigger bringing the whole system up to current Codes. The existing panel is a Simplex Fire Alarm System and should have many years of serviceability left.

**7. ELECTRICAL**

a. POWER

The electrical service that was installed in 1999 appears to be in good working order and should have many years of serviceability left. This gear is comprised of Siemens panels and transformers.

b. LIGHTING

The lighting that was installed in the 1999 addition consists of mostly T-8 fluorescent fixtures. These fixtures are energy efficient and should have many years of serviceability left. Emergency lighting is provided with stand alone battery pack type units. Egress lighting from the exterior of the building appeared to meet Code and be in working order however several of the exterior lights were on so either the photocells or time clock may need to be adjusted.



## **8. TECHNOLOGY**

### **a. IT**

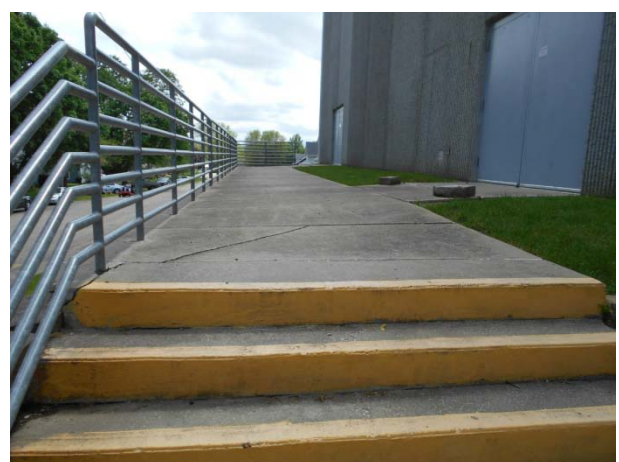
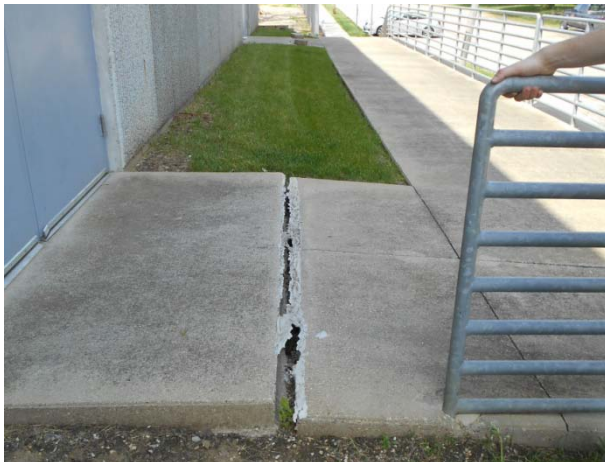
The building has been cabled throughout for both wired connections and wireless. Depending on the new usage additional cabling may be required to provide adequate functionality.

### **b. ACCESS CONTROL**

Access control is currently limited to the main entrance of the school. The other doors remain closed and locked and there are door contacts on the exterior doors to indicate their position.

### **c. SECURITY**

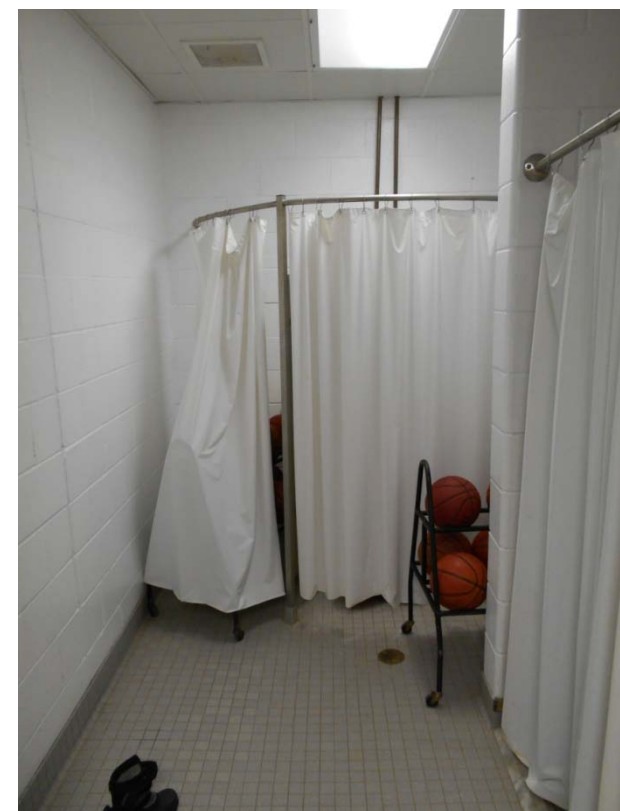
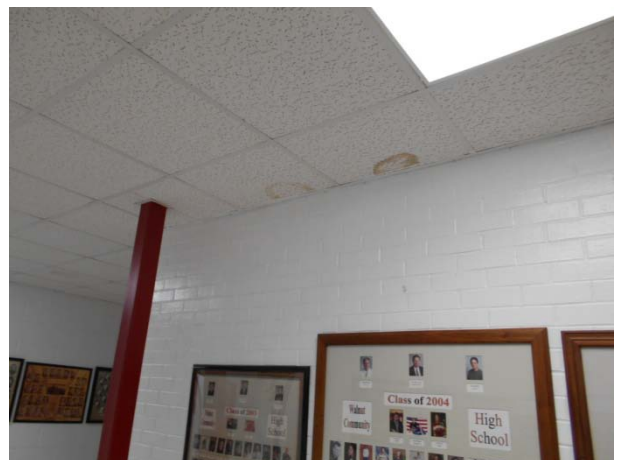
Camera coverage seems to cover all of the corridors and entrances to the building. Cameras are also located around the exterior perimeter of the building to provide coverage of the site.













**GENERAL INFORMATION**

Property Name: Walnut Community School District  
 Address: 415 Antique City Drive  
 City, State, Zip: Walnut Iowa 51577  
 Property Legal Description: \_\_\_\_\_

**UTILITY AND SERVICE PROVIDERS**

Electric	<u>MidAmerican Energy</u>	Fire System	<u>simplex Granel Feld Walnut Volunteer Fire Department</u>
Gas	<u>MidAmerican Energy</u>	Security System	<u>Door Alarms &amp; Video Feld</u>
Drinking Water	<u>City of Walnut</u>	Access Control System	<u>None</u>
Sanitary Sewer	<u>City of Walnut</u>	Elevator	<u>Abandoned</u>
Storm Water	<u>City of Walnut</u>	Roof Warranty	<u>R.L. Kraft</u>

**CAPITAL IMPROVEMENTS**

1. Have any capital improvements been conducted on the subject property in the past five years?

If yes, please provide any information such as the type of improvement, approximate date of improvement. As an example, have any of the roofs been replaced, concrete/asphalt repairs, the buildings' exteriors painted, new HVAC equipment installed, etc?

- North Building - New Roof 2014, Exterior Paint 2012  
New Entrance Doors 2008
- Middle Building - Tack Point 2008 New Shingle Roof  
45yr shingle 2009 Windows & Trim Painted 2009  
New gutters & Fascia 2009
- South Building - Partial New Roof 2013, Partial new  
Roof 2014 Approx 1/3 remains to be roofed; New windows  
in Old gym lobby 2009 New Doors main entry 2009  
new Facie Trim at time of Roofing - Began Replacing  
original Computer Fan HVAC with individual room  
computers in 2014 - 2 are in 2 are in progress  
all new Pneumatic Thermostats in original H.S. Building 2014  
New compressor 2014 pneumatics, New Condensate  
Boiler Tank 2015-
- + East side of Property New Sidewalk, Retaining wall & Fence 2013  
2013 Portions of West sidewalk 2012 New Sidewalk North side 2012  
2013 New Bottom on boiler that serves North and middle Building  
Play ground resurfaced 2013

2. Please discuss any noted property condition concerns that require repair or replacement. This would include roof leaks, damaged asphalt and/or concrete, structural or foundation concerns, problems with the HVAC systems, the waste or supply plumbing, sprinkler systems, erosion, electrical systems, etc. If yes, please note where the concerns are located and the extent of the concern.

Middle Building - at time of Reroofing a birds mouth was installed to divert water past chimney - this apparently wasn't installed properly and a slight leak has been detected winter of 2014-2015 -

Playground developed a few very noticable stress cracks through the winter of 2014-2015 need filled and resealed

There are normal wear and tear repairs needing treated as "Normal Maintenance" on a regular basis and are being treated as they develop

#### REGULATORY COMPLIANCE

1. Are you aware of any outstanding building inspection violations e.g. electrical, plumbing, general construction, exits, etc?

☐ Yes ☒ No ☐ Do Not Know

2. Are you aware of any outstanding fire department inspection violations?

☐ Yes ☒ No ☐ Do Not Know

3. Are you aware of any outstanding health/environmental department inspection violations?

☐ Yes ☒ No ☐ Do Not Know

4. Are you aware of any outstanding Americans with Disability Act violations? For example, are there a sufficient number of handicapped accessible parking spaces?

☐ Yes ☐ No ☐ Do Not Know

We have No designated handicap parking on West  
We do have designated handicap parking on East

The questionnaire information was provided by:

Name/Title:

*Daniel J. [Signature]*  
Director of Maintenance

Phone Number:

712-764-3327

Date:

4-25-15

Page 2 of 2

402-659-8032

Please complete and return to FRK A/E Fax: 515.223.7226

