

Barrington Elementary School Site Summary

Address	400 Cooper Drive Austin, TX 78753
Number of Permanent Campus Facilities	3
Original Year of Construction	1969
Total Campus Building Area (combined)	79,689 SF



Introduction

The Barrington Elementary School campus is located at 400 Cooper Drive in Austin, Texas. The Main School Building (BLDG-149A) was originally constructed in 1969. This building appears to have had one or two additions built over the years. There is the Stand-Alone Classroom and Library Building (BLDG-149B) and another Stand-Alone Classroom Building (BLDG-149D) on the campus as well. These buildings are connected by covered walkways.

Meeting Log		Revision Log		
Date	Meeting	Revision	Date	Summary of Content
8/2/16	Interview	00	9/22/16	Draft Issue
8/8/16	Assessment	01	11/15/16	Added meeting log to report.
10/17/16	Cluster Meeting	02	12/13/16	Added comments from Principal Gilma Sanchez as indicated in email dated 11/8/16. See pages 3, 5, 15-16, 21, and 25-26.
10/26/16	Follow-Up			

Main School Building – BLDG-149A

Building Purpose	Administration, Classrooms
Building Area	50,892 SF
Inspection Date	August 8, 2016
Inspection Conditions	95°F - Sunny
Facility Condition Index	



System Deficiency Overview

The following table provides a summary of the systems and their respective conditions found by each discipline.

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Exterior	Exterior Walls	Exterior walls are primarily brick with a stucco accent band at the roof line, above the windows, and at the main entrance roof extension. The exterior walls were observed to be in average condition. Deficiencies noted in the brick included staining from uncontrolled water run-off from the roof areas, and cracked and aged sealant. Deficiencies observed on the stucco finish included cracking above the window heads at various locations, one instance of an unfinished electrical installation damaging the surface, and the appearance of organic growth on the surface.	Average
	Exterior Windows	The exterior windows consist of aluminum framed single pane glazing units with solid infill panels below the vision lites and tinted glass above the operable sash. The windows were observed to be in poor condition. The metal panels installed in the bottom portion of the frames were observed to be deteriorating or damaged. The sealant at the jambs, sills, and heads appeared aged and cracked. Corrosion on the window frames was observed.	Poor
	Exterior Doors	The exterior doors consist of hollow metal doors set in hollow metal frames. Typically, these units are partially glazed. Some mechanical room doors have louvers set in the metal doors or have louvered transoms. The doors were observed to be in average condition.	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		Some units with acrylic glazing lites appeared to be damaged or aged. It was reported that the door from the gymnasium area was deteriorating and corroded.	
Roofing	<p>The roofing system is typically modified bitumen with a fluid applied top coating on the cap sheet. One small area of built up roofing is located at section A-13.</p> <p>The roofing system was observed to be in poor condition. This was determined from the deficiencies observed from the exterior and the visible signs of water damage observed to interior ceiling finish surfaces. The roof areas were observed to have blistering and loose cap sheets, aged areas and organic growth or deterioration on the cap sheet. At several locations on the roof surface, the runoff did not appear to be controlled and, as a result, stained the facade. Roof leaks were reported by the facility staff in the gymnasium storage closet.</p>		Poor
Interior Construction	Interior Walls	<p>Interior walls are stud construction with gypsum board finish or concrete masonry unit construction.</p> <p>The interior walls were observed to be in good condition. Observed deficiencies were limited to the kitchen area where partial height walls extended from the ceiling to capture humidity or fumes. This construction appeared to be separating from the ceiling grid. The toilet partitions in BRRGYM were noted as rusting. An accordion door was noted in room 108. The operable partition between the gymnasium and cafeteria was noted as having damage to the finishes and was requested to be replaced by the facility staff. At the time of the assessment the Café and associated hallways to the gym had received a fresh coat of wax making a closer review of the operable partition impossible.</p>	Good
	Interior Doors	<p>Interior doors are solid core wood veneer doors set in hollow metal frames. There are a limited number of hollow metal doors inside the facility.</p> <p>The frames and veneer of the interior doors were observed to be in average condition. Hardware appeared to be in good condition. Typically, frames had paint system condition issues resulting from wear and tear. The veneer on doors was observed as chipped, marred, and damaged. This appeared to be typical for all doors in the building. In one instance hardware at the door head appeared disconnected. It was reported by the CAC and Principal that some of the doors in the 100-wing did not lock properly.</p>	Average
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	System not present.	N/A
	Interior Stairs	System not present.	N/A

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Interior Finishes	Interior Wall Finishes	<p>Interior wall finishes consist of paint over gypsum board partitions or concrete masonry units. The restrooms include a combination of painted gypsum board and ceramic tile. Ceramic tile is also present in the kitchen.</p> <p>The interior wall finishes were observed to be in average condition. The deficiencies observed were chipped or peeling paint and a limited amount of damaged ceramic tile. Some portions of the building appeared to have older paint systems. Unfinished CMU (concrete masonry unit) was observed in several rooms creating a non-uniform aesthetic appearance. Damaged laminate was noted at several sink cabinets throughout the building.</p>	Average
	Interior Floor Finishes	<p>Interior floor finishes include VCT (vinyl composite tile), strip wood flooring at the stage, ceramic tile, quarry tile in the kitchen, carpet and an interlocking athletic flooring system in the gymnasium.</p> <p>The flooring finishes were observed to be in average condition. The quarry tile was observed to be aged and in poor condition. It was noted as chipped and patched, and delaminating from the substrate in many areas. Physical damage to the VCT was noted in several areas. The VCT in the cafeteria was reported as delaminating from the substrate. The exposed concrete floor in the kitchen janitorial closet was noted as damaged along with rust developing at the base of a structural column.</p>	Average
	Interior Ceiling Finishes	<p>Ceiling systems were observed to be a 2'x4' and 2'x2' suspended ceiling system. Gypsum board ceilings were observed in restrooms, book rooms or as accents in several areas.</p> <p>The ceiling finishes were observed to be in poor condition. The ceiling grid had rust and corrosion noted in many locations. The ceiling tiles exhibited water damage, humidity damage and physical damage throughout the building.</p>	Poor
Conveying	System not present.		N/A

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Plumbing	Plumbing Fixtures	<p>The building has public restrooms for males and females, students, and separate staff restrooms located throughout the facility. These restrooms typically have vitreous china hand sinks in counters with manual faucets, along with vitreous china, floor-mount/wall toilets with manual flushing mechanisms, and vitreous china, wall-hung urinals in the male restrooms with manual flushing mechanisms. There are service sinks found in the janitorial closets, and water coolers located throughout the facility. It was reported by the CAC and Principal that some of the water fountains had issues with water pressure.</p> <p>The restroom plumbing fixtures were observed to be in good condition as the fixtures were typically aged but functional.</p>	Good
	Domestic Water Distribution	<p>All of the plumbing fixtures are serviced with domestic cold water. There is a GWH (gas water heater) in the main mechanical room that serves the kitchen.</p> <p>The domestic water distribution system was observed to be in average condition. The burner to the GWH was observed to not be installed correctly.</p>	Average
	Other Plumbing	<p>The roof drains are equipped with metal grate covers to prevent debris from entering the drainage system.</p> <p>The roof drains were observed to be in good condition. The floor drain in the basement mechanical room was not draining at the time of observation.</p>	Average
Mechanical/ HVAC	<p>The major mechanical equipment consists of indoor chilled/hot water single zone and multiple zone AHUs (air handling units), an air cooled chiller and gas fired boilers. All AHUs are located in mechanical closets and mezzanines. The mechanical closets are located around the gymnasium and kitchen. There are other mezzanines located above the corridor of each group of classrooms. Several of the units are original to the building and have exceeded their service life by more than ten years. The remainder of the units were installed within the last ten years and were observed to be in good condition. Most of the newer AHUs appeared to be installed as outside air pre-treatment units and appeared to be in good condition.</p> <p>There is one air cooled chiller serving the main building. Its approximate age is ten years and it appeared to be in good condition.</p> <p>The boilers were reported by the facility staff to be aged. According to the nameplates on the boilers, they are less than ten years old. It was observed that the boilers were installed without a primary pump, which could lead to incorrect operation. The CAC and Principal reported that the HVAC (heating, ventilating, and air conditioning) is not working properly within the 100-wing and within the gymnasium.</p>		Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Fire Protection	Fire Alarm	The building has a fire alarm system that consists of alarm and signaling devices such as horns/annunciators, strobes, horn/strobe combinations, pull stations, and detectors. The fire alarm system is controlled by the Silent Knight control panel. The fire alarm system was observed to be in good condition.	Good
	Fire Protection/Suppression	The building is protected by portable fire extinguishers placed throughout the facility. All observed portable fire extinguishers had inspection tags dated within the last year as required and were observed to be in good condition.	Good
Electrical	Electrical Distribution	The electrical service enters the building from the 277/480-volt 2500-amp main switchboard located on the exterior near the service transformer. The service continues through the 2500-amp "MSB" then feeds transformers and high-voltage panelboards, which are located in various electrical rooms throughout the building. There are distribution panels rated at 480-volt that feed lighting and mechanical equipment then utilize step-down transformers to 120/208-volt secondary, which feeds power to 120/208-volt panelboards. The electrical distribution equipment was observed to be in average condition. Panelboard 1PZB in the ELECADM room was observed missing circuit breaker covers and the bussing was exposed behind the circuit breaker board. It was reported by facility staff that the switchgear in the 200 wing is outdated with insufficient capacity. It was also reported that breakers were tripping in the stage area and the 100-200 wing classrooms. The building does not have a lightning protection system.	Average
	Lighting	The building exterior lighting consists of HID (high intensity discharge) light fixtures that are located along the entire perimeter. The interior lighting consists of primarily 2-lamp fluorescent recessed troffer light fixtures. Facility staff reported that the exterior light fixtures for BLDG-149A need to be updated. The lighting for the building appeared to be in good condition and well maintained. There are exit signs present in the building and appeared to be in good working condition.	Good

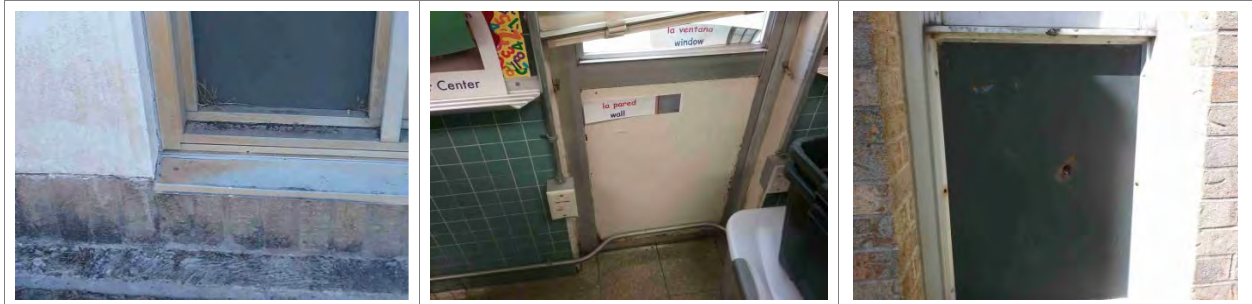
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Communications & Security	<p>There is a security system including surveillance cameras in the building. There is a public address system and telecommunications systems in the building. The facility staff reported that there was insufficient camera coverage facing west of BLDG-149A. Staff also reported that key card access points were frequently malfunctioning on the exterior door next to the music room and the main entrance.</p> <p>The security, public address, and communications systems appeared to be in average condition.</p>	Average

Exterior System Deficiency Examples

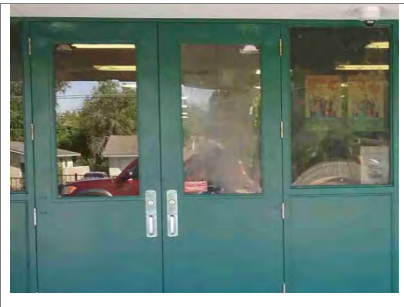
Exterior Walls



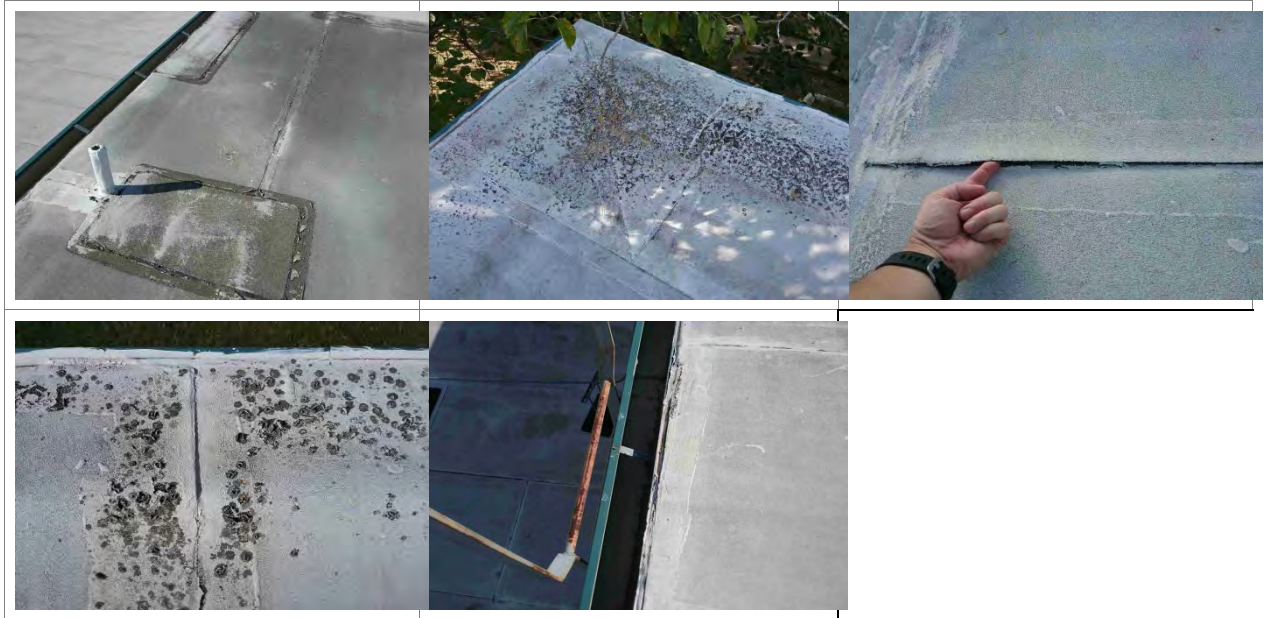
Exterior Windows



Exterior Doors



Roofing Deficiency Examples



Interior Construction Deficiency Examples

Interior Walls



Interior Doors

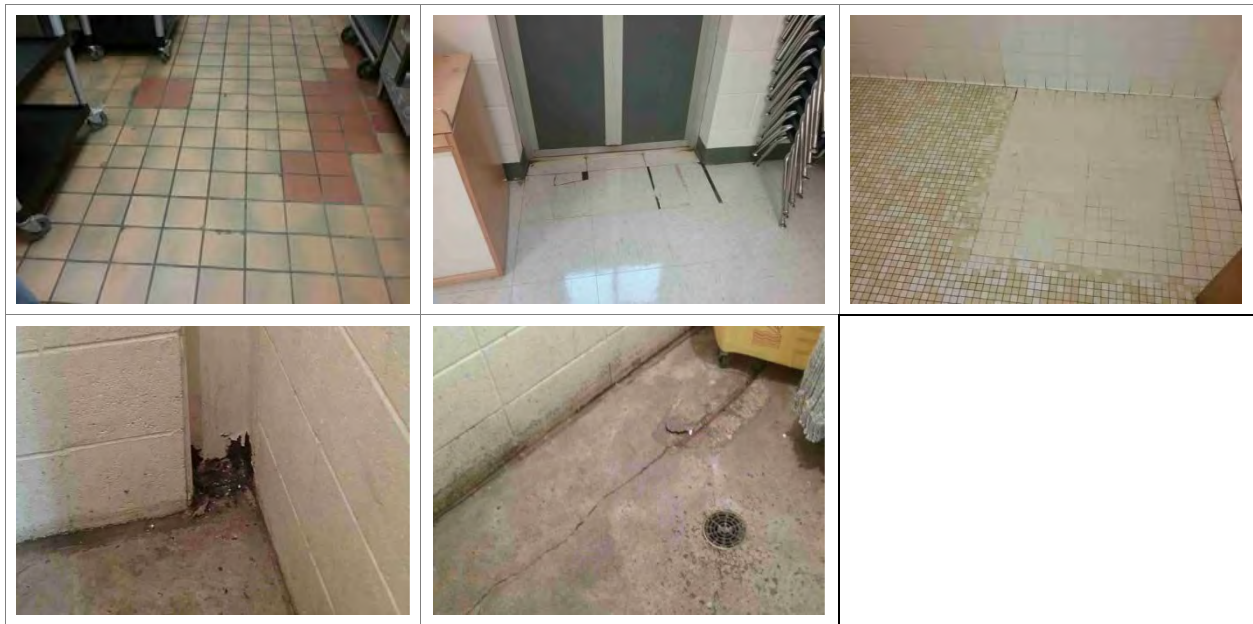


Interior Finishes Deficiency Examples

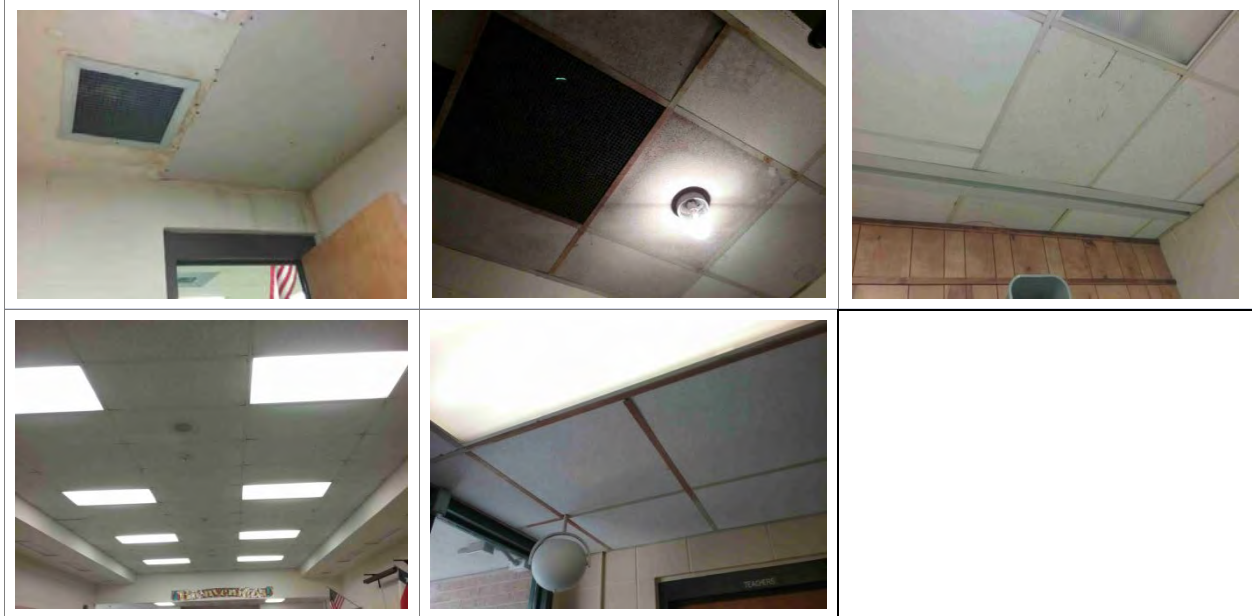
Interior Wall Finishes



Interior Floor Finishes

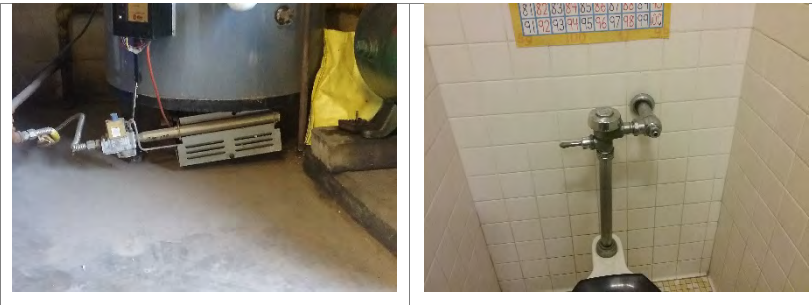


Interior Ceiling Finishes



Plumbing System Deficiency Examples

Domestic Water Distribution



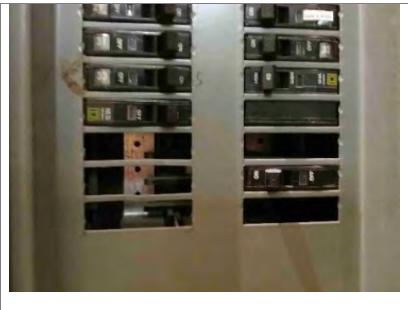
Mechanical/HVAC System Deficiency Examples





Electrical System Deficiency Examples

Electrical Distribution



Stand-Alone Classroom and Library Building – BLDG-149B

Building Purpose	Classrooms and Library
Building Area	16,003 SF
Inspection Date	August 8, 2016
Inspection Conditions	95°F - Sunny
Facility Condition Index	



System Deficiency Overview

The following table provides a summary of the conditions and deficiencies found by each discipline.

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Exterior	Exterior Walls	Exterior walls are primarily brick with mechanically fastened metal panels above and as infill panels at window units. The exterior walls were observed to be in good condition. Deficiencies noted for the brick work included missing or aged sealant at the control joints and cracking of brickwork or grout at the outside corner of room 307. The metal panel system had a loose trim piece in one location and the fasteners appeared to be loose and missing in a few locations.	Good
	Exterior Windows	Exterior windows are aluminum framed single pane glazing units in a single hung configuration. The exterior windows were observed to be in good condition. One window unit was observed with damaged glazing. On all units, the sealants were noted as aged and cracking.	Good
	Exterior Doors	The exterior doors consist of hollow metal doors set in hollow metal frames. Typically, these units contain glazed vision panels. Mechanical rooms have door leafs without windows. The exterior doors were observed to be in good condition. The only deficiency noted was the lack of lower glazing stops in three locations at the southern exit from corridor C1.	Good
Roofing	The roofing is a mechanically fastened metal panel system as observed from the adjacent building. This roof system was observed to be in poor condition. There		Poor

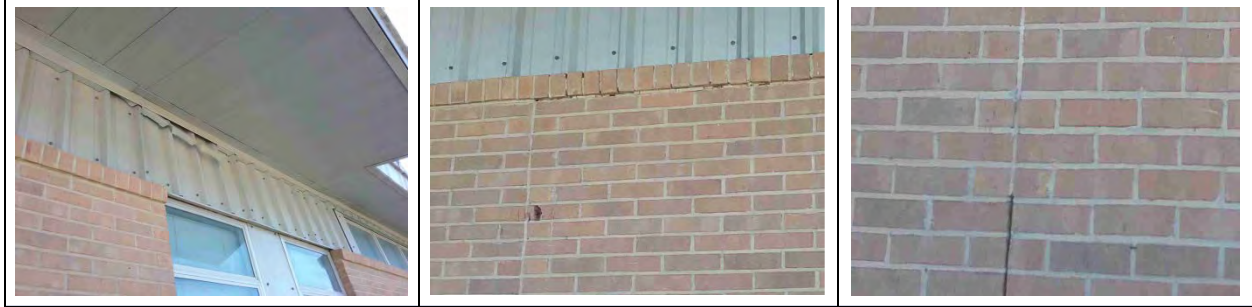
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		was evidence of consistent leaking and previous repairs to the roof surface. The staff report major and persistent roof leaks at the 300-wing.	
Interior Construction	Interior Walls	Interior wall systems are stud construction finished with gypsum board. The interior walls were observed to be in good condition. No deficiencies were noted.	Good
	Interior Doors	Interior doors are solid core wood veneer doors set in hollow metal frames. The door units include side lites. There are a limited number of hollow metal doors inside the facility and utility spaces. The interior doors were observed to be in good condition.	Good
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	System not present.	N/A
	Interior Stairs	System not present.	N/A
Interior Finishes	Interior Wall Finishes	Interior wall finishes consist primarily of paint over gypsum board, ceramic tile in the corridor, and ceramic tile in the restrooms. The interior wall finishes were observed to be in good condition. There was minor damage noted to ceramic tile in corridor C1.	Good
	Interior Floor Finishes	Interior floor finishes include VCT, carpet, ceramic tile, and plywood at the mezzanine. The floor finishes were observed to be in good condition. The plywood flooring in the mezzanine was observed as having many water stains. These appeared to be from mechanical equipment and roof leaks.	Good
	Interior Ceiling Finishes	Interior ceiling systems consist of a 2x4 suspended ceiling system with acoustical tile and gypsum board ceilings in restrooms and in the corridor. The ceiling finishes were observed to be in average condition. The majority of the rooms were observed to have water damaged ceiling tiles. The library appeared to include humidity damage. Both corridor gypsum board ceilings exhibited some form of damage to the surface. In corridor C2 there was a small field of blistering noted while a large blister was observed in corridor C1 outside the library.	Average
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The building has public restrooms for males and females, students, and separate staff restrooms located throughout the facility. These restrooms typically have vitreous china hand sinks in counters with manual	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		faucets, along with vitreous china, floor-mount/wall toilets with manual flushing mechanisms, and vitreous china, wall-hung urinals in the male restrooms with manual flushing mechanisms. There is a service sink in the janitorial closet, and a water cooler located near the library. The restroom plumbing fixtures were observed to be in good condition.	
	Domestic Water Distribution	The domestic water is served from the main building. There is an electric heater in the boiler room suspended above the boiler. The water heater was not accessible, but appeared to be in good condition.	Good
	Other Plumbing	There were no roof drains observed on the roof surface.	N/A
Mechanical/ HVAC	<p>The major mechanical equipment consists of several chilled water AHUs and fan coil units in addition to one boiler, one chiller and one pump per system.</p> <p>The boiler was observed to be in average condition as it is approaching the end of its useful life.</p> <p>The chilled water pump is installed on an inertia base on the mechanical mezzanine and exhibits vibration noises. These vibrations are highly apparent from the first level.</p> <p>The heating water pump is sitting directly on the floor and is not mounted on an inertia base nor is it secured in its location.</p> <p>The chiller appeared in excellent condition as it was installed within the last year.</p> <p>The AHUs appeared to be in good condition. The associated fan coil units appear to be in serviceable conditions. The condensate drain line is not secured in position to keep the line from moving or causing damage to the condensate drain pans. <i>It was reported by the CAC and Principal that the HVAC system was not working properly.</i></p>		Average
Fire Protection	Fire Alarm	The building has a fire alarm system that consists of alarm and signaling devices such as horns/annunciators, strobes, horn/strobe combos, pull stations, and detectors. The fire alarm system is controlled by the Silent Knight control panel. The fire alarm system appeared to be in good condition.	Good
	Fire Protection/Suppression	The building is protected by portable fire extinguishers placed throughout the facility.	Good
Electrical	Electrical Distribution	The electrical service enters the building at the 400-amp, 277/480-volt main distribution board "DPA" located in the electrical room ELECLIB. The distribution panel feeds transformers and branch panelboards in the same room. The electrical distribution equipment appeared to be in	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		<p>good condition.</p> <p>The building does not have a lightning protection system.</p>	
	Lighting	<p>The building exterior lighting consists of downlights, HID light fixtures that are located along the entire perimeter. The interior lighting consists of surface mounted 1'x4' fluorescent light fixtures.</p> <p>Facility staff reported that the exterior light fixtures need to be updated. <i>It was reported by facility staff that some lights were not working properly.</i></p> <p>The lighting for the building appeared to be in good condition.</p>	Good
	Communications & Security	<p>There is a security system including surveillance cameras in the building. There is a public address system and telecommunications systems in the building. The facility staff reported that there is insufficient camera coverage facing north of the building. Staff also reported that key card access points were frequently malfunctioning on the doors leading into the library.</p> <p>At the time of assessment, the security, public address, and communications systems appeared to be in good condition with no visual deficiencies to report.</p>	Good

Exterior System Deficiency Examples

Exterior Walls



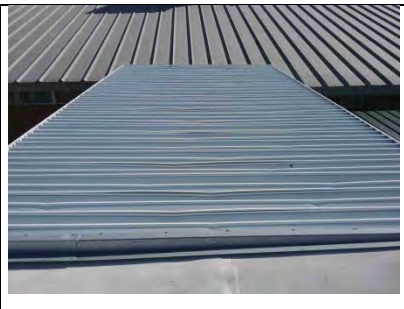
Exterior Windows



Exterior Doors



Roofing Deficiency Examples



Interior Finishes Deficiency Examples

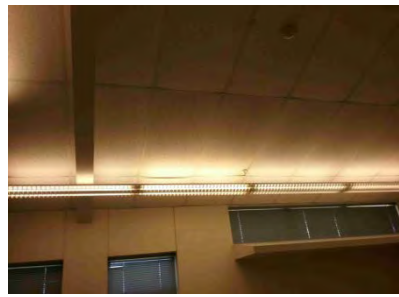
Interior Wall Finishes



Interior Floor Finishes



Interior Ceiling Finishes



Mechanical/HVAC System Deficiency Examples



Classroom Building – BLDG-149D

Building Purpose	Classroom
Building Area	12,794 SF
Inspection Date	August 8, 2016
Inspection Conditions	95°F - Sunny and hot
Facility Condition Index	



System Deficiency Overview

The following table provides a summary of the conditions and deficiencies found by each discipline.

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Exterior	Exterior Walls	Exterior walls are brick with brick accents. The exterior walls were observed to be in good condition. Graffiti was noted on one wall and it appeared this was the location of previous applications of graffiti. The fastener at one of the awnings was noted as rusting and one downspout appeared to be clogged and staining the brick work.	Good
	Exterior Windows	Exterior windows are aluminum framed single pane glazing units in a single hung configuration. The exterior windows were observed to be in good condition. No deficiencies were noted.	Good
	Exterior Doors	Exterior doors consist of hollow metal doors set in hollow metal frames. Typically, these units contain glazed vision panels. The exterior doors were observed to be in good condition. One exterior door was noted as missing its sweep.	Good
Roofing	The roofing system appears to be modified bitumen with a cap sheet coated with plastic sheet. A metal panel system is found at covered walkways and awnings. The roofing system was observed to be in good condition with a few minor deficiencies noted. Ponding was noted in some areas on the modified bitumen. Physical damage was observed in one location of the metal panel roofing system. One awning was noted as having physical damage.		Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Interior Construction	Interior Walls	Interior wall systems consist of stud construction finished with gypsum board. The interior walls were observed to be in good condition. No deficiencies were noted.	Good
	Interior Doors	Interior doors are solid core wood veneer doors set in hollow metal frames. The door units include glazed vision panels. There are a limited number of hollow metal doors inside the facility and utility spaces. The interior doors were observed to be in good condition. No deficiencies were noted.	Good
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	System not present.	N/A
	Interior Stairs	System not present.	N/A
Interior Finishes	Interior Wall Finishes	Interior wall finishes include painted gypsum board and ceramic tile in the restrooms. The interior wall finishes were observed to be in good condition and no deficiencies were noted.	Good
	Interior Floor Finishes	Interior floor finishes include VCT, carpet, and ceramic tile. The floor finishes were observed to be in good condition. Minor damage was noted in corridor C2.	Good
	Interior Ceiling Finishes	Ceiling systems were observed to be a 2x4 suspended ceiling system with acoustical tile and gypsum board ceilings in the restrooms. The ceiling finishes were observed to be in good condition. On room was noted as having water damage tile.	Good
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The building has one restroom for male students and one restroom for female students per classroom pair and a staff restroom in the building. These restrooms typically have vitreous china hand sinks in counters with manual faucets, along with vitreous china, wall-mounted toilets with manual flushing mechanisms. There is a janitorial closet near the main entrance. The restroom plumbing fixtures were observed to be in good condition.	Good
	Domestic Water Distribution	All of the plumbing fixtures are serviced with domestic cold water from the central distribution system. There was one electric water heater located on the mezzanine to serve the restroom lavatories as well as the sink in the library office.	Good

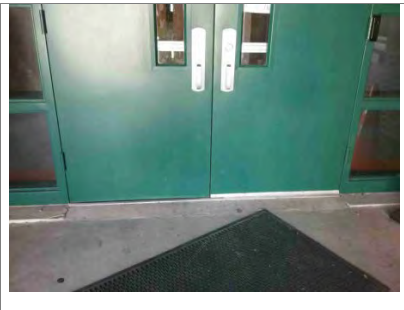
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		The plumbing distribution equipment was observed to be in good condition.	
	Other Plumbing	There were no roof drains to be observed.	N/A
Mechanical/ HVAC	<p>The major mechanical equipment consists of indoor vertical DX FCUs (fan coil units), with split condensing units mounted on the roof. In addition, there is a packaged d/x RTU (roof top unit) that provides outside air to the building.</p> <p>All observed equipment appeared to be in good condition. <i>It was reported by the CAC and Principal that the HVAC system was not working properly in the fifth grade classrooms.</i></p>		Good
Fire Protection	Fire Alarm	<p>The building has a fire alarm system that consists of alarm and signaling devices such as horns/annunciators, strobes, horn/strobe combinations, pull stations, and detectors. The fire alarm system is controlled by the Silent Knight control panel.</p> <p>The fire alarm system was observed to be in good condition.</p>	Good
	Fire Protection/ Suppression	The building is protected by portable fire extinguishers placed within the facility. All observed portable fire extinguishers had inspection tags dated within the last year as required and were observed to be in good condition.	Good
Electrical	Electrical Distribution	<p>The electrical service enters the building at the 400-amp, 277/480-volt main distribution board "1HDP" located in the electrical room 409. The distribution panel feeds transformers and branch panelboards in the same room.</p> <p>The electrical distribution equipment appeared to be in good condition.</p> <p>The building does not have a lightning protection system.</p>	Good
	Lighting	<p>The building exterior lighting consists of HID light fixtures that are located along the entire perimeter. The interior lighting consists of 2-lamp fluorescent recessed 2'x4' troffer light fixtures.</p> <p>The lighting for the building appeared to be in good condition.</p>	Good
	Communications & Security	<p>There is a security system including surveillance cameras in the building. There is a public address system and telecommunications systems in the building.</p> <p>These systems appeared to be in good condition with no deficiencies noted.</p>	Good

Exterior System Deficiency Examples

Exterior Walls



Exterior Doors

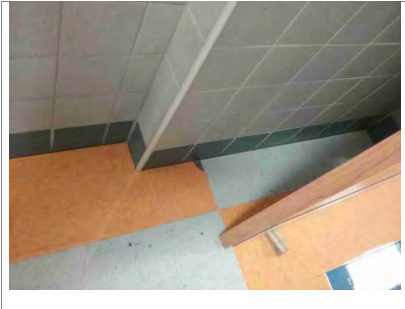


Roofing Deficiency Examples

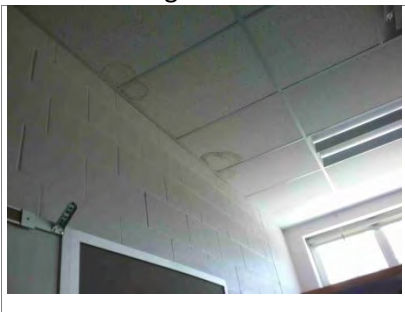


Interior Finishes Deficiency Examples

Interior Floor Finishes



Interior Ceiling Finishes



Barrington Elementary School Campus Summary of Recommendations

This document is based on current conditions observed during fieldwork and provides recommendations for corrective actions by each discipline. The following recommendations provide a summary of the findings.

Campus Recommendations

Plumbing

1. Continue preventive maintenance on aged plumbing fixtures and plan for replacement in the future as fixtures continue to age at all associated campus facilities.
2. Repair or replace any damaged or missing piping insulation as needed at all facilities.
3. Clean and flush out all of the roof and interior floor drainage piping at all facilities.

Mechanical/HVAC

1. Adjust HVAC controls or other equipment, such as dehumidifiers, installed to assist the HVAC equipment in mitigating the humidity observed in all facilities. If any of the HVAC equipment is planned to be replaced, such as any of the AHUs or package units, it should be replaced with an updated asset that includes an integral dehumidification that will assist with humidity issues.
2. Address any rust or corrosion observed to the equipment, its associated piping, or any other sub-asset in all facilities by cleaning, re-painting, and/or repairing by any other means to prevent further deterioration.
3. Repair or replace any damaged or missing piping insulation as needed at all facilities.
4. Address any equipment at all of the campus facilities that were noted with excessive noise/vibration by repairing the motor, changing the belt, or any other means to promote efficiency.
5. Repair any observed leaks to prevent water damage to the asset, its piping, support beams, or any other sub-assets. Once leaks are addressed in all facilities, repair or replace any water-damaged components as needed.
6. Repair or replace any fin assemblies of HVAC equipment that shows extensive wear and tear. Consider adding a protective fence around any of the units on the exterior ground level that could be vandalized or damaged by students/civilians, particularly at the weight room / shop facility.
7. Plan and track for equipment that uses R-22 refrigerant in all facilities. The refrigerant is being phased out of manufacturing and construction use in the near future, and thus will make all equipment obsolete.
8. Ensure routine preventive maintenance is conducted for cleaning ductwork to promote efficient and clean air flows to all of the facilities' spaces.
9. Install air curtains at the entry doors/vestibules as needed.
10. Further investigate the return grilles and corridor HVAC balancing. Facility staff reported that the corridor spaces throughout the main school and gymnasium facilities were poorly conditioned and stated that the lack of return air grilles could be the source of the problem. Note that if air curtains are to be installed this study should be conducted after the installation.
11. Create a test and balance as well as a commissioning plan for any newly replaced equipment including their support systems such as chilled water or heating water as well. New equipment may have different performance compared to the old.

Fire Protection

1. Continue annual inspections of the fire protection system (at the main school) and the portable fire extinguishers (at all facilities).

Electrical

1. Review the exterior lighting levels and repair/replace as needed to insure security and safety.
2. Provide security cameras inside and outside of buildings where necessary for proper coverage.
3. Inspect the data network and telephone systems to insure they are working and free of future failures.

Main School Building Recommendations

Exterior

1. Repair or replace sealants at the brickwork.
2. Repair stucco systems above window heads.
3. Repair stucco systems at exterior roof extensions or awnings. Replace rusted elements and review interior structure of system for rusting of support materials.
4. Survey and replace the windows.
5. Survey building and replace acrylic glazing with glass.
6. Replace rusted door at GYM.

Roofing

1. Repair or replace the roof systems.

Interior Construction

1. Repair partitions at kitchen ceiling.
2. Review closure of accordion door closets at six locations.
3. Survey interior door systems replace or repair as necessary.
4. Reinstall hardware at 208RR's door head or remove if not required.
5. Investigate and repair non-locking doors within the 100-wing, as reported by the CAC and Principal.
6. Replace operable partition in GYM/CAFÉ.
7. Replace toilet partitions in BRRGYM.

Interior Finishes

1. Repaint the portion of the 200 wing that includes rooms 201 thru 211.
2. Repaint the resource office area that includes RESCLO and RESOFC1
3. Review rooms for exposed CMU uncovered by the removal of black boards.
4. Replace the quarry tile in the kitchen.
5. Replace damaged VCT tiles. Where matching tiles are not available, replace the tile in the room.
6. Review VCT in cafeteria for adhesion issues.
7. Replace VCT in OFC200
8. Repair concrete flooring and structural column at KITCC. Install appropriate flooring to control wetting of this area.
9. Replace ceiling grid and tile; install appropriate tile system in KITCC.
10. Review humidity issues in MULTI200 and rooms 200, 202, 204, 206, 208, and 210.

Plumbing

1. Repair burner installation on GWH.
2. Investigate water pressure issues, as reported by the CAC and Principal.

Mechanical/HVAC

1. Create a replacement plan for the AHUs that have exceeded their service dates.
2. Reinstall boiler piping to incorporate a primary pumping.
3. Investigate and repair issues with the HVAC system in the 100-wing and in the gymnasium, as reported by the CAC and Principal.

Electrical

1. Provide missing circuit breaker cover plates for the panelboard 1PZB.
2. Inspect the switchgear that feeds the 200 wing for insufficient capacity and replace if necessary.

Stand-Alone Classroom and Library Building Recommendations

Exterior

1. Replace all exterior sealants at brick work and windows.
2. Repair damaged grout and brick work at the outside corner of room 307.
3. Tighten all fasteners in exterior metal panel system.
4. Replace damaged window glazing.
5. Install new glazing stops at exterior side lite configuration of the southern exit from corridor C1.

Roofing

1. Replace roofing system with one that does not contain exposed fasteners.

Interior Construction

1. Install curbs and a waterproof material over the mezzanine floor structure to capture mechanical unit leakage from maintenance or breakdowns.

Interior Finishes

1. Repair damaged tile in corridor C1.
2. Install water resistant material at sinks in classrooms.

Mechanical/HVAC

1. Create a plan to replace the boiler.
2. Create a plan to replace the heating and chilled water pumps, remove inertia bases and install inline pumps.
3. Install automatic purge for air separator.

Classroom Building Recommendations

Exterior

1. Remove graffiti from exterior brick work outside of room 414.
2. Replace rusting fastener outside of room 403.
3. Clean stained brick work outside room 403 at the downspout.

Roofing

1. Unclog downspout outside of room 403.
2. Close up counter flashing at parapet with appropriate sealant.
3. Repair damaged awning panel.

Interior Finishes

1. Replace damaged tiles in corridor C2.
2. Diagnose source of water in room 414, repair and replace damaged ceiling tiles.

Mechanical/HVAC

1. Investigate and repair issues with the HVAC system in the fifth grade classrooms.