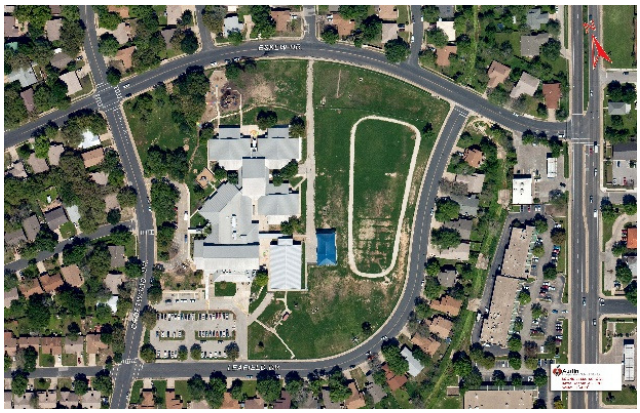
Boone Elementary School Site Summary

Address	8101 Croftwood Drive Austin, TX 78749
Number of Permanent Campus Facilities	2
Original Year of Construction	1986
Total Campus Building Area (combined)	73,690 SF



Introduction

The Boone Elementary School campus is located at 8101 Croftwood Drive in Austin, Texas. Boone Elementary School was established in 1986, and consists of two permanent buildings. The buildings include the Main School Building (BLDG-170A) with classrooms, administration, gymnasium, and cafeteria, and the Stand-Alone Classroom Building (BLDG-170B). The buildings are connected by a short, covered sidewalk.

Main Classroom Building – BLDG-170A

Building Purpose	Administrative, Classrooms, Cafeteria, and Gymnasium
Building Area	63,672 SF
Inspection Date	July 26-27, 2016
Inspection Conditions	July 26 - 93°F - Thunderstorms July 27 - 92°F - Overcast
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	The exterior walls of the building are finished in brick with a flat metal panel fascia. They were observed to be in good condition with a few isolated and minor deficiencies. Small areas of brick were observed to be chipped or missing. One decorative brick column had unconnected anchors and was leaning away from the wall.	Good
	Exterior Windows	The exterior windows are comprised of single pane systems set in metal frames. Some are part of a storefront system and have painted frames. The painted window frames were observed to have peeling paint on the exterior. Many window frames were observed to be unclean on the exterior as well.	Good
	Exterior Doors	There are two main entry doors to BLDG-170A located on the west side of the building. They are metal doors set in metal storefront systems. The remaining exterior doors are metal in metal frames with a fixed transom window. The exterior doors were observed to be in good condition with isolated areas of worn paint.	Good
Roofing	The roof is standing seam metal. The roof was inaccessible due to rain and slope. From the ground level, the roof appeared to be in good condition with no visible signs of damage. Water damage was rare inside the building, and confined to the kitchen area.		Good
Interior Construction	Interior Walls	The interior walls are constructed of CMU (concrete masonry unit) or a metal stud wall system. Most walls are furred out with drywall. Built in display cases and	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		windows are prevalent throughout the building. Some rooms, like the cafeteria, are divided by foldable partitions. The interior walls were observed to be in good condition with very few signs of damage. Cracks in the freezer wall in the kitchen were observed to be covered with duct tape.	
	Interior Doors	The interior doors are wood and metal, both in metal frames. Most wood doors have narrow lites in metal frames. There is one small roll-up door providing dish access from the cafeteria to the kitchen. It measures approximately 4'-0" wide and 5'-0" tall. The doors were observed to be in average condition due to age and use. The wood was observed to be splitting on many of the doors. The doors in the kitchen, including the freezer door, were observed to have corroded frames and deteriorated door finishes. The roll-up door to the kitchen was observed to be in good condition.	Average
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	System not present.	N/A
	Interior Stairs	There are three stairs leading to the stage level of the cafeteria. Two are small wood stairs, and the third is a low monument stair covered in carpet. The stairs were observed to be in good condition, only showing a few spots of damage to the carpet of the monument stairs. The corners of the stairs were observed to have pulled tufts of carpet.	Good
Interior Finishes	Interior Wall Finishes	The walls of the school are finished with painted drywall, painted CMU, and varnished wood paneling. The restrooms and kitchen have FRP (fiber-reinforced plastic) panels on the walls as well. The wall finishes appeared to be in good condition, showing signs of wear lighter than expected for the school's age. Some of the wood paneling was observed to be faded at the base, and one location exhibited signs of water damage. The corners of the drywall in the classrooms were observed to have chipped paint, and a few wall penetrations were unsealed. The FRP by the kitchen sinks was observed to be unclean and aged.	Good
	Interior Floor Finishes	The majority of the school is finished with linoleum tile. The administration area is carpeted. The kitchen and restrooms are finished with ceramic tile flooring, and the	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		stage floor is wood. The kitchen floor appeared to be in good condition except for isolated spots of calcium staining and tile corrosion. These spots were near the freezer door and under the heating equipment. The linoleum tile was observed to be in good condition throughout the school with only a few cracked tiles. The stage floor, administration carpet, and restroom tile floors were likewise observed to be in good condition.	
	Interior Ceiling Finishes	There is ACT (acoustical ceiling tile) in the majority of the school. There is drywall ceiling in the restrooms. There is wood wool ceiling in the gymnasium. The cafeteria ceiling is finished with lay-in FRP panels. The ceilings in the administration wing and faculty areas were missing tiles or cracked. Very few tiles showed signs of water damage except in the kitchen. The kitchen ceiling showed signs of water damage and rust on the tiles and tees.	Good
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The building has public restrooms for males and females located throughout the facility with separate restrooms for the staff. The restrooms in the administrative area were observed to be in good condition. The hot water lines for the A1 and A2 faucets remained cold. The A6 faucet was only slightly warm. The flush valve for room C1 would continue to flush for a long period of time when activated. The urinals in the BHRRGYM restroom did not flush properly.	Average
	Domestic Water Distribution	There are several sinks in the A-wing classrooms that have hot water lines. One sink in the B-wing classrooms has a hot water line as well. The faucets that have hot water are directly connected to a small water heater located underneath the sink. The restrooms in the administrative offices had faucets that were directly connected to small water heaters underneath the sink as well. The gas water heater located in the main mechanical room was observed to be in poor condition. Part of the distribution piping for this unit was extremely corroded. The nameplate showed that the manufacturing date was 1992 and water heaters should be replaced every 15 to 20 years.	Average

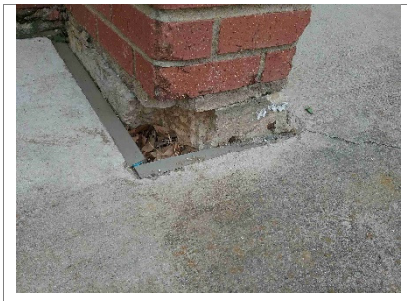
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Other Plumbing	There were not any drainage issues observed during the assessment. The condensate from mechanical equipment and water from the kitchen faucets drained properly. No drains were observed to be clogged or deteriorated. The floor drains in this building were observed to be in good condition.	Good
Mechanical/ HVAC	The major mechanical equipment for this building consists of roof top air handlers, water source heat pumps, a cooling tower, and outdoor air handlers. The majority of the heat pumps in the building are located above the ceiling. The air handlers are located outside the facility on ground level or on the roof. The VFDs (variable frequency drives) in the main mechanical room were observed to be aged and outdated. The boilers were observed to be in good condition although the distribution piping for one of the boilers was corroded in certain areas. The unit heater in the main mechanical room also looked dated and was observed to be in poor condition. The recirculation pumps on the boilers were observed to be new and in good condition. The air conditioning unit for the gymnasium was not functioning at the time of the assessment. The weather conditions at the time of assessment were not conducive for safe roof access. Therefore, the units located on the roof of the building were not assessed. The cooling tower could not be accessed, but it appeared to be in good condition.		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 5820XL addressable control panel. The fire alarm system appeared to be in good condition.	Good
	Fire Protection/ Suppression	The building does not have a sprinkler system. Fire extinguishers are placed throughout the building to protect in the event of a fire. The equipment appears to be in good condition and the tags were signed by an inspector and dated within the last year.	N/A

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Electrical	Electrical Distribution	A pad-mounted transformer serves a 1200A 480/277V main switchboard MSB. MSB was installed in 2002. There were also additions to the electrical system in 1998, which included the addition of a 100kVAR power factor correction capacitor bank. The remaining equipment is original from 1986. The building does not have a lightning protection system. The electrical distribution equipment was observed to be in average condition. Approximately 40% of the distribution equipment appeared to be in good condition and the remaining 60% appeared to be from the original 1986 construction and was showing signs of wear and tear and corrosion/rust. One panelboard was observed with missing circuit breaker covers and the bussing was exposed behind the breaker board. This condition could be considered a life safety hazard and breaker covers should be installed immediately. One transformer was observed to be humming very loudly. The kitchen area janitorial storage room that contains the power factor correction bank felt hotter than normal.	Average
	Lighting	Approximately 95% of the facility consists of 2x4 fluorescent recessed light fixtures which appear to be in good condition. Approximately 40% of the exit signs appear to be LED (light-emitting diode) type with LED emergency heads, which appear to be in good condition. However, 60% of the exit signs are worn out or non-functional. All lighting controls in the facility are manual. The gymnasium has HID (high-intensity discharge) low bay fixtures that appeared to be in good condition. There are LED exit signs with integral emergency heads that appear to be recently installed. The cafeteria has 2x4 fluorescent recessed light fixtures and the stage are has fluorescent strip lights for house lighting. There are also theatrical lights for the stage. All lights in the cafeteria appeared to be in good condition. The exit signs are LED with integral emergency heads and appear to be recently installed. Exterior lighting at the facility consists of HID building-mounted light fixtures. The interior lighting for the building was observed to be in good condition. In the book room, a 2x4 light fixture was observed missing a lens. The exterior lighting appeared to be aged past their design life, but it was	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		reported that all exterior lighting is being replaced with LEDs.	
	Communications & Security	There is a Gemini security system including surveillance cameras in the building. According to facility staff, the system is in good condition with no reported deficiencies. There is public address system in the building. The PA system is in poor condition as it was reportedly not functional in the corridor areas. The building is equipped with telecommunications systems, but the main backbone equipment is located in an inaccessible room. Wi-Fi hubs are present throughout the facility and appeared to be in good condition. The telephone system is in average condition as it was reported that the telephone system is traditional and does not have VOIP (Voice Over Internet Protocol) capabilities. The school bell system is controlled by the District through a Telcor MCC-4 phone controller. The bell system is in average condition as it is functional, but was reported very cumbersome to use/program. The school clock system is digital appears to be original to the 1986 construction. The clock system is in poor condition as it was reported that it requires all manual controls/user inputs and very cumbersome and difficult for the staff to program each year.	Average

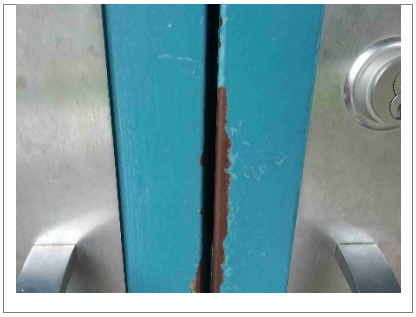
Exterior System Deficiency Examples

Exterior Walls



Exterior Windows

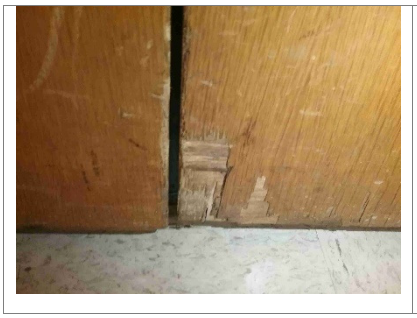
Exterior Doors



Interior Construction Deficiency Examples

Interior Walls

Interior Doors

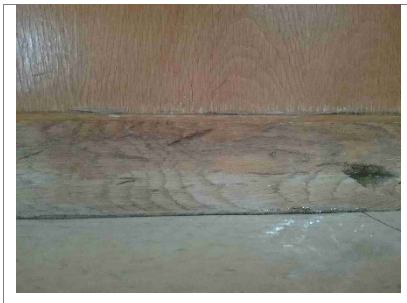
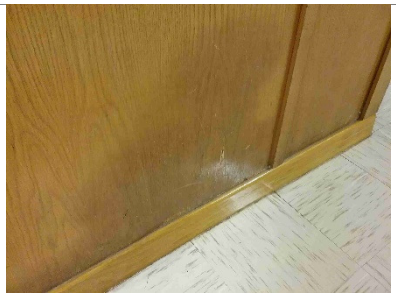
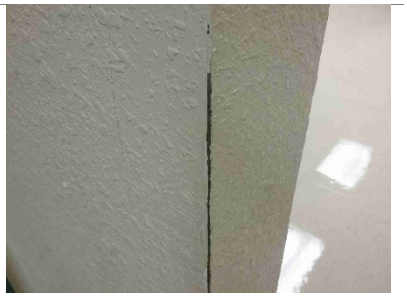


Stairs Deficiency Examples

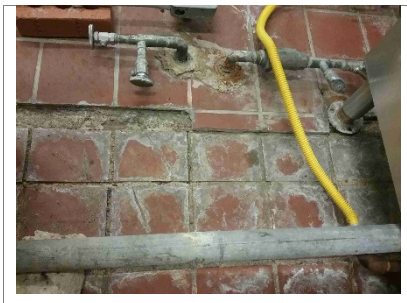
Interior Stairs

Interior Finishes Deficiency Examples

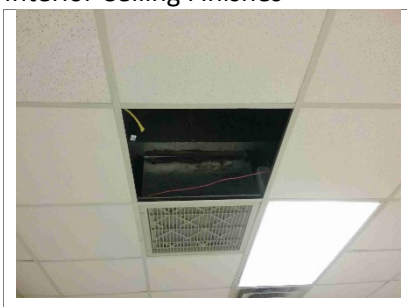
Interior Wall Finishes

Interior Floor Finishes

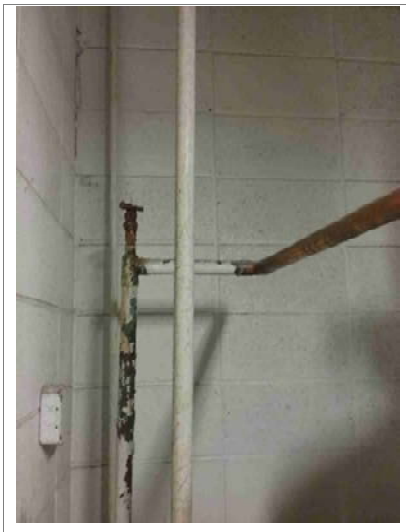



Interior Ceiling Finishes



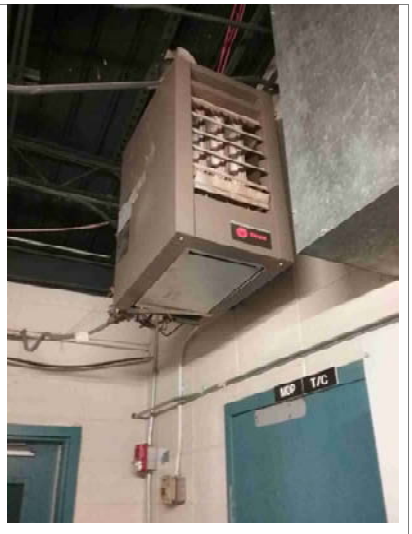
Plumbing System Deficiency Examples

Domestic Water Distribution



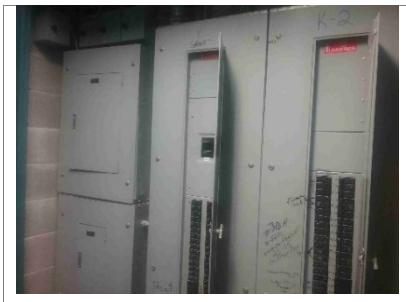

Mechanical/HVAC System Deficiency Examples

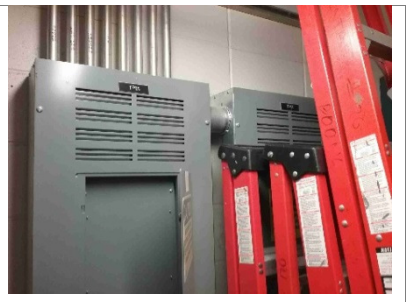




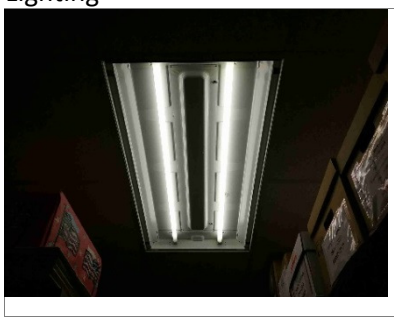
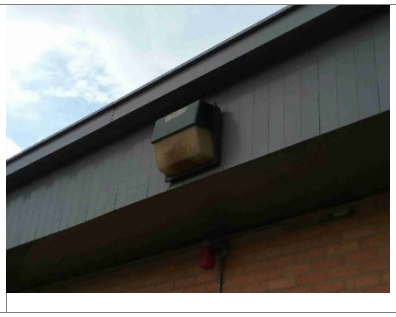
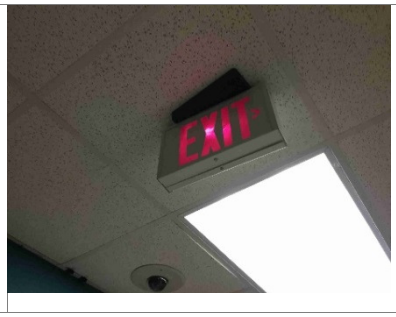
Electrical System Deficiency Examples

Electrical Distribution





Lighting

Communications & Security


Stand-Alone Classroom Building – BLDG-170B

Building Purpose	Administrative, Classrooms, Cafeteria, Gymnasium
Building Area	10,017 SF
Inspection Date	July 26, 2016
Inspection Conditions	93°F - Thunderstorms
Facility Condition Index	

System Deficiency Overview

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

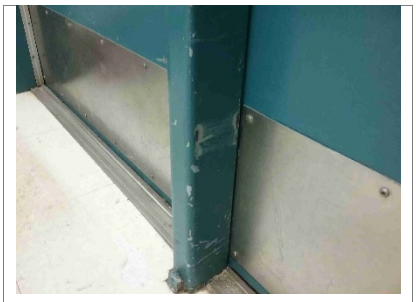
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Exterior	Exterior Walls	The exterior walls of the building are finished in brick. The exterior walls were observed to be in good condition with no observed deficiencies.	Good
	Exterior Windows	The exterior windows are single-paned fixed windows set in aluminum frames. The windows were observed to be in good condition with no observed deficiencies.	Good
	Exterior Doors	There are two main exterior doors on opposite ends of the building. They are metal doors set in metal frames. The exterior doors were observed to be in good condition with areas of worn paint as expected from use.	Good
Roofing	The roof is standing seam metal with a flat metal panel fascia. The roof was inaccessible due to rain and slope. From the ground level, the roof appeared to be in good condition with no visible signs of damage.		Good
Interior Construction	Interior Walls	The interior walls are composed of CMU construction and metal stud and gypsum board construction. The walls were observed to be in good condition with no observed deficiencies.	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Interior Doors	The interior doors are wood with metal frames. The interior doors were observed to be in good condition with slight damage to the door frames and bases. Many door frames were observed to have worn paint, and many doors were observed to have worn wood bases.	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	The wall finishes consist of painted dry wall and CMU with FRP panels in the restrooms. The wall finishes were observed to be in good condition with isolated moments of deficiency. The restroom wall finish is damaged where a toilet paper dispenser was removed from the wall, and the wall behind one light switch was observed to be poorly finished. The wall corners were observed to be damaged from typical wear and tear.	Good
	Interior Floor Finishes	The floor is finished with linoleum tiling and rubber wall base throughout. The floor was observed to be in average condition due to areas of stained and uneven linoleum. The janitorial closet was observed to have a particularly stained floor.	Average
	Interior Ceiling Finishes	The building is ceiled with 2x4 lay in ACT throughout. The ceiling was observed to be in average condition due to the prevalence of damaged tiles. Water damage was observed in many areas of the ceiling. Some ceiling tiles were observed to be bowing out of their support tees, and the tees were observed to be significantly bent.	Average
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	The building has a restroom with a toilet and sink in each classroom. These restrooms have vitreous china hand sinks and toilets. The toilets have manual flush valves and the sinks have manual faucets. There was a faucet located in room E6 that did not have water flow. A toilet in E3HRR does not flush. The faucet in E3 has very low water pressure and is loose. There was one mop sink in the building that was observed to be in good condition.	Average
	Domestic Water Distribution	The building was observed to be serviced by one 30-gallon EWH (electric water heater).	Excellent

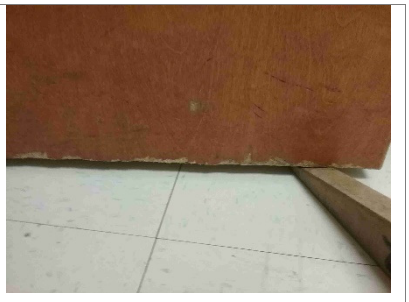
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		The EWH appears to be in excellent condition. The unit appeared to be new along with its distribution piping.	
	Other Plumbing	System not present.	N/A
Mechanical/ HVAC	The mechanical equipment for this building was located in the mezzanine. The mezzanine for this building was inaccessible at the time of the assessment.		Average
Fire Protection	Fire Alarm	The fire alarm system is controlled by the campus main fire alarm control panel. The fire alarm system in this building appears to be in good condition.	Good
	Fire Protection/ Suppression	This building does not have a sprinkler system. Fire extinguishers are placed throughout the building protection in the event of a fire. The equipment appears to be in good condition and the tags were signed by an inspector within the last year.	N/A
Electrical	Electrical Distribution	There is a 150A 480V panelboard 'H3' located in the main electrical room that feeds a transformer and 208/120V panel. Panel 'H3' is fed from the main electrical gear. All electrical equipment is from 1998 and appears to be in good condition.	Good
	Lighting	This building consists of 2x4 fluorescent recessed light fixtures. The exit signs appear to be recently installed and functional. There are no occupancy sensors anywhere in this building and all lighting controls are manual. Emergency egress lighting appears to be accomplished by integral emergency batteries in designated 2x4 fluorescent fixtures. The lighting for this building appeared to be in good condition.	Good
	Communications & Security	There is a Gemini security system including surveillance cameras in the building. The system appeared to be in good condition. There is public address system in the building. It appeared to be in good condition with no reported deficiencies. The building telecommunications system appears to be fed from the campus main MDF (main distribution frame) room. Wi-Fi hubs are present throughout this building. Wi-Fi and telecommunications systems appeared to be in good condition.	Good

Exterior System Deficiency Examples

Exterior Doors

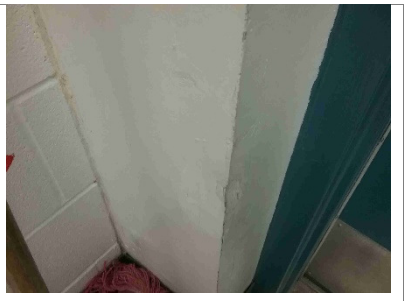


Interior Doors



Interior Finish Deficiency Examples

Interior Wall Finishes

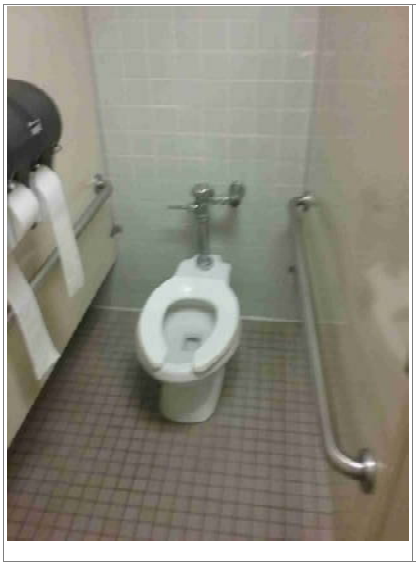


Interior Floor Finishes

Interior Ceiling Finishes

Plumbing Deficiency Examples

Plumbing Fixtures



Boone 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 preventative maintenance on aged plumbing fixtures and plan for replacement in the future as fixtures continue to age.
2. It was reported that the mop sink faucets are old and failing.

Mechanical/HVAC

1. Address any rust or corrosion observed to the mechanical equipment by cleaning, re-painting, and/or repairing by any other means to prevent further deterioration.
2. Repair or replace any damaged or missing piping insulation as needed.

Electrical

1. Immediately provide missing break cover plates for all electrical equipment that were noted, as these instances should be considered life safety hazards.
2. Repair or replace all electrical equipment affected by corrosion or rust. If the corrosion/rust is beyond the enclosure then replacement is suggested.
3. Remove any floor receptacles as they are being phased out of use district-wide.
4. Replace all outdated interior light fixtures with LED light fixtures with dimming capabilities.
5. Replace all outdated existing incandescent exit signs with LED fixtures. Provide additional LED exit signs where required for all buildings.
6. Provide additional security cameras in interior corridor areas and at exterior of all buildings to obtain adequate coverage.
7. Provide additional LED emergency egress lighting units where required for all buildings to obtain adequate illumination at all egress paths.
8. Upgrade the school telephone/data system to have VOIP capabilities.
9. Repair/upgrade existing PA system to provide coverage in corridor areas.
10. Upgrade school bell system to a new easy-to-use digital type system per staff reports of struggle with current system.
11. Upgrade school clock system to a new easy-to-use digital type system per staff reports of struggle with current system.
12. Upgrade transformer ‘TT1A’ and its associated down-stream panel ‘TP1A’ with larger capacities to accommodate the existing (and any future) load.
13. Install exhaust fan for kitchen area janitorial closet to vent out the heat generated by the capacitor bank.
14. Provide new LED pol- mounted lighting in parking lots and student drop-off areas.
15. Provide a lens for the 2x4 light fixture that is in the book room.

Main School Building Recommendations

Exterior

1. Patch and repair all areas of damaged brick.
2. Secure decorative brick column to wall.
3. Refinish and clean exterior window frames.

4. Refinish exterior door frames.

Roofing

1. Further investigate roof drainage over kitchen area.

Interior Construction

1. Repair the damaged refrigerator walls in the kitchen.
2. Replace the corroded doors and frames in the kitchen.
3. Recondition the wood doors.

Interior Finishes

1. Patch the carpet on the stairs leading to the cafeteria stage.
2. Recondition faded or water-damaged wood paneling.
3. Repair and repaint corners of classroom walls.
4. Seal any penetrations through the walls.
5. Replace FRP in kitchen.
6. Clean and repair the damaged kitchen floor tiles, or replace them as necessary.
7. Further investigate the slope of the kitchen floor to ensure it properly slopes to drainage points.
8. Replace all of the cracked linoleum tiles.
9. Install ceiling tiles where they are currently missing.
10. Replace all damaged ceiling tiles.

Plumbing

1. Repair crawl space hangers. It was reported that the crawl space is always wet and the space hangers are deteriorating.
2. Secure the cast iron waste water line and the copper domestic water line in the crawl space. It was reported that these water lines are falling.
3. Replace Boiler 1 in the main mechanical room. It was reported to be aged and a persistent maintenance issue.

Mechanical/HVAC

1. Plan to replace the VFDs in the main mechanical room.
2. Fix corrosion issues for Boiler 1 distribution piping.
3. Replace the unit heater in the main mechanical room.
4. Plan to replace or repair the air conditioning unit for the gymnasium.

Stand-Alone Classroom Recommendations

Exterior

1. Refinish exterior door frames.

Interior Construction

1. Recondition the bases of the wood doors.
2. Repaint the metal door frames.

Interior Finishes

1. Install metal corner guards to all the classroom wall corners.
2. Repair all damaged wall finishes.
3. Clean linoleum flooring.
4. Replace all damaged ceiling tiles.

Plumbing

1. The issue with the lack of water flow to the faucet in room E6 needs to be addressed.
2. The toilet in room E3HRR needs to be fixed as it does not flush.
3. The issue with the faucet in room E3 needs to be addressed.

CRAWL SPACE – Boone ES – Main School Building (BLDG-170A)

Building Purpose	Administrative, Classrooms, Gym, Cafeteria and Library
Inspection Date	August 26, 2016 Morning
Inspection Conditions	82° - Cloudy, Light Rain

Crawl Space System Deficiency Overview

NOTES CONCERNING CRAWL SPACE OBSERVATIONS: Water infiltration in crawl spaces restricted extent of exploration at all access points.

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
Soil, Drainage, Ventilation & Access	Soil Below Building, Site Drainage in Crawl Space	Soil beneath building was saturated. Standing water was observed at all access hatches. Channels for drainage exist, but appear ineffective. Source of water is unknown, but given heavy amounts of rainfall recently, likely source is runoff infiltration. Soil/Drainage deficiencies: • Saturated soil / Standing water / Poor drainage • Potentially poor site drainage (if standing water is due to infiltration of rain water from outside of building)	Poor
	Soil Retainers	A combination of concrete and plastic soil retainers were observed around the building. Overturned/caved concrete and plastic retainers were observed on the southwest and north sides of the building. Describe any soil retainer deficiencies. • Overturned/caved plastic & concrete soil retainers	Average
	Areaways/Ventilation	Ventilation appeared inadequate. Condensation was observed on underside of slab and on pipes. Areaways were located around the building and appeared generally in good condition. Areaway/ventilation deficiencies: • Poor ventilation • Condensation under slab	Poor
	Access Hatches	Three access hatches are located in the main building. Access hatches were located in the floors of custodial closets	Average

		and the main mechanical room. Hatches were generally moderately rusted and lacked adequate connection to the floor framing. At most locations, a wood ledger is held in place to the concrete by rusted screws with the hatch set on top. Access hatch deficiencies: • Rusted steel framing • Inadequate connection to floor slab	
Exposed Structure	Exposed Columns & Tops of Foundations	All observed pier tops were all in good overall condition. Column/Foundation deficiencies: • Some piers “mushroom” at top	Good
	Exposed Faces of Perimeter Walls / Beams	Perimeter beams were generally in good condition. Perimeter wall/beam deficiencies: • Minor honeycombing	Good
	Exposed Portions of Interior Floor Beams Above	Interior beams were suspended and spanned between columns. Minor honeycombing was observed on interior beams. Beam deficiencies: • Minor honeycombing	Good
	Underside of Suspended Floor Slabs Above	Flooring system was comprised of cast-in-place pan joists. Slab deficiencies: • Exposed, corroded reinforcement under slab • Spalling and honeycombing in pan joist webs	Average
Pipes, Ducts, Equipment & Fireproofing	Suspended Pipes & Hangers	Crawl space contained many pipes. Pipes and pipe hangers were moderately to significantly rusted. Pipe deficiencies: • Rusted pipes and hangers • Pipe bearing on ground (deteriorated hangers indicate pipe was previously suspended)	Average
	Exposed Ductwork	N/A – No exposed ductwork was present in the crawl space areas observed.	N/A

	MEP Equipment	N/A – No MEP equipment was present in the crawl space areas observed.	N/A
	Spray Fireproofing/ Insulation	N/A – No spray fireproofing or insulation was present in the crawl space areas observed.	N/A

Crawl Space Deficiency Examples

Soil, Drainage, Ventilation & Access

Standing water

Overturned plastic soil retainers

Condensation under slab

Rusted access hatch steel frame & inadequate connection to floor slab

Exposed Structure

Minor honeycombing on interior beam

Exposed reinforcement

Pipes, Ducts, Equipment & Fireproofing

 Rusted cast iron pipes	 Pipe on the ground, failed hangers	

CRAWL SPACE – Boone ES – Stand-Alone Classroom Building (BLDG-170B)

Building Purpose	Stand-Alone Classroom Addition
Inspection Date	August 8, 2016, (Morning or Afternoon)
Inspection Conditions	90° - Sunny & Dry

Crawl Space System Deficiency Overview

NOTES CONCERNING CRAWL SPACE OBSERVATIONS: Water infiltration in crawl space restricted extent of exploration beyond access hatch vicinity. Access hatch at exterior of building was bolted shut and could not be accessed.

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
Soil, Drainage, Ventilation & Access	Soil Below Building, Site Drainage in Crawl Space	Soil below building was saturated and held standing water. Soil/Drainage deficiencies: • Saturated soil / Poor drainage • Potentially poor site drainage (if standing water is due to infiltration of rain water from outside of building)	Poor
	Soil Retainers	Building contained concrete soil retainers. Overturned and/or collapsed soil retainers were observed along the north wall. Others had slid or rotated inward at the bottom. Describe any soil retainer deficiencies. • Overturned/rotated/undermined soil retainers	Average
	Areaways/Ventilation	Areaways are located all around the building. Poor ventilation was observed in crawl space. Areaway/ventilation deficiencies: • Poor ventilation	Poor
	Access Hatches	Access hatch was located on the floor of the custodian closet on the north side of the building. An exterior access door is located on the east wall of the building but could not be opened. Steel framing on floor access hatch was very rusted. Access hatch deficiencies: • Rusted steel framing (see additional commentary in floor slab section below)	Average

		• Exterior access door not operable	
Exposed Structure	Exposed Columns & Tops of Foundations	Building contained a badly over-poured pier; the top of the pier mushrooms. Column/Foundation deficiencies: • Over-poured pier with mushroom top	Average
	Exposed Faces of Perimeter Walls / Beams	Perimeter beams were in good condition. No perimeter beam deficiencies were observed.	Good
	Exposed Portions of Interior Floor Beams Above	Interior suspended beams ran between columns. Beams were in good condition. No beam deficiencies were observed.	Good
	Underside of Suspended Floor Slabs Above	The floor system consisted of hollow core panels spanning between beams. The floor system was typically in good condition. The steel framing for the hatch opening supports one end of a panel and is rusted badly. Slab deficiencies: • Transfer framing surrounding hatch opening is badly rusted.	Average
Pipes, Ducts, Equipment & Fireproofing	Suspended Pipes & Hangers	Cast iron pipes were present in the crawl space with moderate rusting. All pipes were suspended. One broken drain pipe was continuously spilling water on an electrical outlet. A drain from the custodial room above was poorly sealed and leaking continuously into the crawlspace, presumably from a condensate line. Pipe deficiencies: • Broken pipe leaking into crawl space (and on electrical outlet) • Leaking drain • Rusted pipes & hangers	Average
	Exposed Ductwork	N/A – Building does not contain exposed ductwork.	N/A
	MEP Equipment	N/A – Building does not contain MEP equipment.	N/A
	Spray Fireproofing/ Insulation	N/A – Building does not contain spray fireproofing or insulation.	N/A

Crawl Space Deficiency Examples

Soil, Drainage, Ventilation & Access

Stading, stagnant soil

Overturned soil retainer

Soil retainers rotated inwards at base

Rusted access hatch steel frame

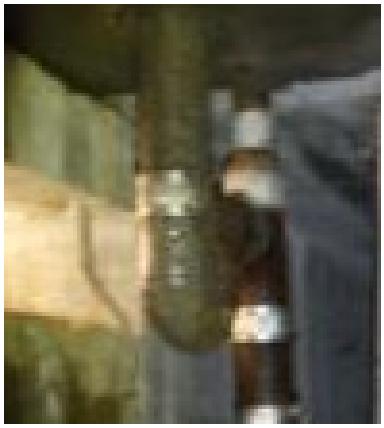
Exposed Structure

Over-poured pier (“mushroom” top)

Transfer framing surrounding hatch opening is badly rusted

Pipes, Ducts, Equipment & Fireproofing

Broken pipe and rusted hangers



Leaking floor drain

Water flowing over electrical outlet

Boone ES – Campus Summary of Crawl Space 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.

Main School Building (BLDG-170A) Recommendations

Soil, Drainage, Ventilation & Access

1. Improve drainage in crawl space
2. Investigate need for improved site drainage around perimeter of building
3. Replace failed soil retainers
4. Provide adequate ventilation
5. Replace or repair access hatch steel framing

Exposed Structure

1. Repair beam honeycombing in columns, beams and/or slabs
2. Repair exposed reinforcement in slab

Pipes, Ducts, Equipment & Fireproofing

1. Replace failed/rusted hangers
2. Repair fallen pipe

Stand-Alone Classroom Building (BLDG-170B) Recommendations

Soil, Drainage, Ventilation & Access

1. Improve drainage in crawl space
2. Investigate need for improved site drainage around perimeter of building
3. Replace failed soil retainers
4. Provide adequate ventilation
5. Replace or repair steel framing at access hatch

Pipes, Ducts, Equipment & Fireproofing

1. Repair broken pipe
2. Repair leaking pipe
3. Replace rusted hangers
4. clean rusted pipes and protect from further corrosion
5. Seal drain in custodial room

DRAFT

DEFICIENCIES FOUND IN THIS LOCATION:
1) STANDING WATER
2) FAILED PLASTIC & CONCRETE RETAINERS
3) RUSTED PIPES AND PIPE SLEEVES
4) BENT AND RUSTED HANGERS
5) PREVIOUSLY SUSPENDED PIPE BEARING ON GROUND

DEFICIENCIES FOUND IN THIS LOCATION:
1) STANDING WATER / INADEQUATE DRAINAGE
2) OVERTURNED SOIL RETAINERS
3) RUSTED STEEL FRAMING AT ACCESS HATCH
4) BADLY OVERPOURED PIER
5) BROKEN/LEAKING PIPE
6) RUSTED HANGERS
7) WATER RUNNING OVER ELECTRICAL OUTLET
8) LEAKING FLOOR DRAIN

B

FLR-170B-01

STANDING WATER AND SATURATED SOIL DID NOT ALLOW ACCESS TO REST OF CRAWL SPACE

A

FLR-170A-01

APPROXIMATE LIMITS OF CRAWLSPACE OBSERVED DURING SITE VISIT

APPROXIMATE LIMITS OF CRAWLSPACE PER AVAILABLE PLANS AND SITE OBSERVATIONS

DEFICIENCIES FOUND IN THIS LOCATION:
1) STANDING WATER
2) OVERTURNED SOIL RETAINERS
3) CONDENSATION UNDERSIDE OF SLAB AND ON PIPES
4) HONEYCOMBING ON INT. BEAM
5) RUSTED PIPES/HANGERS

DEFICIENCIES FOUND IN THIS LOCATION:
1) STANDING WATER
2) EXPOSED/RUSTED REBAR AT BOTTOM OF SLAB
3) RUSTED PIPES AND HANGERS

AUSTIN I.S.D.

DEPARTMENT OF CONSTRUCTION MANAGEMENT

BOONE ELEMENTARY SCHOOL

8101 Croftwood Rd.
Austin, Texas

FLOOR PLAN
1ST FLOOR

APPROVALS		
DRAWN	CHECKED	APPROVED
JR		
12/15/12		
DWG: 170-FLR-01		SHEET
DRAWING SCALE		1 OF 1
1/32" = 1'-0"		