

Blazier Elementary School Site Summary

Address	8601 Vertex Boulevard Austin, TX 78744
Number of Permanent Campus Facilities	1
Original Year of Construction	2007
Total Campus Building Area (combined)	82,897 SF



Introduction

The Blazier Elementary School campus is located at 8601 Vertex Boulevard, Austin Texas. This is an elementary facility consisting of one building (BLDG-185A) that includes classrooms, library, kitchen, cafeteria, and gymnasium. It is a one-story facility, which includes a hi-bay area that houses the cafeteria and gymnasium.

Main School Building – 185A

Building Purpose	Administrative, Classrooms, Library, Cafeteria, and Gymnasium
Building Area	82,897 SF
Inspection Date	July 28, 2016
Inspection Conditions	97°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	<p>The exterior façade of this facility is constructed of three colors of common brick.</p> <p>There is a canopy at the front entrance that is constructed of tube steel columns, metal framing, and a metal roof. The tube steel columns are enclosed with brick half columns. The canopy extends out from the entrance doors, and then follows the sidewalk in both directions with four bays.</p> <p>It was reported by District staff and observed the building façade was in good condition with no breaks or cracks in the block.</p>	Good
	Exterior Windows	<p>The exterior windows consist of single-pane glazing units with aluminum frames. There is a clerestory above the gymnasium with aluminum frames and glazing.</p> <p>It was reported the aluminum clerestory windows leaked badly.</p> <p>It was reported and observed there were leaks around the window frames. Staff reported this was not a caulking issue, but rather a defective product. This occurred on all sides of the building.</p>	Poor
	Exterior Doors	<p>There is one public entryway located at the south side of the building. There are one pair and two single-leaf metal doors in a metal frame with half lites in each door and four panels of glazing above the doors. On the east side of the building, there is a public entrance into the gymnasium area. This entrance consists of a pair of</p>	Poor

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		<p>metal doors in a metal frame with half lites. There are glazed side lites and glazing above the doors.</p> <p>The remaining exterior doors around the facility are metal with metal frames. The doors used for egress by students and faculty have various sizes of lites. The doors to mechanical and electrical rooms have no lites. There is a roll up door into the gymnasium area.</p> <p>At the classrooms, there are aluminum frames with aluminum doors. There are side lites in the frames.</p> <p>It was reported the classroom doors leaked at the frames due to poor quality frames.</p> <p>It was reported and observed that there was leaking under the majority of the doors due to poor site drainage.</p> <p>It was observed that the doors were in poor condition.</p>	
Roofing		<p>The roof system for this facility is modified bitumen, which is original to construction. This is common to the building and the canopies.</p> <p>Ponding was reported to occur on the main roof.</p> <p>It was also reported that the roof leaked throughout the building. The leaks occurred in the entry foyer and the entire length of the main corridor. Leaks were also reported to occur in the library and the equipment storage room connected to the gymnasium.</p> <p>The roof was observed to be in average condition; however, the leakage caused it to be rated in poor condition.</p>	Poor
Interior Construction	Interior Walls	<p>The interior partitions are a mix of drywall and studs as well as CMU (concrete masonry unit). The corridors and kitchen are constructed of CMU with the room partitions constructed of drywall.</p> <p>It was observed that the walls were in good condition.</p>	Good
	Interior Doors	<p>The interior doors in this facility are stained wood with hollow metal frames. These doors each have a lite as well as glazed side lites.</p> <p>It was observed that the doors were in good condition.</p>	Good
	Interior Specialties	System not present.	N/A
Stairs	Exterior Stairs	<p>The exterior stairs in the facility are poured-in-place concrete with metal handrails.</p> <p>It was observed that the stairs were in good condition.</p>	Good
	Interior Stairs	System not present.	N/A

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
Interior Finishes	Interior Wall Finishes	<p>The interior partitions in this facility are a painted drywall system or CMU. The kitchen is painted CMU with full-height ceramic tile in the serving area. The restrooms have ceramic tile wainscoting on some walls.</p> <p>It was observed the walls were in average condition with normal wear and tear.</p>	Average
	Interior Floor Finishes	<p>The interior floor finishes in the building consist of vinyl tile in the classrooms, corridors, and cafeteria. There is carpet in the administration office and the library, and ceramic tile flooring in the kitchen, serving area and restrooms.</p> <p>It was observed that the interior floors were in good condition.</p>	Good
	Interior Ceiling Finishes	<p>The ceilings throughout this building are a 2x4 suspended acoustical system.</p> <p>It was reported and observed there were no issues with the ceiling system itself. However, there were damaged ceiling tiles throughout the building due to roof leakage.</p>	Average
Conveying	System not present.		N/A
Plumbing	Plumbing Fixtures	<p>The building has one set of public restrooms for men and women located near the cafeteria. There are separate staff restrooms located throughout the facility. These restrooms typically have vitreous china hand sinks with manual faucets, along with vitreous china toilets with manual flushing mechanisms, and vitreous china wall-hung urinals in the male restrooms with manual flushing mechanisms. There are floor sinks in the janitorial closets, and water coolers located throughout the facility. Each suite of classrooms has two restrooms with a floor-mounted toilet in each. Each classroom has a stainless steel sink with a gooseneck faucet and a water fountain.</p> <p>The building also includes plumbing fixtures in the kitchen.</p> <p>It was reported the gooseneck faucets were too fragile in their construction and require frequent replacement.</p> <p>It was reported the angle stops leaked when the key was inserted.</p> <p>A sewage smell was reported in corridors 2 and 5 and the restrooms off the gymnasium.</p> <p>The plumbing fixtures were observed to be in average condition.</p>	Average

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
	Domestic Water Distribution	<p>The kitchen, janitorial closets, and administration office have hot water.</p> <p>It was reported that the water heaters as well as the water distribution system were in good condition.</p>	Good
	Other Plumbing	<p>The roof drains are a system of gutters and downspouts, some of which daylight into splash blocks. There are also numerous downspouts that empty into storm sewer grates. Some downspouts drain onto the pavement.</p> <p>It was reported the roof drainage system was in good condition.</p>	Good
Mechanical/ HVAC	<p>The HVAC (heating, ventilating, and air conditioning) system consists of two boilers and two air-cooled chillers. There are eight RTUs (roof top units) with VAV (variable air volume) and VFDs (variable frequency drives) and two fresh air units on the roof. There are 49 FCUs (fan coil units) in the interior corridors, which serve the classrooms.</p> <p>It was reported the boilers were in good condition. However, the chillers had union-type connectors that were leaking. Staff also reported the controls for the AC system had never worked properly. Switching on the AC units frequently failed. It was also reported the RTUs were badly weathered.</p> <p>It was reported the school had power surges, which affected the controls. It is possible there is arcing on the city side of the service.</p> <p>It was reported the outside loop lines lacked insulation, resulting in condensation and leaks. Staff reported that some ducts were missing dampers.</p> <p>It was reported and observed that this system was in average condition for the age of the facility.</p>		Average
Fire Protection	Fire Alarm	<p>The building has a fire alarm system that consists of alarm and signaling devices such as horns, strobes, pull stations, and detectors.</p> <p>It was reported the fire alarm system was working properly.</p> <p>The system was observed to be in good condition, considering the age and technology.</p>	Good
	Fire Protection/ Suppression	<p>The building has a wet standpipe sprinkler system. There is a dry fire suppression system in the kitchen vent hoods. There are also detectors in the duct system.</p> <p>It was reported that the vent hood suppression system and the sprinkler system worked properly.</p> <p>It was observed and reported that fire extinguishers are placed throughout the building.</p> <p>It was observed that the available fire protection systems were in good condition.</p>	Good

System	Subsystem	Condition and Deficiency Overview	System Condition Rating
<p>Electrical</p>	<p>Electrical Distribution</p>	<p>The electrical service for this facility is 2500-amp, 3-phase 4-wire, 480/277-volt primary, 208/120-volt secondary with a GFI (ground fault interrupter) main breaker. There is a 150 KVAR power factor unit but no solar for this facility.</p> <p>It was reported the school had power surges which affected the controls. It is possible there is arcing on the city side of the service.</p> <p>It was reported there was ample room for expansion in both the primary and secondary panels. It was reported and observed there were an insufficient number of power outlets in the corridors.</p> <p>It was observed that the electrical distribution system was in average condition for its age.</p>	<p>Average</p>
	<p>Lighting</p>	<p>The interior lighting system consists of 2x4 troffer fixtures in the suspended ceiling system. There are two tube pendant-mounted fluorescent fixtures in the library. The restrooms have can lights.</p> <p>It was reported that a problem existed with changing bulbs in the can lights. The bulb was hard to reach, and the fixture was frequently broken during the removal process.</p> <p>It was reported the capacity discharge emergency lighting had very expensive battery packs.</p> <p>The exterior lighting system consists of pole lighting in the parking lots, wall packs and a drum-type fixture at the majority of the points of egress, including the canopy.</p> <p>It was reported that the type of bulbs used in the exterior pole lights had a very short life and required frequent replacement. It was reported there was insufficient lighting at the kitchen door. It was reported and observed that the exterior canopy lights had lenses that were discolored due to heat from the bulbs.</p> <p>The interior and exterior lighting was observed to be in average condition.</p>	<p>Average</p>
	<p>Communications & Security</p>	<p>This facility has a Wi-Fi system, card readers, a public address system, and CCTV (closed circuit television).</p> <p>It was reported the Wi-Fi system had connection problems throughout the building. It was reported the card readers were working properly, and there were a sufficient number of card readers in the facility.</p> <p>It was reported there were issues with the cameras. The</p>	<p>Average</p>

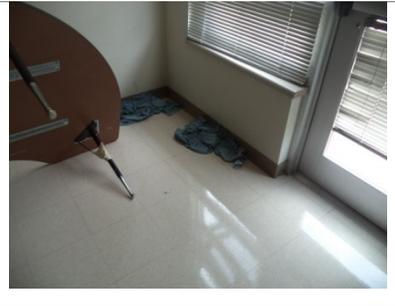
System	Subsystem	Condition and Deficiency Overview	System Condition Rating
		<p>cameras were original and had poor resolution. There was a need for additional cameras in the main corridor and in the area of the cafeteria. There was also a need for a dedicated monitor for viewing the various cameras.</p> <p>It was reported there was no way to prevent visitors from entering the school building without prior screening through the administration offices.</p> <p>It was observed the communications and security systems were in average condition based upon the age of the equipment and the state of current technology.</p>	

Exterior System Deficiency Examples

Exterior Windows



Exterior Doors



Roofing Deficiency Examples



Interior Finish Deficiency Examples

Interior Ceiling Finishes



Plumbing Deficiency Examples

Plumbing Fixtures



Electrical System Deficiency Examples

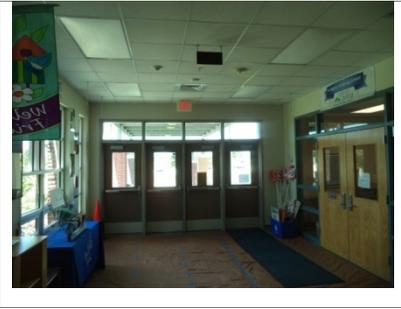
Electrical Distribution



Lighting



Communications & Security



Blazier Elementary School Summary of Recommendations

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

Main School Building Recommendations

Exterior

1. Remove and replace aluminum window/door units at classrooms with hollow metal units because the aluminum frames have a quality issue and cannot be repaired.
2. Consult an architect for solutions to replace the clerestory windows with appropriate windows for the application. Replace the windows as directed.
3. Survey the site to determine the extent of the drainage problem as it affects the exterior exits and windows. Regrade the affected part of the site and/or install a storm sewer line to take water away from the building.

Roofing

1. Conduct a leak test on the entire roof system. Identify and repair leakage, which could involve some pitch changes in the insulation system and repair or replacement of the roof covering.

Interior Finishes

1. Continue replacement of damaged ceiling tiles as needed until a permanent solution is developed and implemented to resolve the roof leaks.

Plumbing

1. Remove and replace all gooseneck faucets with a more substantial model appropriate for the application.
2. Replace angle stops as needed.
3. Investigate the source of the sewage smell. Repair as needed to alleviate the smell.

Mechanical/HVAC

1. Replace missing dampers.
2. Replace and reinsulate the outside loop lines.
3. Replace the union connections with a closed loop.
4. Have a mechanical engineering consultant evaluate the performance of the controls for the HVAC system. Follow recommendations for repair or replacement of the control system.
5. Confirm whether an annual fire extinguisher inspection program is in place and make sure that extinguishers are inspected annually and tagged.

Electrical

1. Work with staff to determine the quantity and location of outlets needed in the corridors. Add outlets as recommended and per code.
2. Coordinate with the City of Austin's electrical department to determine the source of the electrical arcing. Install protection equipment in the school's systems to protect against power arcing on the city side of the system.
- 3.
4. Replace can lights with LED (light-emitting diode) lighting fixtures.
5. Replace emergency lighting with a system that has current technology.
6. Add lighting at the kitchen door.
7. Replace canopy lighting with LEDs.
8. Consult a network engineer to determine why the Wi-Fi is not working properly. Implement recommended procedures to bring the system up to a good working condition.

9. Consult with a professional architect to determine how to change the entry foyer into an airlock that will force visitors to enter through the administration office.
10. Add one camera in the main corridor and one camera in the cafeteria.
11. Consider replacing the camera system with newer technology and adding a dedicated monitor to view the cameras in real time.