

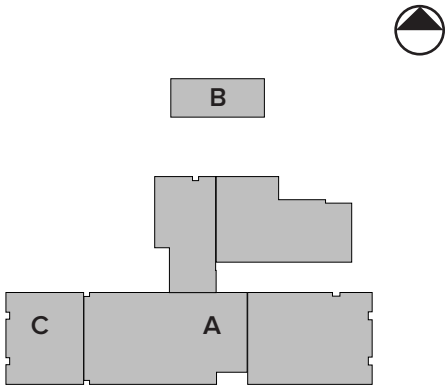
HOWELL MIDDLE SCHOOL

14

GENERAL INFORMATION



HOWELL MIDDLE SCHOOL 2502 Fannin Victoria, TX 77901	
Year(s) Built:	1970, 1990, 1999
Approx. Total Building Square Footage	130,322 SF
Approx. Total Site Area	20.1 Acres
Potential Capacity	920
Current Enrollment	873



UTILIZATION PLAN

















FLOOR PLAN REMOVED FOR CAMPUS SECURITY

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UTILIZATION PLAN

FLOOR PLAN REMOVED FOR CAMPUS SECURITY

COLOR LEGEND

		Administration/ Administration Support			Fine Arts/Fine Arts Support
		Academic Spaces/ Academic Support			College, Career and Military Readiness Space/ College, Career and Military Readiness Space Support
		Library/ Library Support			Building Support
		Dining/ Dining Support			Circulation
		Athletics and Physical Education/ Athletics and Physical Education Support			

T.E.A. COMPLIANCE PLAN

FLOOR PLAN REMOVED FOR CAMPUS SECURITY

COLOR LEGEND

Compliant with TEA

Not Compliant with TEA

No TEA/Best Practices Requirements

T.E.A. COMPLIANCE PLAN

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Not Compliant with TEA

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CAPACITY PLAN

FLOOR PLAN REMOVED FOR CAMPUS SECURITY

COLOR LEGEND

Instructional Capacity

Core Capacity

Support Space/ Not Calculated

CAPACITY PLAN

FLOOR PLAN REMOVED FOR CAMPUS SECURITY

COLOR LEGEND

Instructional Capacity

Core Capacity

Support Space/ Not Calculated

PROGRAM OF SPACES

Existing Room Number	Space/Type of Space	Area per Space	Max Capacity (TEA Instructional Spaces)	Functional Capacity (90% Utilization)
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INSTRUCTIONAL SPACES

CLASSROOMS

	6TH GRADE MATH CLASSROOM	725	25	21
	6TH GRADE MATH CLASSROOM	720	25	21
	6TH GRADE SOCIAL STUDIES CLASSROOM	720	25	21
	6TH GRADE SOCIAL STUDIES CLASSROOM	720	25	21
	6TH GRADE ELAR CLASSROOM	720	25	21
	6TH GRADE ELAR CLASSROOM	715	25	21
	8TH GRADE ELAR CLASSROOM	696	25	21
	8TH GRADE HISTORY CLASSROOM	687	25	21
	8TH GRADE HISTORY CLASSROOM	687	25	21
	SPANISH CLASSROOM	687	25	21
	6TH/7TH GRADE MATH CLASSROOM	680	25	21
	7TH/8TH GRADE MATH CLASSROOM	720	25	21
	7TH/8TH GRADE MATH CLASSROOM	720	25	21
	6TH GRADE ELAR CLASSROOM	720	25	21
	7TH GRADE ENGLISH LIT. CLASSROOM	721	25	21
	7TH GRADE ELAR CLASSROOM	720	25	21
	7TH GRADE ENGLISH LIT. CLASSROOM	720	25	21
	7TH GRADE ELAR CLASSROOM	728	25	21
	7TH GRADE SOCIAL STUDIES CLASSROOM	717	25	21
	8TH ELAR CLASSROOM	700	25	21
	8TH GRADE MATH CLASSROOM	700	25	21
	PROFESSIONAL COMMUNICATIONS	691	25	21
	8TH GRADE SCIENCE/AVID CLASSROOM	1,227	25	21
	PREP / STORAGE	223		
	6TH GRADE SCIENCE CLASSROOM	1,248	25	21
	PREP / STORAGE	285		
	6TH GRADE SCIENCE CLASSROOM	1,217	25	21
	6TH/7TH GRADE SOCIAL STUDIES CLASSROOM	708	25	21
	7TH GRADE SOCIAL STUDIES CLASSROOM	1,271	25	21
	7TH GRADE SCIENCE CLASSROOM	1,220	25	21
	PREP / STORAGE	286		

***CAPACITIES ARE BASED ON CURRENT UTILIZATION**

PROGRAM OF SPACES				
Existing Room Number	Space/Type of Space	Area per Space	Max Capacity (TEA Instructional Spaces)	Functional Capacity (90% Utilization)
INSTRUCTIONAL SPACES				
CLASSROOMS				
	7TH GRADE SCIENCE CLASSROOM	1,251	25	21
	8TH SCIENCE CLASSROOM	1,216	25	21
	PREP / STORAGE	359		
	8TH GRADE SCIENCE CLASSROOM	1,220	25	21
	8TH GRADE MATH CLASSROOM	696	25	21
INSTRUCTIONAL GENERAL SUPPORT				
	ISS	712		
	GCS (CONTENT MASTERY)	1,277		
	PREP / STORAGE	148		
	STORAGE	101		
	STORAGE	49		
	GIRLS	286		
	BOYS	292		
	GIRLS	251		
	BOYS	249		
	GIRLS	345		
	BOYS	275		
TOTAL INSTRUCTIONAL SPACES		32,029	800	680
SPECIAL PROGRAM SPACES				
CATE				
	6TH GRADE STREAM	723	25	21
	6TH GRADE STREAM	725	25	21
	8TH POWER	691	25	21
LABS				
	COMPUTER LAB	861	25	21
	COMPUTER LAB	746		
	COMPUTER LAB	657		
	COMPUTER LAB STORAGE	104		
SPED/RESOURCE				
	LIFESKILLS CLASSROOM	1,147	15	13
	LIFESKILLS STORAGE	73		
	LIFESKILLS STORAGE	79		
	LIFESKILLS STORAGE	79		
	LIFESKILLS RESTROOM	64		
	ACE (BEHAVIORAL)	1,423	15	13

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PROGRAM OF SPACES				
Existing Room Number	Space/Type of Space	Area per Space	Max Capacity (TEA Instructional Spaces)	Functional Capacity (90% Utilization)
SPECIAL PROGRAM SPACES, CONT.				
SPED/RESOURCE, CONT.				
	LIFESKILLS CLASSROOM	727	15	13
	RESOURCE	710		
	RESOURCE	715		
	RESOURCE	712		
	MATH RESOURCE (SPED)	687		
	INTERVENTION	715		
	INTERVENTION	691		
TOTAL SPECIAL PROGRAM SPACES		12,329	45	38
FINE ARTS SPACES				
ART				
	ART CLASSROOM	1,264	25	
	ART STORAGE	406		
TOTAL FINE ARTS SPACES		1,670		
PERFORMING ARTS SPACES				
BAND/ORCHESTRA				
	BAND ROOM	1,591	25	21
	BAND OFFICE	63		
	INSTRUMENT STORAGE	301		
	PRACTICE	51		
	PRACTICE	76		
	PRACTICE	52		
	PRACTICE	52		
	PRACTICE	62		
	PRACTICE	96		
	ORCHESTRA	1,033	25	21
	STORAGE	140		
CHOIR				
	CHOIR ROOM	1,323	25	21
	CHOIR OFFICE	104		
	ROBE ROOM	177		
	PRACTICE	53		
	PRACTICE	53		
	PRACTICE	80		

***CAPACITIES ARE BASED ON CURRENT UTILIZATION**

PROGRAM OF SPACES				
Existing Room Number	Space/Type of Space	Area per Space	Max Capacity (TEA Instructional Spaces)	Functional Capacity (90% Utilization)
PERFORMING ARTS SPACES, CONT.				
DANCE				
	DANCE ROOM	2,340	25	21
	DANCE STORAGE	192		
THEATER ARTS				
	THEATER	1,381	25	21
	STAGE	719		
PERFORMING ARTS SUPPORT				
101	AUDITORIUM (LOWER LEVEL)	2,922		
	STAGE	1,348		
	AUDITORIUM STORAGE	443		
	AUDITORIUM STORAGE	74		
	STORAGE	200		
	STORAGE	218		
	AUDITORIUM (UPPER LEVEL)	3,437		
	UPPER STAGE	1,434		
	PROJECTION ROOM	73		
	BOYS RESTROOM	260		
	GIRLS RESTROOM	261		
TOTAL PERFORMING ARTS SPACES		9,940	125	106
PHYSICAL EDUCATION SPACES				
PHYSICAL EDUCATION				
	HEALTH CLASSROOM	691	25	21
	MAIN GYMNASIUM	9,991	50	43
	PE STORAGE	363		
	FOOTBALL DRESSING	1,298		
	BOYS DRESSING	1,371		
	TOWEL ROOM	50		
	P.E. EQUIPMENT	48		
	SHOWERS	215		
	LOCKER ROOM RESTROOMS	204		
	OFFICE	165		
	OFFICE RESTROOM	43		
	GIRLS DRESSING ROOM	943		
	SHOWERS	361		
	TOWEL ROOM	40		

*CAPACITIES ARE BASED ON CURRENT UTILIZATION

PROGRAM OF SPACES				
Existing Room Number	Space/Type of Space	Area per Space	Max Capacity (TEA Instructional Spaces)	Functional Capacity (90% Utilization)
PHYSICAL EDUCATION SPACES, CONT.				
	LOCKER ROOM RESTROOMS	148		
	OFFICE	114		
	OFFICE RESTROOM	43		
	GYMNASIUM	6,270	25	21
	EQUIPMENT ROOM	295		
	LOCKERS / DRESSING	1,009		
	SHOWERS	448		
	STORAGE	49		
	LOCKER ROOM RESTROOMS	214		
	TOWEL ROOM	117		
	OFFICE	160		
	STORAGE	32		
	DRESSING	31		
	OFFICE RESTROOM	36		
	WEIGHT ROOM	2,275		
	STORAGE	253		
	STORAGE	77		
	STORAGE	180		
	WEIGHT ROOM RESTROOM	66		
PHYSICAL EDUCATION SUPPORT				
	BOYS	141		
	GIRLS	194		
	R/R	27		
TOTAL PHYSICAL EDUCATION SPACES		27,961	100	85
CORE SPACES				
LIBRARY				
	LIBRARY	4,367		
	CONFERENCE ROOM	121		
CAFETERIA				
	CAFETERIA / GYM	4,481		
	STORAGE	161		
	KITCHEN	2,013		
	DRESSING	62		
	STAFF RESTROOM	18		
	STORAGE	160		

***CAPACITIES ARE BASED ON CURRENT UTILIZATION**

PROGRAM OF SPACES				
Existing Room Number	Space/Type of Space	Area per Space	Max Capacity (TEA Instructional Spaces)	Functional Capacity (90% Utilization)
CORE SPACES, CONT.				
CAFETERIA, CONT.				
	W.H.	11		
TOTAL CORE SPACES		11,395		
ADMINISTRATIVE SPACES				
	ESL OFFICE	178		
	GUIDANCE OFFICE	818		
	LAMINATING ROOM	185		
	CONFERENCE ROOM	249		
	BOOK ROOM	133		
	BOOK ROOM	133		
	BOOK ROOM	283		
	RECONFIGURED ADMIN OFFICE SPACE	631		
	OFFICE	184		
	OFFICE	170		
	OFFICE	159		
	COUNSELOR	131		
	FILES	45		
	WAITING	66		
	COUNSELOR	114		
	DIRECTOR	139		
	STAFF TOILET	81		
	STAFF TOILET	69		
	ASST. PRINCIPAL	155		
	VAULT	109		
	PRINCIPAL	173		
	CLOSET	12		
	SECRETARY / WAITING	673		
	NURSE	98		
	STAFF TOILET	43		
	ISOLATION	68		
	ISOLATION	55		
	LOBBY	1,207		
	SPEECH OFFICE	161		
	BORE OFFICE	167		
	LOUNGE	708		

*CAPACITIES ARE BASED ON CURRENT UTILIZATION

PROGRAM OF SPACES				
Existing Room Number	Space/Type of Space	Area per Space	Max Capacity (TEA Instructional Spaces)	Functional Capacity (90% Utilization)
ADMINISTRATIVE SPACES, CONT.				
	WOMENS	70		
	MENS	66		
	RECONFIGURED ADMIN OFFICE SPACE	712		
	WORK ROOM	344		
	STAFF RESTROOM	44		
	LSSP OFFICE	519		
	INSTRUCTIONAL COACHES OFFICE	1,203		
	OFFICE	98		
	COMMUNITIES IN SCHOOLS OFFICE	519		
TOTAL ADMINISTRATIVE SPACES		10,969		
GENERAL BUILDING SUPPORT/CIRCULATION				
	CUSTODIAN	256		
	CUSTODIAN	55		
	CUSTODIAN	54		
	CUSTODIAN	27		
	CUSTODIAN	35		
	CUSTODIAN	43		
	CUSTODIAN	28		
	CUSTODIAN	31		
	MECHANICAL	95		
	HALL	89		
	HALL	127		
	HALL	101		
	HALL	182		
	HALL	165		
	CORRIDOR	4,875		
	FOYER	227		
	MECHANICAL	160		
	MECHANICAL EQ	1,332		
	CORRIDOR	16,145		
TOTAL GENERAL BUILDING SUPPORT/CIRCULATION		24,028		

***CAPACITIES ARE BASED ON CURRENT UTILIZATION**

TOTAL BUILDING AREA/CAPACITY TOTALS			
TOTAL BUILDING AREA	130,322		
TOTAL BUILDING CAPACITY		1,070	
TOTAL FUNCTIONAL CAPACITY			910

**CAPACITIES ARE BASED ON CURRENT UTILIZATION*

01 - ACCESSIBILITY

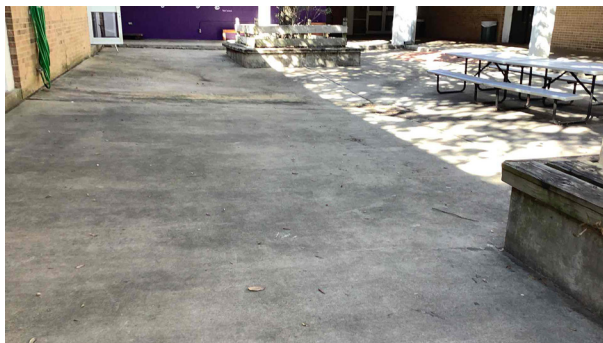
Primary/ original building built prior to accessibility standards. Therefore, nearly every aspect of accessibility is not compliant or has been modified over time to try and achieve some level of accessibility compliance. The following represent a sample of the accessibility conditions/deficiencies:



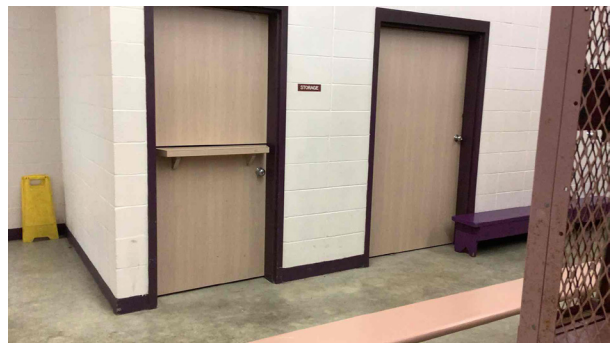
1.1 - Accessible parking not properly identified with signage, access aisles, and accessible route to sidewalk (potentially not sufficient accessible parking – verify counts)



1.2 - Bathrooms (fixtures, partitions, mirror reflective surface height, trap insulation). Bathrooms with 6 or more fixtures have both accessible and ambulatory toilet stall



1.3 - Exterior courtyard slopes to drain exceed 2% cross slope



1.4 - Door knob and dutch door shelf



1.5 - Inadequate clearance on pull side of door



1.6 - No landing or ramp at exterior door step for access



1.7 - Doors from theater classroom swing wrong direction for egress



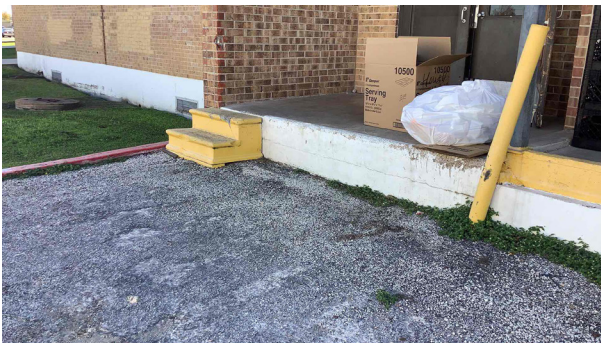
1.8 - Drinking fountains; though an accessible fountain is provided it does not have the proper clearances.



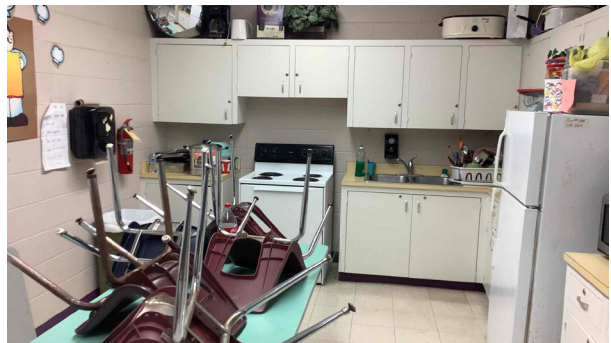
1.9 - Concrete path is disjointed with tripping hazard



1.10 - Fire extinguisher cabinet mounted too high – handle above 48 inches



1.11 - Kitchen loading dock does not have accessible route



1.12 - Life skills classroom kitchen not accessible

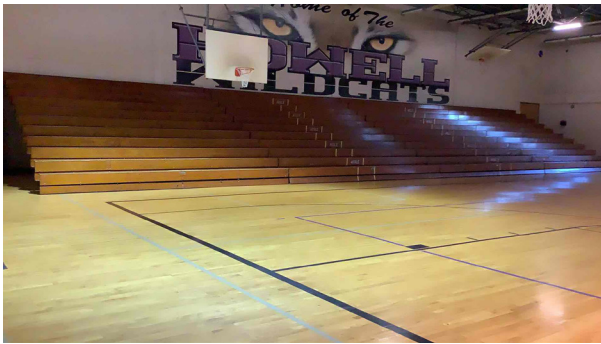
01 - ACCESSIBILITY, CONT.



1.13 - Main entrance elevated with no ramp and steep grade between stairs



1.14 - Platform/ stage not accessible



1.15 - No accessible or companion seats in bleachers



1.16 - Restroom not provided with ambulatory toilet stall



1.17 - Office platform raised, not accessible, and potential falling hazard



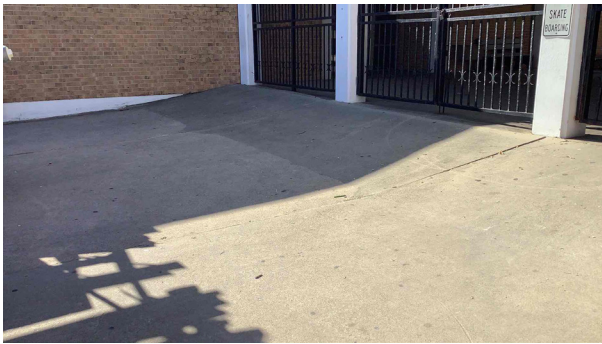
1.18 - Ramp handrails not compliant and stairs missing handrails



1.19 - Ramp to nowhere block ramp at landing or extend walk beyond



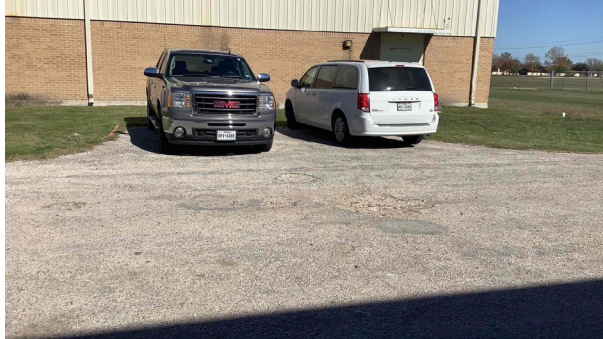
1.20 - Curb ramp flares create cross slope greater than 2%



1.21 - Sloped walk to gates exceeds 5% making condition a ramp with no railing

02 - SITE

The following represent a sample of the building site conditions/deficiencies:



2.1 - Cars parked in fire lane blocking fire apparatus turn-around clearances



2.2 - Erosion along building edge exposing building underfloor allowing access for water and critters under building



2.3a - Negative slope towards building prevents positive drainage away from building



2.3b - Negative slope towards building prevents positive drainage away from building



2.4a - Trees and bushes along building need to be trimmed to prevent damage to walls, roof, flashing or other building components



2.4b - Trees and bushes along building need to be trimmed to prevent damage to walls, roof, flashing or other building components

03 - PAVING

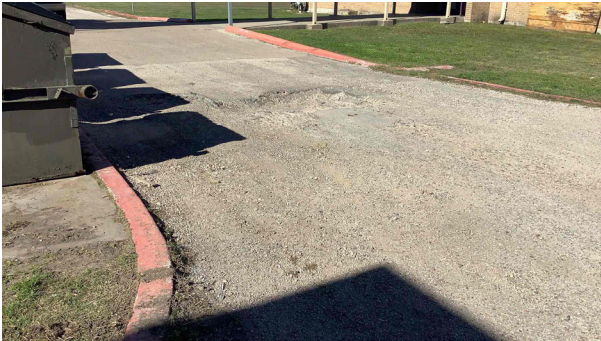
The following represent a sample of the paving conditions/deficiencies:



3.1 - No accessible pedestrian loading zone along drop off/ pickup area; multiple lanes for pickup causing students to walk across lanes of traffic



3.2a - Service drive/ fire lane severely potholed and deteriorated



3.2b - Service drive/ fire lane severely potholed and deteriorated



3.3a - Heavily deteriorated and potholed staff parking lot



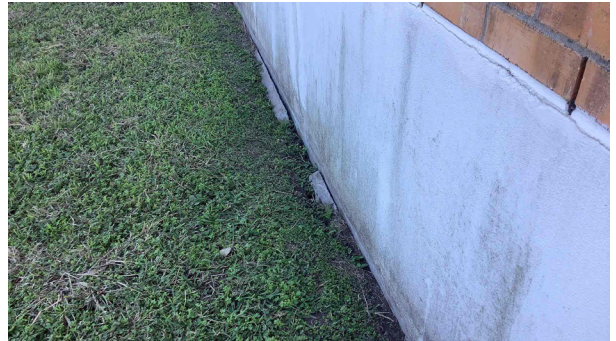
3.3b - Heavily deteriorated and potholed staff parking lot

04 - FOUNDATION

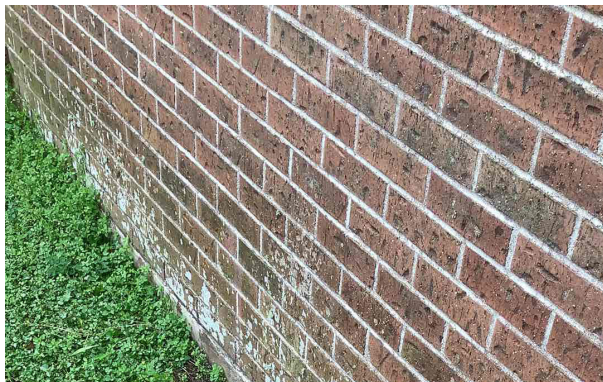
The following represent a sample of the foundation conditions/deficiencies:



4.1 - Areaway attachment to building broken causing areaway to shift



4.2a - Retainer blocks separating from building and in some locations they appear to be pushing in under the building



4.2b - Retainer blocks separating from building and in some locations they appear to be pushing in under the building



4.3 - Plants and trees growing from areaways

05 - CONCRETE/FLATWORK

The following represent a sample of the concrete/flatwork conditions/deficiencies:



5.1 - Concrete settling at step allowing water under flatwork



5.2 - Concrete walks heaving and moving - accessibility issues



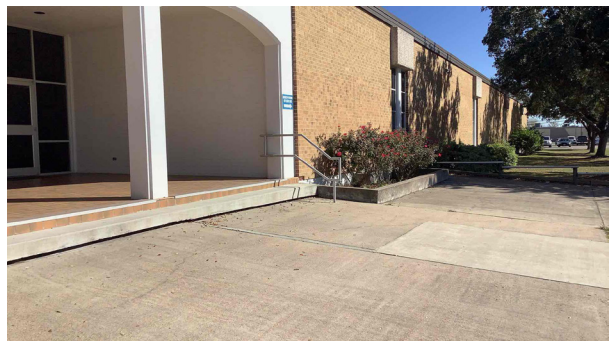
5.3 - Concrete mow strip along building edge pulling away with no concrete sealant



5.4 - Locations where concrete is settling adjacent to building creating step hazards and exposing concrete dowels



5.5a - Concrete walk at main and side entrances settling creating "floating" step – not compliant with code for step heights and concern step could break/ collapse



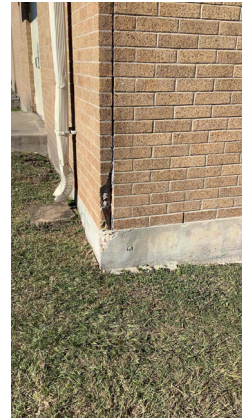
5.5b - Concrete walk at main and side entrances settling creating "floating" step – not compliant with code for step heights and concern step could break/ collapse

06 - WALL/MASONRY

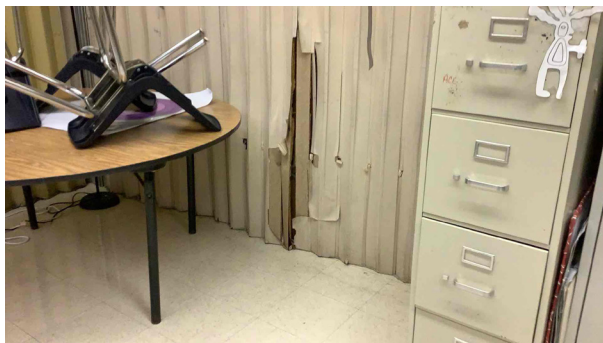
The following represent a sample of the wall/masonry condition/deficiencies:



6.1 - Acoustical wall panels in band and choir very dirty



6.2 - Brick corner cracked at gymnasium corner – appears to be from something hitting building (mower, vehicle, etc.)



6.3 - Folding partition walls in old auditorium converted classrooms heaving damaged



6.4 - Building sealants drying out, cracking and failing allowing moisture into building envelope



6.5 - Growth of exterior walls (potential cavity ventilation issue)

07 - WINDOWS

The following represent a sample of the window condition/deficiencies:



7.1 - Growth on windows, frames, sills, etc. at locations along north wall where windows are in shade

08 - ROOF

The following notes were provided by Kuhn and Associates:

Our overall recommendation is to replace the built-up roof sections and ancillary metal components, installing insulation to meet 2015 IECC requirements, raising equipment curbs as necessary, and to obtain a two-year contractor warranty, as well as a 20-year roof manufacturer warranty.



Failed sealant was observed consistently throughout the campus



Base flashings observed throughout the campus appeared to be in consistently poor condition, in some cases potentially allowing moisture infiltration

08 - ROOF



Materials installed to expansion joints appeared to be deteriorated and brittle



Roof drain strainer missing and drain body filled with debris and growing plants

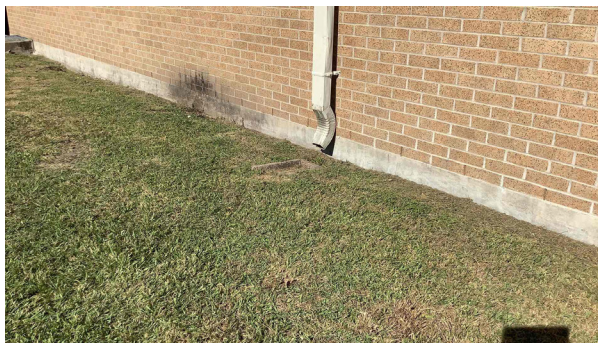


Damaged and rusted lead flashing was observed installed to vent pipe penetrations.

The following represent a sample of the roof conditions/deficiencies (as provided by Huckabee):



8.1 - Gutter downspouts disconnected from gutter at roof



8.2 - Downspouts along gymnasium wall damaged and discontinuous in locations



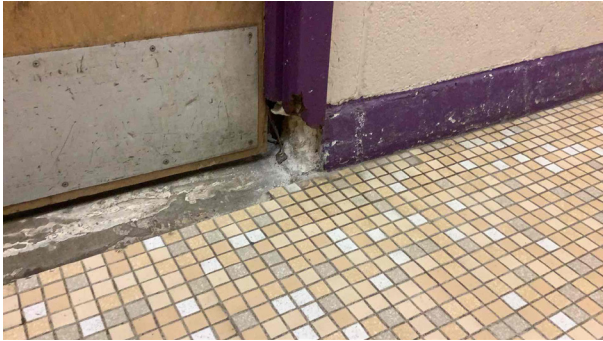
8.3a - Roof leak in library forcing removal of books and draping shelves with plastic



8.3b - Roof leak in library forcing removal of books and draping shelves with plastic

09 - FLOOR

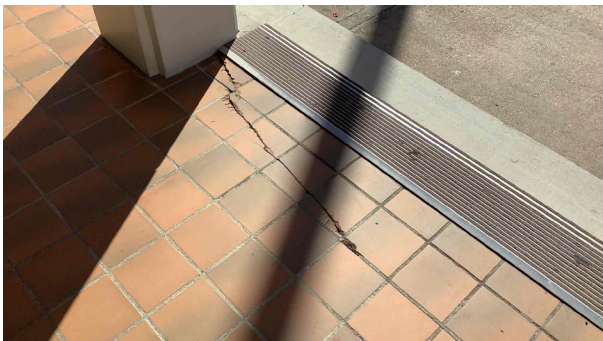
The following represent a sample of the floor conditions/deficiencies:



9.1a - Bathroom mosaic tile cracked and missing in locations (noticed rusted door frame base)



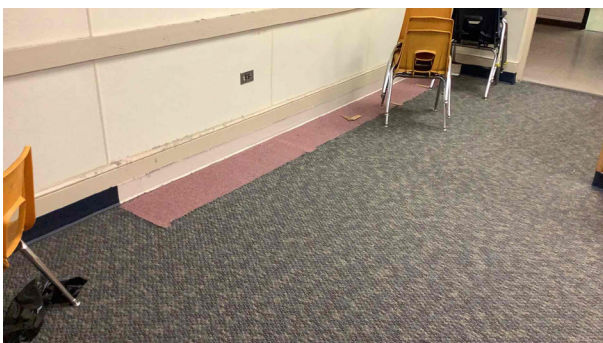
9.1b - Bathroom mosaic tile cracked and missing in locations



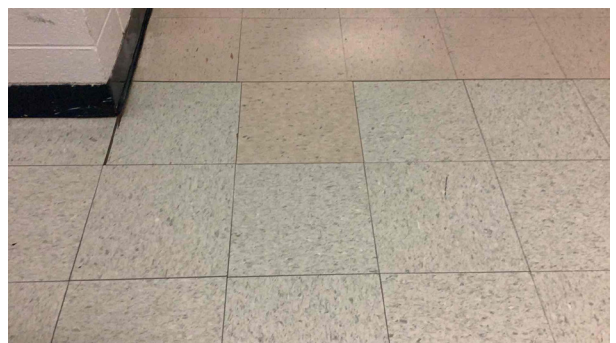
9.2 - Floor tile at front entrance steps cracked – concern indicative of underlying cracking where steps are floating



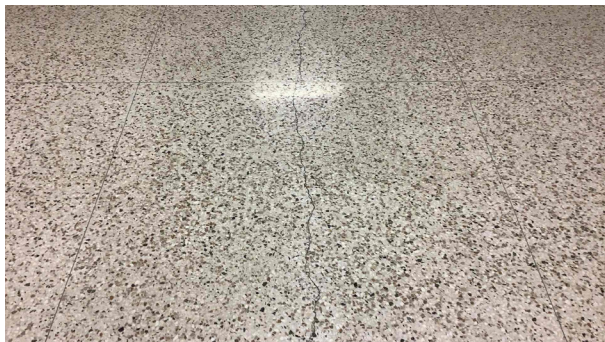
9.3 - Kiln sitting directly on VCT – should be on concrete or similar



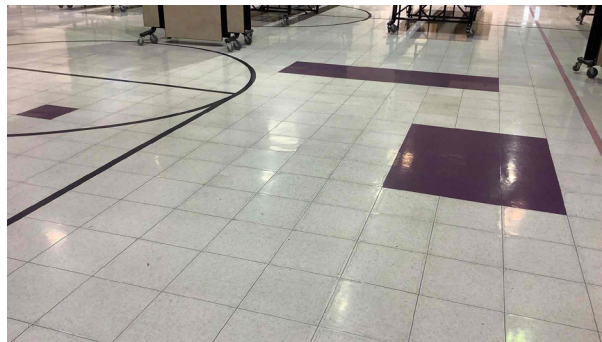
9.4 - Library carpet worn in traffic areas but in generally good condition



9.5 - Mismatched VCT at replacement areas



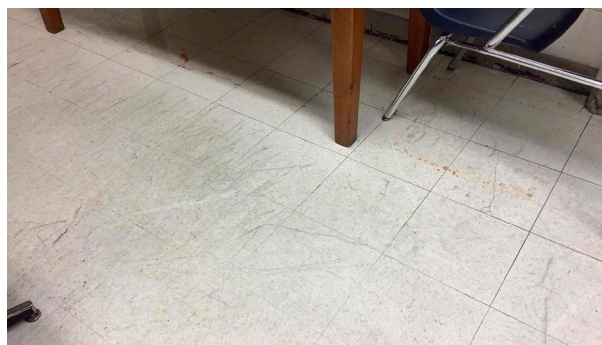
9.6 - Terrazzo corridors cracked – down center of hallway



9.7a - VCT gaps (likely due to movement of tile from adhesive failure)



9.7b - VCT gaps (likely due to movement of tile from adhesive failure)



9.8 - VCT scuffed heavily at chair locations – appears to be stripped and waxed on regular schedule



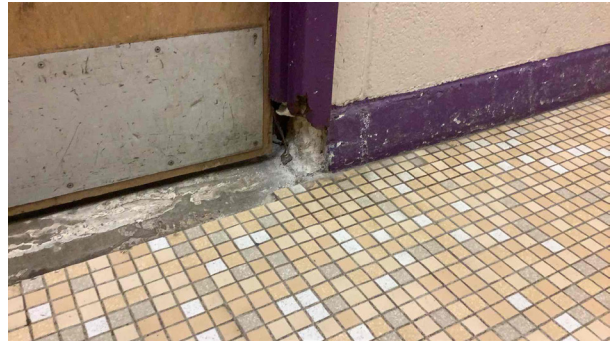
9.9 - VCT curling at corners and edges and damaged at exterior door (wet) location

10 - DOORS

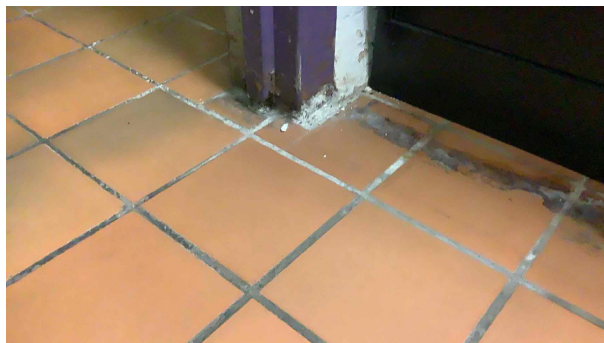
Majority of door issues are related to accessibility requirements and age. The following represent a sample of the door conditions/deficiencies:



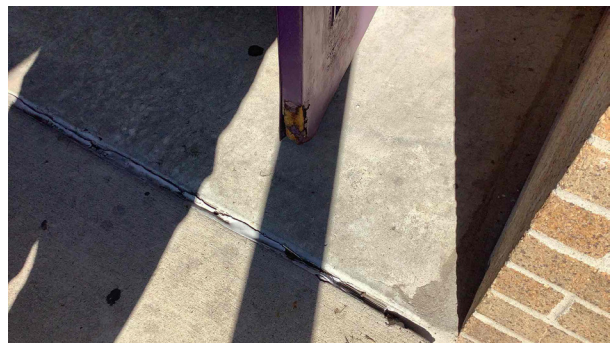
10.1 - Bottom rail of existing storefront doors (must be 10" for accessibility)



10.2a - Interior door frames rusting at base where heavy mopping occurs (kitchen and bathrooms)



10.2b - Interior door frames rusting at base where heavy mopping occurs (kitchen and bathrooms)



10.3 - Exterior steel doors rusting along bottom edges

11 - LOCKERS

The following represent a sample of the locker conditions/deficiencies:



11.1 - Campus lockers unused and in fair condition



11.2 - Locker finish peeling

12 - MILLWORK

General condition of existing – old, but still functioning. The following represent a sample of the millwork conditions/deficiencies:



12.1 - General condition of existing – old, but still functioning



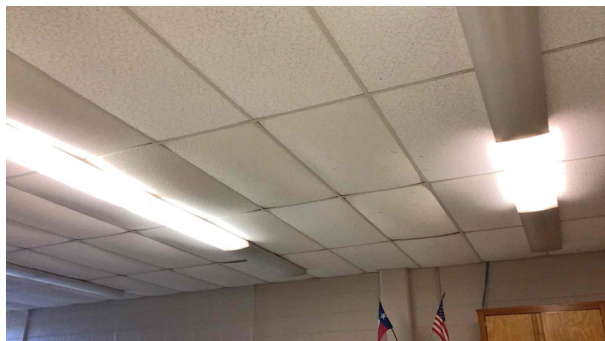
12.2 - Sink base cabinets not compliant for accessibility

13 - CEILING

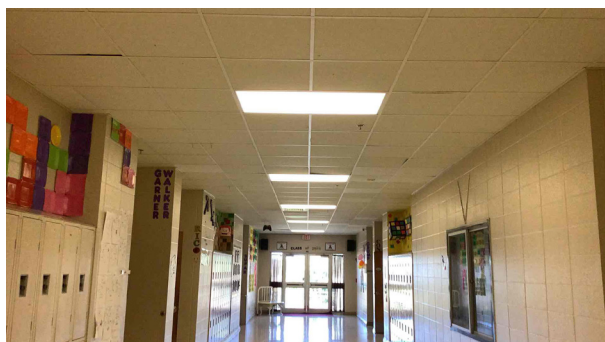
The following represent a sample of the ceiling conditions/deficiencies:



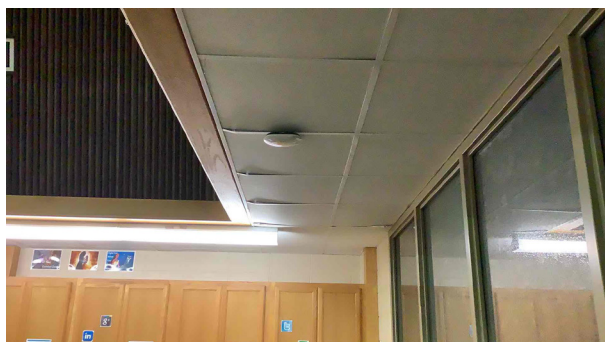
13.1a - Sagging tiles in classrooms



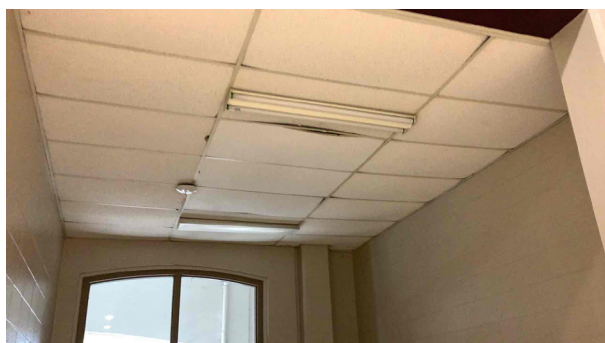
13.1b - Sagging tiles in classrooms



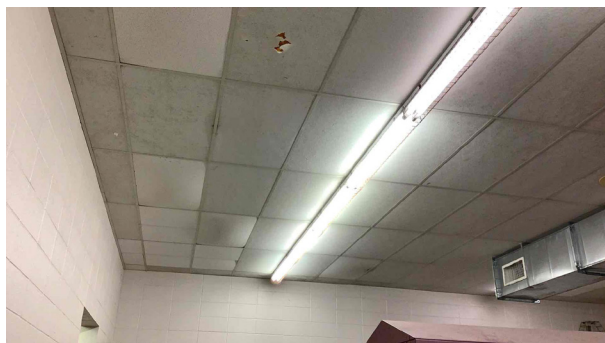
13.2 - Grid damage in hallways not allowing tile to sit flush



13.3 - Grid damage in library not allowing tile to sit flush setback



13.4 - Tile sagging and hanging below grid, likely from high humidity



13.5 - Mismatched tile throughout from replacement over years

14 - TECHNOLOGY

The following represent a sample of the technology conditions/deficiencies:



14.1 - No traditional MDF and IDF closets – cabinets located where possible



14.2 - No traditional MDF and IDF closets – cabinets located where possible

15 - DINING/KITCHEN

The following are the notes from Foodservice Design Professionals:

PROJECT NOTES:

Student Population: 873
Facility Built: 1970
Kitchen Square Footage: 2096
Recommended Square Footage: 5,500
Renovation Date:

RECOMMENDATIONS:

Owner has been proactive in replacing kitchen equipment, overall the kitchen is undersized and recommended to be increased to 5500 sq feet. Replace all priority 1/2 items, code items, and any equipment missing due to insufficient square footage.

RECEIVING:

The following pieces of equipment are in poor condition:
a. Air Screen

OFFICE:

The following pieces of equipment are in fair / poor condition:
a. Office

JANITORS:

The following pieces of equipment are in poor condition:
a. Wood Shelving

TOILET/LOCKER ROOM:

The following pieces of equipment are in poor condition:
a. Locker Room
b. Toilet

DRY STORAGE:

The following pieces of equipment are in fair / poor condition:
a. Dry Storage Shelving

PAPER STORAGE:

The following pieces of equipment are in poor condition:
a. Wood Shelving

COLD STORAGE ASSEMBLY:

All equipment in this functional area are in fair condition.

PREPARATION:

The following pieces of equipment are in fair / poor condition:
a. 20 Qt. Mixer W/Stand

PRODUCTION:

The following pieces of equipment are in fair / poor condition:
a. Fire Protection System
b. 40 Ga. Tilt Braising Pan- Manual Tilt

15 - DINING/KITCHEN, CONT.

The following pieces of equipment are in fair / poor condition:

- a. Fire Protection System
- b. Convection Steamer- Single

HOLDING:

The following pieces of equipment are in poor condition:

- a. Reach-In Heated Cabinet - 3dr
- b. Roll-Thru Tall Heated Cabinet 1 Dr

PREPARATION:

The following pieces of equipment are in fair / poor condition:

- a. Reach-In Heated Cabinet- 2dr

SERVERY:

All equipment in this functional area are in fair condition.

WAREWASH:

All equipment in this functional area are in fair condition.

CODE DEFICIENCIES:

1. Fire Suppression ansul autumn located in traffic area is not 66" required.
2. Fire Suppression has rust located at ansul drops.

ARCHITECTURAL:

1. Floor: Fair/Poor
2. Ceiling-Kitchen : Fair/Poor
3. Walls: Fair
4. Floor Sinks:
5. Electrical Panels: Fair/Poor
6. Ceiling-Servery: Fair/Poor
7. Cafeteria Square Footage: 4,481 sf

RATING CRITERIA:

- Priority 1: Poor – Immediate replacement (0-5 life expectancy)
Priority 2: Poor/Fair – Should be replaced (5-15-year life expectancy)
Priority 3: Fair – Replacement not needed currently (15-20-year life expectancy)
Priority 4: Good – Replacement not needed (20-25-year life expectancy)

15 - DINING/KITCHEN, CONT.



15.1a - Walk-in cooler freezer - frost build-up on freezer door



15.1b - Walk-in cooler freezer - frost build-up on freezer door



15.1c - Walk-in cooler freezer - frost build-up on freezer door



15.2 - Mobile heated cabinet - located behind serving counter, not adequate for back up



15.3 - Serving area - used for storage

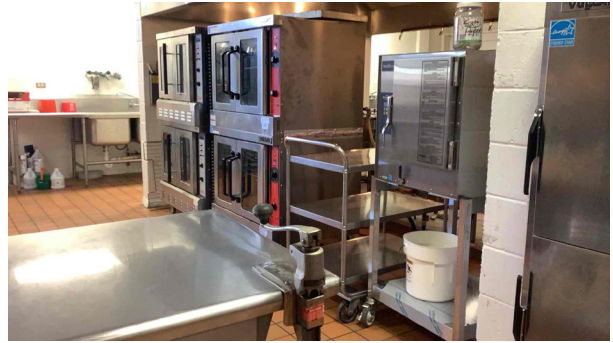


15.4 - Receiving door - no air screen

The following represent a sample of the dining/kitchen condition/deficiencies (as provided by Huckabee):



15.6 - Ceiling tile dirty, ceiling grid sagging and missing tile



15.7 - Equipment is in fair condition



15.8 - Floor tile is in good condition.



15.9 - Four serving lines for serving students



15.10 - Serving counters appear new; recently upgraded

16 - MEP SERVICES

The following information was provided by Salas O'Brien and represent the Mechanical, Electrical and Plumbing conditions/deficiencies:

HVAC DESCRIPTION:

1. 156,404 sq. ft.
2. Built in 1970's with additions in 1990 and 1999.
3. Standalone brick and metal building used for a gymnasium with gas heat and ventilation only in main area with split DX systems for coaches' offices.
4. Library: Librarian says it is always hot.
5. Restrooms have louver from hall with exhaust fan.
6. Gym/cafeteria has DX rooftop units.
7. Kitchen vent hood appears to have makeup air.
8. York chiller with R-123 serves fan coil units in original building. Approximately 69,500 sq. ft.

HVAC RECOMMENDATIONS:

1. Pretreatment of additional outside ventilation air is necessary to comply with current codes and standards. Due to the limits of the bond dollars this work should be a lower priority than capital expenditures for improvements of educational objectives. Provide opinion of probable construction cost. Approximately 156,404 sq. ft.
 - a. Convert building to water source heat pumps with outside air units on roof providing fresh air via medium velocity duct. Approximately 69,500 sq. ft.
 - b. Provide pretreated outside air to remaining buildings, that utilize rooftop units, with a pretreated outside air unit. Approximately 86,904 sq. ft.
2. Add building management and controls. Approximately 156,404 sq. ft.
3. Replace rooftop units on north addition of school.
4. Fix condensate drain piping for rooftop units that terminate on roof's surface.

ELECTRICAL RECOMMENDATIONS:

1. Replace all Federal Pacific and other pre-1990 renovation obsolete electrical switchgear except for Square D NQOB series and I-Line series panel boards which are still supported.
2. Relocate transformers and other equipment to provide worker access to panelboards and other equipment.
3. Replace non-LED interior and exterior lighting with LED.
4. Provide lighting controls with dimming for interior and BMCS control of exterior lighting.
5. Replace and add additional exit signs and emergency lighting in interior and exterior clear of last door or fence/gate/public way.
6. Provide parking and driveway lighting, remove AEP or local utility-maintained site lighting.
7. Remove all abandoned equipment and wiring.
8. Provide GFCI receptacles at all code required locations.
9. Provide local safety disconnects for all equipment and appliances lacking such devices.
10. Add additional receptacle outlets to minimize the use of power plug strips extension cords.
11. Remove storage items clear of all electrical switchgear.
12. Provide new LED stage lighting.
13. Provide emergency generator and emergency power distribution system.
14. Provide surge suppression devices (SPDs) to all switchboards and panelboards.

16 - MEP SERVICES, CONT.

TECHNOLOGY RECOMMENDATIONS:

1. Provide new networked card key access control to perimeter doors. Remove magnetic locks and REXs. Provide new doors with electric crash hardware and access controls.
2. Provide new networked burglar alarm system.
3. Provide new fire alarm system with voice evacuation.
4. Expand and update existing public address system with audio coverage in all areas.
5. Remove abandoned technology equipment and wiring.
6. Provide wire management in IDF and MDF locations.
7. Remove all coaxial cable TV distribution and CRT TVs. Replace with IP/LED flat screens.
8. Replace all projectors with LED projectors or convert to flat screens.
9. Provide new networked IP video surveillance system.
10. Provide first responder radio coverage testing.
11. Provide new stage and gym local sound system.
12. Provide UPS for all data racks.

PLUMBING DESCRIPTION:

1. Building is not fire sprinkled.
2. Water closets are a mixture of floor and wall mount with flush valves but don't meet the code requirement of 1.28 gallons per flush. The urinals are trough urinals (trough urinals are illegal and do not meet code). Lavatories are a mixture of new and original with single post faucets and lever handle style faucets. Janitor closets are a mixture of mop and service sinks. Drinking fountains are a mixture of new and old. Showers in locker rooms are wall mounted stainless steel, and need of replacement, handicapped showers do not meet code. Wash fountains are stainless steel and appear to be abandoned. Stainless steel sinks do not meet TAS depth requirements.
3. Water piping is mostly galvanized piping with some copper piping around the boiler in the central plant. Make-up line to the hot and chilled hydronic piping systems need a testable backflow preventer in it.
4. Hot water is supplied to the majority of the campus with a small boiler and storage tank on a circulated system. At least one small point of use electric heater was observed under a sink. The electric heater in the cabinet did not have a floor drain/sink for drain lines.
5. Sanitary and vent piping appears to be a mixture of cast iron and PVC plastic piping. In the kitchen, all multi-compartment sink drains need to be routed to a floor sink, no hard connection is allowed at the floor. Grease trap needs to be replaced with a dual compartment grease trap and a sample well installed downstream.
6. Gas piping is served by a 5 pound meter and is routed on the roof to serve the rooftop units and through the kitchen. Piping appears to be a mixture of black steel and galvanized piping with threaded joints. Pipe is not painted.

PLUMBING RECOMMENDATIONS:

1. Provide a fire sprinkler system in each area as required by code. This may be considered a low priority based on further evaluation.
2. Replace all water closets to meet current standards of 1.28 gallons per flush. Replace trough urinals with single urinals and provide flush valves that meet .5 gallons per flush and TAS requirements. Replace all lavatories. Replace all drinking fountains to meet TAS requirements. Replace all stainless steel sinks to meet TAS depth requirements. Replace service sinks with mop sinks, provide hot water and replace the mop sinks. Replace the wall mounted showers in the locker rooms and the handicapped showers. Replace the wash fountains if still needed.
3. Replace the existing galvanized water piping with copper. Insulate water piping in exposed areas that are not heated. Insulate all hot water piping. Provide a testable backflow preventer serving the fill and make-up water for the hydronic systems.

4. Replace all water heaters/boilers 10 years or older. Provide floor sinks/drains adjacent to water heaters. Replace the existing circulating pump. Provide hot water to all fixtures that code requires, including public lavatories and mop sinks.
5. Provide floor sinks/drains where required by code with trap seal protection. Provide trap seal protection in all existing drains. Provide a dual compartment grease trap with a sample well downstream of the grease trap.
6. Test all gas piping. Clean and paint gas piping yellow. Replace flex connectors to equipment on roof. Provide proper support of piping on roof.

The following represent a sample of the MEP conditions/deficiencies (as provided by Huckabee):



16.1 - Exterior dust collection barrel rusted – evidence that roof cover for dust collector removed



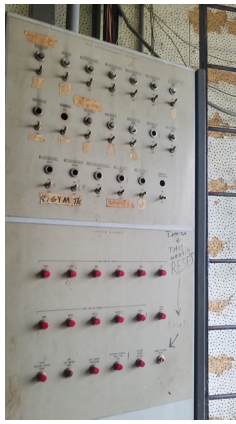
16.2 - Space heaters being used under desk



16.3 - Original locker room showers; no accessible shower stall provided.



16.4 - Exposed non-GFCI electrical outlets at non compliant drinking fountain (exterior, wet area)



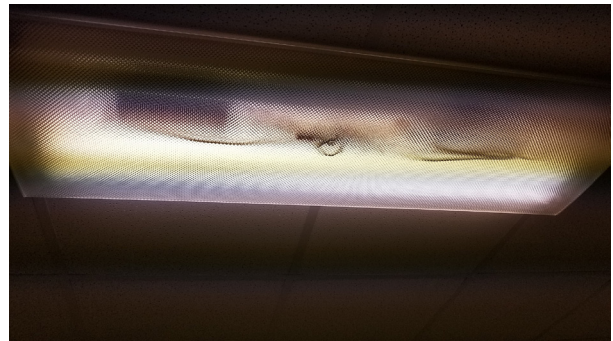
16.5 - Aging electric panels



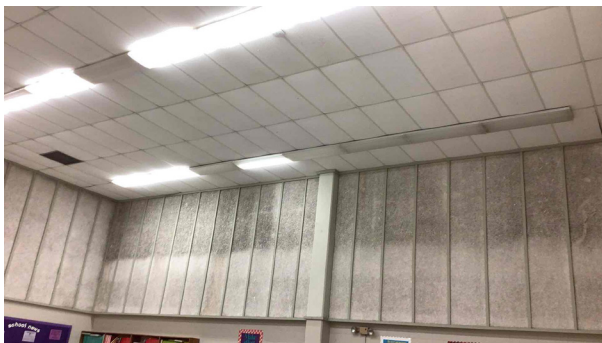
16.6 - Panels accessible in office



16.7 - Panels unlocked and accessible in weight room



16.8a - Many interior light bulbs out in fluorescent fixtures

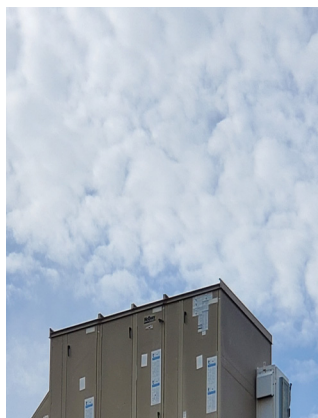


16.8b - Many interior light bulbs out in fluorescent fixtures



16.8c - Many interior light bulbs out in fluorescent fixtures

16 - MEP SERVICES, CONT.



16.9 - Mechanical RTU edge protection (MEP)



16.10 - Unit ventilators pose noise constraints



16.11 - Toilets without stalls



16.12 - Plumbing 3 compartment sink drain (MEP) must discharge into floor drain



16.13 - No knee clearance provided below sink



16.14 - Trough urinals are not ADA/TAS compliant

The following information was provided by Salas O'Brien and represent the Mechanical, Electrical and Plumbing condition/deficiencies for ALL Campuses:

DISTRICT-WIDE ELECTRICAL RECOMMENDATIONS TO ALL CAMPUSES

ELECTRICAL SWITCHGEAR:

Looking at the school district as a whole, the majority of the electrical switchgear is pre-1980 construction, obsolete, and should be replaced due to lack of replacement parts and beyond end of life. The remainder of the switchgear that is pre-2000 is a mix of obsolete of near end of life equipment that should be considered for replacement. Obsolete circuit breakers and other electrical equipment removed in renovations should be selectively retained by VISD for spare maintenance parts to be used in other campuses until all obsolete equipment is replaced district wide.

Existing electrical and mechanical rooms should be cleared of storage items which are creating safety and fire hazards. Where there are other permanent obstructions for accessing electrical equipment safely, either the electrical equipment or the obstruction should be relocated.

Surge suppression devices (SPDs) with selenium/MOV protection should be added to all new and existing main electrical service gear and SPDs with MOV protection to all new and existing panelboards.

EMERGENCY POWER:

Consideration should be given to adding emergency natural gas generators and emergency power distribution for life safety lighting and power for communications. Additionally, to mitigate campus evacuation during extended power outages the following can be included on the emergency generator: minimal general lighting and power in selected areas, elevators, and power for kitchen cooler/freezers to avoid food spoilage. This will eliminate the need for battery packs in emergency lighting fixtures, and the required cost of maintenance/testing/replacement of individual light fixture and exit sign battery packs throughout the campuses.

LIGHTING:

Major life safety concerns are the lack of and mis-placement of emergency lighting and exit signage both inside and outside the buildings, including the exterior portions of many of the buildings within the controlled access (fenced/gated) areas of each campus which can be fully addressed with a campus wide lighting replacements. Simulated power failure testing and corrective measures of the existing emergency lighting and exit signage should be conducted as soon as possible.

Lighting consist of obsolete T-12 fluorescent and HID lighting without energy saving automatic lighting controls that should be replaced with LED lighting with minimal (simple) code required lighting controls that includes dimming in instructional spaces. Newer campuses with existing T-8 fluorescent lighting can be future evaluated and remain functional with continued maintenance/repair but should be replaced with LED under a lower priority than the T-12 fluorescent campuses based on the age of the lighting system.

MISCELLANEOUS:

Receptacles required to be GFCI protected by the 2020 NEC shall be replaced district wide. Additional receptacles should be added to eliminate the use of extension cords across rooms which create a tripping hazard and TAS violation. Other additional receptacles added to eliminate the extensive and non-code compliant use of power strips for permanently installed equipment.

16 - MEP SERVICES, CONT.

DISTRICT-WIDE TECHNOLOGY (communications, safety, and security)

GENERAL:

All systems should be tested end to end to identify deficiencies in the existing hardware and cabling, and to identify weaknesses that require correction.

All abandoned cabling and equipment shall be removed for NEC compliance.

NFPA 3000 STANDARD FOR AN ACTIVE SHOOTER / HOSTILE RESPONSE (ASHER) PROGRAM:

The District and all stake holders should develop a planning/response/recovery plan in accordance with NFPA 3000 as the outcome will affect almost all aspects of the technology infrastructure district wide and may alter the recommendations in this report accordingly.

FIRE ALARM SYSTEM:

Fire alarm system alarms consist of horn and horn/strobe alarm devices with only the newer campuses having current NFPA/ADA/TAS compliant devices and device locations. Current code requirement is for a voice evacuation fire alarm systems.

Existing fire alarms will be required to be updated to current voice evacuation code requirements with any building floor plan changes or renovations. At a minimum all systems horn/strobe alarm devices shall be brought up to current NFPA standards. All fire alarm systems should be upgraded or replaced with voice evacuation whenever there is major above ceiling work such as a campus wide lighting retrofit, HVAC retrofit, or fire sprinkler addition.

Most if not all buildings are non-sprinklered and should have smoke and/or heat detection in pre-K and Kindergarten areas, egress exits/corridors, storage and equipment rooms, kitchens, etc. Fire alarm pull stations added with lacking or where not in proper ADA access locations.

Campuses with existing current generation Notifier NFS series fire alarm panels are capable of adding voice communications to the existing panels. Most if not all fire alarm panels have 4G cellular communicators. Existing upgradeable and replacement fire alarm panel should include an IP communicator (if not existent) for remote access by District personnel and as an alternate channel for monitoring. If existing, legacy POT telephone line communications can be removed with this migration.

FIRST RESPONDER RADIO COVERAGE:

All campuses should be tested for interior first responder radio coverage as required by the IBC and NFPA unless pre-determined to be adequate by the local Fire Marshall. Those not in compliance shall have distributed antennae systems (DAS) installed. It is estimated that most elementary schools will not require a DAS except for Mission Valley ES and Aloe ES which may require. It is possible the middle schools and Liberty HS may require a DAS.

SCHOOL COMMUNICATION/CLOCK/BELL SYSTEMS:

School communication/clock/bell systems include legacy switch-bank controls, and more modern microprocessor-based systems manufactured by Bogen, Rauland, and Valcom. At a minimum the obsolete switch-bank systems should be replaced in their entirety. The other systems at a minimum required additional speakers in the corridors and other dead spaces where there are none or very few. Moving in the direction of a single manufacture and platform to easily allow district-wide mass notification should be strongly considered. Analog sweep hand clocks should be removed or replace with less expensive digital clocks only in limited locations such as kitchen/cafeteria, front office, libraries.

Consideration should be given to implementing unauthorized access panic buttons in strategic locations in each campus which will automate a specific warning tone or signal through the school communications system to initiate a lock-down.

All school communication systems should be upgraded or replaced with whenever there is major above ceiling work such as a campus wide lighting retrofit, HVAC retrofit, or fire sprinkler addition.

TELEPHONE SYSTEM:

District wide telephone system is IP based and shall remain. Handsets are 3COM which is now supported by HP. Verify compatibility with HP product substitutions and longevity. Additions and relocations only as needed and during architectural renovations.

DATA CABLING:

The majority of data infrastructure consist of legacy category 5 and 5e cabling which can remain. All campuses have WiFi Access Points (WAPs) distributed across campus. Consider upgrading the WiFi cabling and hardware to category 6A for increased bandwidth and future proofing.

There are few to none dedicated technology closets with proper air-conditioning. Existing rooms used for MDFs and IDF's should be air-conditioned to maintain proper air temperatures for this equipment.

There are no un-interruptible power supplies serving or protecting the electronics equipment. UPSs should be added to avoid network shut downs due to poor power quality or short duration power failures. Addition of emergency generators and emergency power feeding the UPSs should eliminate any network shutdown due to poor power quality or utility power outages.

Existing cabling in technology rooms should be dressed and organized with cable management devices. Minimal data outlets should be relocated or added to minimize long runs of patch cables where this condition exists. Additional network evaluations that should be evaluated and corrected beyond the scope of this report include the District's fiber WAN and data transmission choke points both on the WAN and the LANs in each campus.

ACCESS CONTROL:

Existing access control consist of legacy magnetic locks and card key access at perimeter door locations. Most campuses are inconsistent with deployment and have unprotected access locations. Many egress doors lack proper ADA crash hardware. Doors and door hardware should be replaced to meet ADA requirements with electric crash hardware and IP based door controllers residing on the District's IP network and appropriate software. Access control should be a separate system isolated from the burglar alarm system so that unauthorized access to an active card key does not deactivate the burglar alarm system and can decentralize District personnel control between the two systems for added security.

Exterior gates that are chained and pad-locked should be upgraded with locking crash hardware where they impede the emergency egress from the building and campus. Use of chains and padlocks on exterior gates during school hours should be evaluated with the local Fire Marshall and District security personnel.

BURGLAR ALARM:

Burglar alarm systems should be replaced as needed with a District standard enabling network access to the panels as the existing equipment is or is becoming obsolete.

AUDIO/VISUAL PRESENTATION:

There is a lack of consistency in teacher instruction audio/visual presentation for both equipment used and deployment ranging from ceiling mounted projectors, projectors mounted on teacher's desk, and projectors on carts. At a minimum all desk and permanently located cart mounted projectors should be moved to ceiling mount to eliminate ADA obstacles and trip hazards from data cabling and power extension cords laid on the floor. A consensus future curriculum requirements and A/V presentation requirements and equipment should be developed moving forward including the use of classroom sound enhancement systems.

16 - MEP SERVICES, CONT.

Obsolete legacy CRT TVs and VCRs with coaxial CATV cable distribution is still present in many classrooms (but not seen in use) and should be removed.

Local sound reinforcement systems in cafeterias/stages, and gymnasiums is inconsistent campus to campus. These systems should be replaced when there are non-existent, not fully functional, or there are architectural renovations in this space. Salvageable A/V equipment should be returned to the District for redeployment at other campuses that are lacking equipment or need replacements but yet to receive architectural renovations.

VIDEO SURVEILLANCE:

There is a lack of consistency in video surveillance and user access. Migration should be to a fully IP based system and software using IP cameras with POE power and eliminating local DVRs and dedicated monitoring stations (some are in closets or equipment rooms). POE cameras and the use of UPSs will keep this system functional during short duration power outages.

Camera locations and types should be evaluated campus wide to eliminate dead coverage spots, areas prone to illicit behavior, and to provide face recognition quality video at perimeter entry points.

17 - GENERAL/TYPICAL CONDITIONS

Full assessment includes many issues and photographs representing the prevalence of the issues noted herein.