
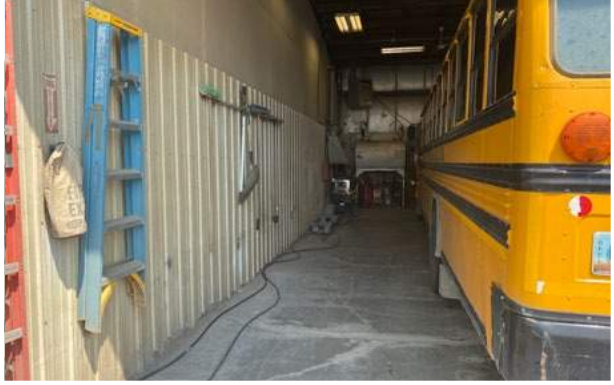






ICON
ARCHITECTURAL GROUP

FACILITY ASSESSMENT FOR
DEVILS LAKE PUBLIC SCHOOLS

Devils Lake, ND

ICON
ARCHITECTURAL GROUP

Prairie
Engineering, P.C.
Professional Consulting Engineers

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BACKGROUND

SECTION

01

01 BACKGROUND

A. INTRODUCTION TO THE PROJECT

This document reviews the current conditions of all facilities within Devils Lake Public Schools, as well as case studies to consider for the resolution of facility issues. This is not intended to represent a design solution, but rather demonstrate the facts observe through our study. ICON Architectural Group (ICON) teamed up with Prairie Engineering, Lowry Engineering, and Construction Engineers to prepare the information included within this report. The facility assessment was commissioned to assist the District with long-range planning and to address increasing enrollment, changing educational requirements, and aging facilities. This assessment includes input from architects, engineers, educational planners, and Devils Lake Public Schools staff.

The scope of this report is to identify deficiencies within the current facilities including code compliance, Americans with Disabilities Act (ADA) compliance, security, and educational adequacy. The report will apply all costs associated with the upgrades required and deferred maintenance items identified within Minnie H, Prairie View, and Sweetwater Elementary Schools, Central Middle School, LACTC, Sports Center, Devils Lake High School, and the Bus Garage and Maintenance Building. Options to consider include renovating the current facilities to meet long-range needs and/or new construction.

B. STAFF INPUT

To further understand how the buildings function for students and staff, ICON hosted two days of meetings with a large cross-section of current staff members of Devils Lake Public Schools who work within the facilities on a day-to-day basis. ICON met with each group individually without administration present to facilitate an open conversation and honest feedback. These meeting groups included staff from each education department, custodial staff, kitchen staff, special education staff, library, and administration for each of the eight buildings being assessed.
ICON also solicited staff input by encouraging them to fill out a questionnaire regarding the facilities' function for their curriculum. The questions focused on aspects of the facility that are working well and serving their educational purpose as well as educational requirements and activities that are unable to be met due to facility constraints. Respondents had the opportunity to recommend facility improvements that would better foster staff and student success.

C. OVERVIEW OF FACILITY ACTIVITIES AND PROGRAMS

Devils Lake Public School District's primary purpose is public education for grades K-12 during the day, but also allows for various extracurricular activities and district-wide events during the evenings and weekends. These activities include, but are not limited to, basketball, volleyball, wrestling, dance, concerts, and school dances.

D. APPLICABLE CODES

Below is a list of applicable codes and standards that was used to create this assessment.

- North Dakota State Building Code
- 2018 International Building Code (IBC)
- 2018 International Energy Conservation Code (IECC)
- 2018 National Fire Protection Association (NFPA) 70 – National Electric Code
- 2018 National Fire Protection Association (NFPA) 72 – National Fire Alarm and Signal Code
- 2018 National Fire Protection Association (NFPA) 101 – Life Safety Code
- Local Codes
- Uniform Plumbing Code
- International Mechanical Code (IMC)
- International Fuel Gas Code (IFC)
- National Fire Protection Association (NFPA)

FACILITY ASSESSMENT

SECTION

02

MINNIE H KINDERGARTEN CENTER

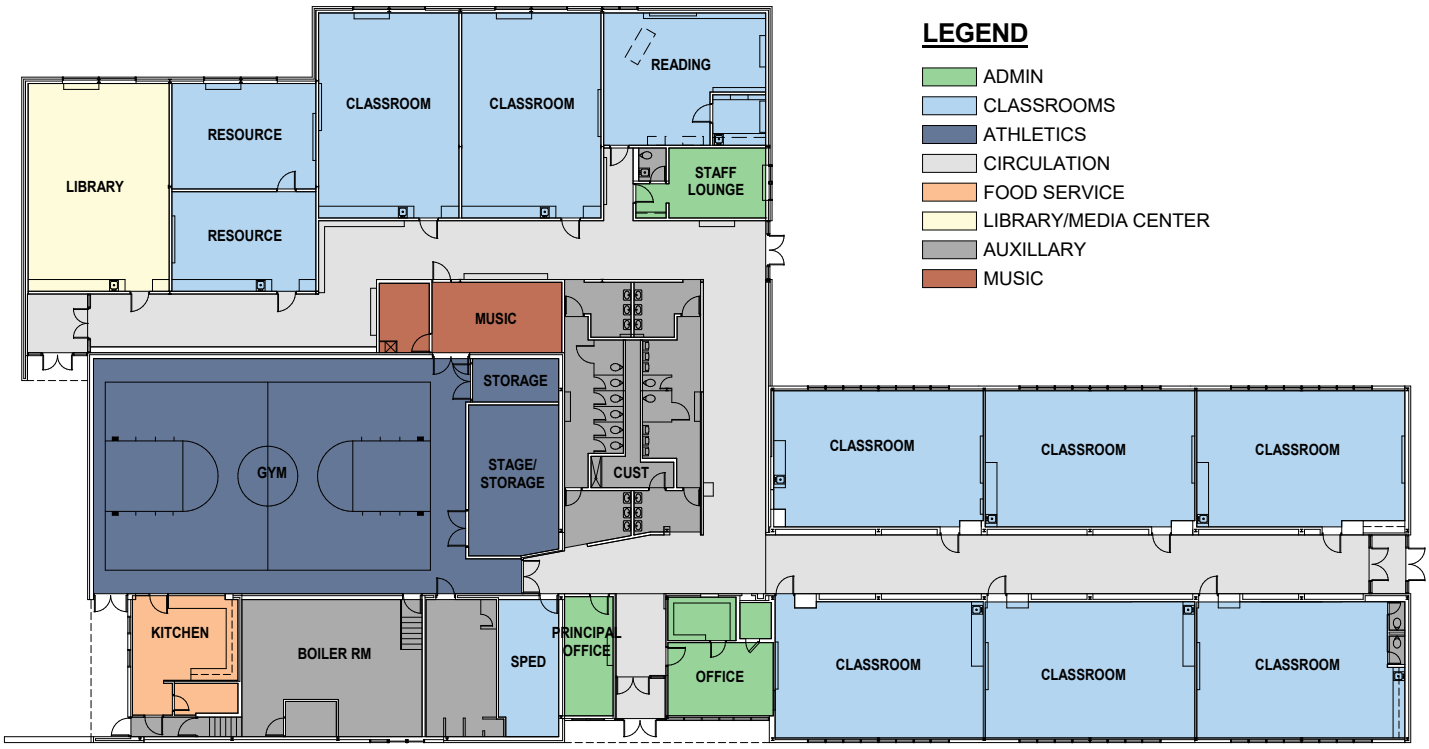
02 FACILITY ASSESSMENT

A. MINNE H KINDERGARTEN CENTER
EXISTING BUILDING INVENTORY

Room Schedule	
Department	**Area**
ADMIN	737 SF
ATHLETICS	3,094 SF
AUXILLARY	2,059 SF
CIRCULATION	3,500 SF
CLASSROOMS	8,253 SF
FOOD SERVICE	353 SF
LIBRARY/MEDIA CENTER	848 SF
MUSIC	366 SF
Grand total: 46	19,211 SF

20,275 GROSS TOTAL

Minnie H Kindergarten Center is located at 210 College Drive south in Devils Lake, ND. Constructed in 1957, Minnie H was originally one of 3 elementary schools built to replace aging facilities in the 1950's. In 1966, all 3 elementary schools got additions as the enrollments increased. There was a full window renovation in 2010 and in 2013, the entire building had an extensive interior renovation, replacing floor and ceiling finishes, painting walls, and installing new lighting, fire alarm system and sprinkler system. In 2018, Minnie H was converted to a full time Kindergarten Center. Minnie H is accessible from College Drive to the west and borders 3rd street SE on the south. The staff park in a lot on the north side of the building, and parents drop off students in the same parking lot.



B. EXISTING CONDITIONS

The analysis of the existing Minnie H Kindergarten Center has been broken down into three categories: code compliance/Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance

This includes evaluation of the current building codes required by the City of Devils Lake and the State of North Dakota. Non-compliant items within the building have been identified and are listed below.

- Both girl's and boy's restrooms do not have handicap accessible stalls
- The boiler room is below the main grade of the building and is not on a handicap accessible route as it is only accessible by stairs.
- The interior vestibule doors are lacking closers and do not allow for protection from exterior extreme temperatures per energy code.
- Door into the kitchen from the gymnasium lacks push/ pull clearances
- Restrooms within classrooms are very small and do not meet maneuverability and clearance requirements.
- Staff restroom does not meet maneuverability and clearance requirements.

2. Educational Adequacy

This is a review of applicable Department of Public Instruction recommendations as they relate to Minnie H Kindergarten Center's curriculum. To understand educational space deficiencies, we have evaluated educational models, curriculum configurations, and quantity and quality of existing spaces in comparison to the option of a modern, purpose-built educational facility.

Space	Current Square Footage	DPI Guideline Square Footage	Difference
Admin	737	1,430	693
Classroom (Average)	818	1,200	382
Gym/PE	3,094	6,000	2906
Kitchen/Food Service	353	2,700	2347
Cafeteria	N/A	960	N/A
Art	N/A	1,000	N/A
Library	848	1,680	832
Music	366	1,000	634

ARCHITECTURAL FINISHES

Minnie H Kindergarten Center was constructed in 1957 and has undergone several additions and renovations. Overall, the building has been well maintained and with the recent 2013 renovation, most of the interior finishes are all in satisfactory condition. The casework in the classrooms is very aged and is not handicap accessible. The doors and door hardware throughout the whole school also need to be replaced in the near future.

Masonry

The exterior façade of the kindergarten center is a combination of brick and metal siding.

Metal Siding

The exterior siding appears to be in adequate condition.

Roofing

No observable issues at this time.

Openings

Minnie H had a full window replacement in 2010. The building's exterior openings appear in adequate condition. Throughout the interior of Minnie H, door, frame, and hardware replacement is required due to age, code compliance, security, or a combination of these.

Ceilings

There are several ceiling types within the kindergarten center, but most is acoustical ceiling tile. The ceiling tile is in good shape because of the 2013 renovation where it was all replaced.

There are several areas of gypsum ceiling that need patching, cleaning, and painting. This is not an immediate need but should be phased in through a capital maintenance plan.

Flooring

There are a couple different flooring types throughout Minnie H. Most of the school is either tile or carpet and is in good condition. Carpet is in most classrooms and in some of the corridors. The tile is in corridors, the gymnasium, kitchen, and other areas.

STRUCTURAL

No observable issues at this time.

MECHANICAL

Fire Suppression

The fire suppression system is a wet sprinkler type. It was installed in 2014 and is in good condition.

Plumbing
Plumbing fixtures in toilet rooms are vitreous china with hands free operation. The fixtures appear in good condition and should continue to operate with occasional maintenance on the flush valves.

The lavatories in the toilet rooms are a mixture of wall-hung and counter mounted, made from vitreous china. The faucets are hands free and should remain functions with occasional maintenance on the faucets.

The drinking fountains have been upgraded to include a bottle filler.

The water heater is a tank-type manufactured by AO Smith, natural draft gas-fired, model FCG 75300, input capacity of 75 MBH, with 73 GPH recovery, and manufacture date of 2015. The heater is in good condition.

Climate Control
Classrooms in the original school are heated by wall mounted fin tube heaters near the floor. The heaters are designed for steam systems. Any plans to remove the steam system would need to include updating the classroom heaters to hydronic type.

Classrooms in the north addition are heated and ventilated by unit ventilators on the exterior wall. The units appear in fair condition and are expected to last another 10 years.

The north vestibule on the addition is heated by an exposed steam radiator. The heater presents a burn hazard for students and should be replaced.

No air conditioning is provided in the school besides window AC units in the administration offices.

Ventilation and Exhaust
The ventilation is provided by (2) vertical Herman Nelson air handlers with steam heating coil and no cooling. Ventilation air is delivered via underground tunnels to each area. The units are older and should be scheduled for replacement within the next 10 years.

Ventilation is returned through the corridors, a method which is not allowed by current safety codes.
The toilet room exhaust system consists of a power roof exhaust fan ducted to each toilet room.

The kitchen exhaust hood is a wall mounted range exhaust hood and features a fire suppression system. The hood does not extend over the full surface of the appliance and does not provide adequate capture. The hood should be removed and replaced with a full-size hood.

There is no exhaust system for the dishwasher. A heat and condensate removal hood should be provided along with exhaust fan.

Central Plants
The heating plant consists of (2) Burnham steam boilers, model CL-80-G-PF, gas-fired with a heating input of 3,266 MBH and heating capacity of 2,800 MBH. Each boiler features a Power Flame burner, model BCC3-G-20HTD. The boilers are in good condition.

Temperature Controls
The facility features a pneumatic controls system. The pneumatic controls systems are becoming increasingly difficult to maintain due to difficulty in obtaining repair parts and components. The system should be scheduled for replacement over the next 5 years.

ELECTRICAL

Lighting
Light fixtures throughout the entire facility incorporate energy efficient T5 fluorescent lamps with electronic ballasts. The general condition of the interior light fixtures that incorporate T5 lamps is noted as good. Most of the lights were installed in 2013. The lighting system should remain viable beyond the 10-year mark.

Exterior lighting has been updated to LED type fixtures.

Emergency egress lighting is accomplished with self-diagnostic battery backup units. The batteries have been maintained and the units appear to be functional. Likewise for the LED exit signs. The emergency lighting should remain viable beyond the 10-year mark.

Power
The building's electrical service is an 800 Amp, 120/208 Volt, 3 Phase system installed with the 2008. The main distribution panel utilizes circuit breakers to provide power distribution through the building. There is physical space to install additional circuit breakers if required. Replacement parts are readily available for this Siemens panel. The branch panels in the facility are modern circuit breaker panels by Siemens. The branch panels have spares and spaces, providing room to add additional circuits if required.

Convenience receptacles have been added to all the classrooms, providing adequate power for today's technological requirements.

The power and distribution system should remain viable for many years.

SYSTEMS

Fire Alarm
The building incorporates an addressable Simplex fire alarm system. It includes smoke detector coverage in the corridors and other select locations and ADA compliant pull stations at the building entrances. ADA compliant Audible/Visual annunciation devices are installed throughout the facility.

It should be noted the recently adopted building code requires new fire alarm systems to include Voice Evacuation type annunciation. Although the existing system is grandfathered in, it can be upgraded to this new requirement for educational occupancies by adding the voice communications module and replacing the existing annunciation devices with Speaker/Visual devices.

Network Cabling
Network cabling is obsolete Category 5. This cabling does not provide the bandwidth that is typically required by today's networks. The cabling should be upgraded to Category 6. It is also recommended to add additional Category 6 cables to support Wi-Fi nodes.

Public Address
The building includes a functional intercom and corrected clock systems. Both systems should remain viable beyond the 10-year mark.

Surveillance
Surveillance cameras cover the interior corridors and exterior building entrances. The system is adequate and should remain viable beyond the 10-year mark.

Security
The district wide access control system controls the exterior doors. Intrusion detection is also included. The system should remain viable beyond the 10-year mark.

MINNIE H KINDERGARTEN CENTER

INTERIOR AND EXTERIOR EXISTING CONDITION PHOTOS

The boiler room is not handicap accessible. Existing stairs are not to code.

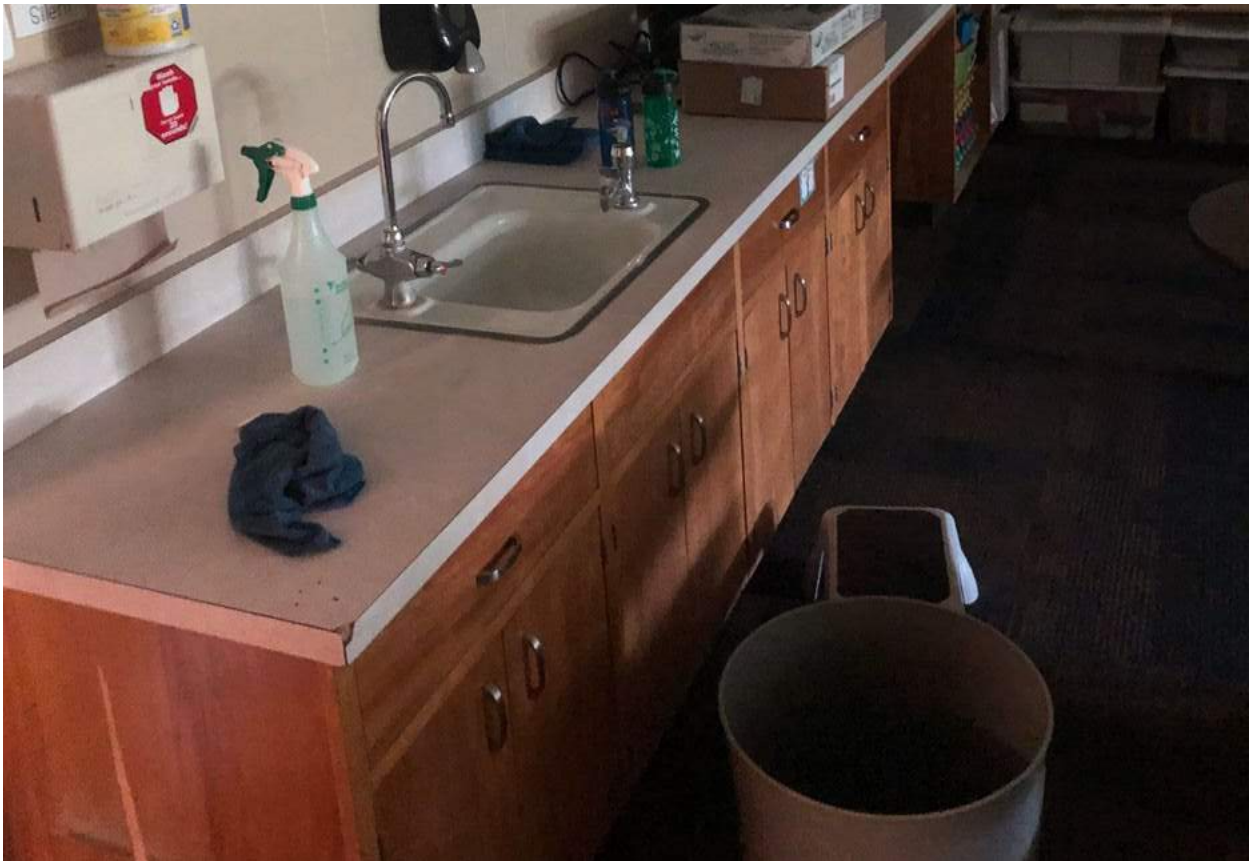
Doors and door hardware are aged.

Interior vestibule doors do not have a closer.

Casework is aged in corridors, classrooms, and the main office.

Restrooms within classrooms are very small and do not meet maneuverability and clearance requirements.

The restrooms lack privacy and do not meet handicap accessibility.



Sink has drinking fountain bubbler on it, which is not up to code and does not meet handicap accessibility clearances.

Cracked and settling concrete.

CONSTRUCTION ENGINEERS

3. Capital Maintenance Costs

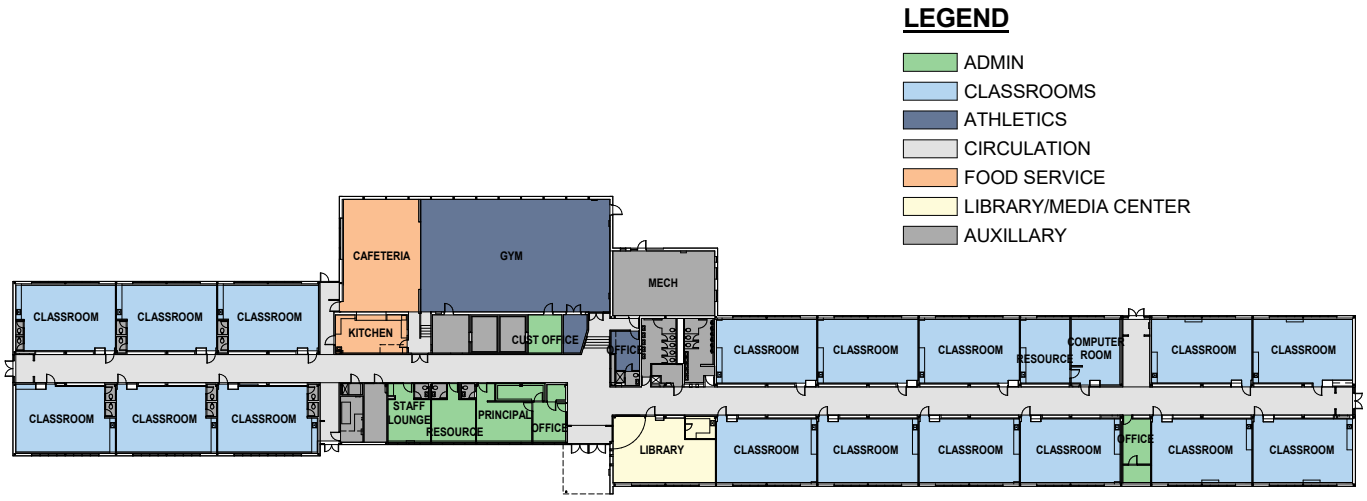
Minne H Kindergarten Center

Description	Takeoff Qty	Total Cost/Unit	Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Total Cost
M.H.K.C. Code Compliance							
Reconfigure Stalls in boys and girls bathroom to make it handicap accessible/ add grab bars	20,275 SF	$2.63 /SF	$53,319				$53,319
Add lift in Boiler Room	20,275 SF	$2.36 /SF	$47,811				$47,811
Add Closers to Interior Vestibule Doors	20,275 SF	$0.13 /SF	$2,663				$2,663
Push Pull Clearances at Kitchen from Gym	20,275 SF	$0.18 /SF	$3,586				$3,586
Make Restrooms in Classrooms ADA Compliant	20,275 SF	$4.13 /SF	$83,669				$83,669
Staff Restrooms ADA Compliant	20,275 SF	$1.94 /SF	$39,259				$39,259
Total Compliance	**20,275 SF**	**$11.36 /SF**					**$230,306**
M.H.K.C. Security							
Add Secure Entrance to Staff Lounge	20,275 SF	$0.00 /SF					
Total Security	**20,275 SF**	**$0.00 /SF**					**$0**
M.H.K.C. Educational Adequacy							
Addition SF Based on DPI Guideline	9,372 SF	$326.74 /SF				$3,062,198	$3,062,198
Total Adequacy	**9,372 SF**	**$326.74 /SF**					**$3,062,198**
M.H.K.C. Capital Maintenance							
Replace all Int Doors/Frames/Hardware	20,275 SF	$4.63 /SF		$93,854			$93,854
Replace All Casework in Classrooms - Corridors	20,275 SF	$7.09 /SF		$143,687			$143,687
Patch Paint Ceiling in 10 years	20,275 SF	$0.47 /SF			$9,438		$9,438
Mechanical upgrades	20,275 SF	$9.14 /SF	$185,266				$185,266
Replace North Vestibule Radiator							
Improve Ventilation at Corridors							
Upgrade Hood at Kitchen							
Exhaust system for dishwasher							
Sink with fountain bubbler							
Mechanical upgrades in the next 10 years	20,275 SF	$26.77 /SF			$542,800		$542,800
Add AC to Class rooms							
Replace 2 Air Handlers							
Mechanical upgrades in the next 5 years	20,275 SF	$5.98 /SF		$121,170			$121,170
Controls							
Electrical Upgrades	20,275 SF	$4.46 /SF	$90,467				$90,467
Fire Alarm Voice Controls							
Replace Cat 5 with Cat 6							
Replace cracked paving assume (18x34)	20,275 SF	$0.59 /SF	$12,021				$12,021
Replace Roof	20,275 SF	$19.48 /SF			$394,958		$394,958
Total Maintenance	**20,275 SF**	**$78.60 /SF**					**$1,593,660**
Totals			**$518,059**	**$358,711**	**$947,195**	**$3,062,198**	**$4,886,164**

PRAIRIE VIEW ELEMENTARY SCHOOL

02 FACILITY ASSESSMENT

A. PRAIRIE VIEW ELEMENTARY SCHOOL
EXISTING BUILDING INVENTORY



Room Schedule	
Department	**Area**
ADMIN	1,565 SF
ATHLETICS	2,929 SF
AUXILLARY	2,418 SF
CIRCULATION	5,904 SF
CLASSROOMS	14,393 SF
FOOD SERVICE	1,442 SF
LIBRARY/MEDIA CENTER	842 SF
Grand total: 68	29,494 SF

31,500 GROSS TOTAL

Prairie View Elementary School is located at 200 12th Avenue NE in Devils Lake, ND. Constructed in 1957, Prairie View was originally one of 3 elementary schools built to replace aging facilities in the 1950's, except it was twice the size as Minnie H and Sweetwater. In 1966, all 3 elementary schools got additions as the enrollments increased. In 2009, the entire building had an extensive interior renovation, replacing floor and ceiling finishes, painting walls, and installing new lighting, fire alarm system and sprinkler system. Prairie View is accessible from 3rd Street NE to the north and borders 12th Avenue NE on the west. Most staff parks in a gravel lot along the east side of the building, and many parents drop off students in the same parking lot.

B. EXISTING CONDITIONS

The analysis of the existing Prairie View Elementary School has been broken down into three categories: code compliance/Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance.
This includes evaluation of the current building codes required by the City of Devils Lake and the State of North Dakota. Non-compliant items within the building have been identified and are listed below.

- Both girl's and boy's restrooms do not have handicap accessible stalls
    - No vertical grab bars
- The boiler room is below the main grade of the building and is not on a handicap accessible route as it is only accessible by stairs.
- There is no vestibule at the main entrance of the building and does not allow for protection from exterior extreme temperatures per energy code.
- Door into the kitchen from the Cafeteria lacks push/ pull clearances.
- Lower level that is below the main grade of the building is not handicap accessible. This area below grade includes the gymnasium, kitchen, storage, and mechanical room.
- There is no handicap accessible entrance to the gymnasium. Existing ramp is not up to code.
- Restrooms within classrooms are very small and do not meet maneuverability and clearance requirements.
- Staff lounge does not meet maneuverability and clearance requirements.
- Restroom in Resource Room does not meet maneuverability and clearance requirements.

2. Educational Adequacy
This is a review of applicable Department of Public Instruction recommendations as they relate to Prairie View Elementary School's curriculum. To understand educational space deficiencies, we have evaluated educational models, curriculum configurations, and quantity and quality of existing spaces in comparison to the option of a modern, purpose-built educational facility.

Space	Current Square Footage	DPI Guideline Square Footage	Difference
Admin	1565	1,430	135
Classroom	800	1,200	400
Computer Lab	395	1,000	605
Gym/PE	2929	6,000	3071
Kitchen/Food Service	347	2,700	2353
Cafeteria	1095	960	135
Art	N/A	1,000	N/A
Library	842	1,680	838
Music	N/A	1,000	N/A

ARCHITECTURAL FINISHES

Prairie View Elementary School was first constructed in 1957 and has gone through a few renovations and additions. The windows were replaced in 2009, and there was also an interior renovation completed. Overall, the building has been well maintained. Casework in the corridors and classrooms is not in ideal shape and will likely need to be replaced in the near future. The doors and door hardware throughout the school are aged and beat up.

Masonry

The exterior façade of the elementary school is a combination of brick and metal siding.

Metal Siding

The exterior siding appears to be in adequate condition.

Roofing

No observable issues at this time.

Openings

Prairie View had a full window replacement in 2009. The building's exterior openings appear in adequate condition. Throughout the interior of Prairie View, door, frame, and hardware replacement is required due to age, code compliance, security, or a combination of these.

Ceilings

There are several ceiling types within the elementary school, but most is acoustical ceiling tile. All the ceiling tile is in rather good shape because it was replaced during the 2009 renovation.

There are several areas of gypsum ceiling that need patching, cleaning, and painting. This is not an immediate need but should be phased in through a capital maintenance plan.

Flooring

There are a couple different flooring types throughout Prairie View Elementary. Most of the school is carpet or tile flooring. Carpet is in most classrooms and some corridors. Tile flooring is in some corridors, the gymnasium, kitchen, etc. The carpet is in adequate condition, but the tile flooring is aging in some locations.

STRUCTURAL

No observable issues at this time.

MECHANICAL

Fire Suppression

The fire suppression system is a wet sprinkler type. It was installed in 2015 and is in good condition.

Plumbing

Classroom sinks are stainless steel with residential grade, kitchen style faucets. The fixtures appear in good condition.

Plumbing fixtures in toilet rooms are vitreous china with hands free operation. The fixtures appear in good condition and should continue to operate with occasional maintenance on the flush valves.

The lavatories in the toilet rooms are a mixture of wall-hung and counter mounted, made from vitreous china. The faucets are hands free and should remain functions with occasional maintenance on the faucets.

The drinking fountains have been upgraded to include a bottle filler.

The water heater plant for the original school consists of (2) AO Smith tank type, natural draft gas-fired, model FCG 75400, input capacity of 75 MBH, with 73 GPH recovery, and manufacture date of 2017. The heaters are in good condition.

The facility is served by a 2" water meter.

Climate Control

Classrooms are heated by wall mounted fin tube heaters near the floor. The heaters are designed for steam systems. Any plans to remove the steam system would need to include updating the classroom heaters to hydronic type.

No air conditioning is provided in the school besides window AC units in the administration offices and the library.

Ventilation and Exhaust

The ventilation is provided by (2) vertical air handlers with steam heating coil and no cooling. Ventilation air is delivered via underground tunnels to each area. The units are older and should be scheduled for replacement within the next 10 years.

The kitchen exhaust hood is a wall mounted range exhaust hood and features a fire suppression system. The hood is in good condition.

There is no exhaust system for the dishwasher. A heat and condensate removal hood should be provided along with exhaust fan.

Central Plants

The heating plant consists of (2) Columbia Boiler steam boilers, model MPH-80, gas-fired with a heating input of 3,360 MBH and heating capacity of 2,755 MBH. Each boiler features a gas-fired burner. The boilers are in good condition.

The feed water pumps show signs of aging and should be replaced in the next 5 years.

Temperature Controls
The facility features a pneumatic controls system. The pneumatic controls systems are becoming increasingly difficult to maintain due to difficulty in obtaining repair parts and components. The system should be scheduled for replacement over the next 5 years.

ELECTRICAL

Lighting
Light fixtures throughout the entire facility incorporate energy efficient T5 fluorescent lamps with electronic ballasts. The general condition of the interior light fixtures that incorporate T5 lamps is noted as good. Most of the lights were installed in 2014. The lighting system should remain viable beyond the 10-year mark. Exterior lighting has been updated to LED type fixtures.

Emergency egress lighting is accomplished with self-diagnostic battery backup units. The batteries have been maintained and the units appear to be functional. Likewise for the LED exit signs. The emergency lighting should remain viable beyond the 10-year mark.

Power
The building's electrical service is a 600 Amp, 120/208 Volt, 3 Phase system installed with the 2008. The main distribution panel utilizes circuit breakers to provide power distribution through the building. There is physical space to install additional circuit breakers if required. Replacement parts are readily available for this Siemens panel. The branch panels in the facility are modern circuit breaker panels by Siemens. The branch panels have spares and spaces, providing room to add additional circuits if required.

Convenience receptacles have been added to all the classrooms, providing adequate power for today's technological requirements.

The power and distribution system should remain viable for many years.

SYSTEMS

Fire Alarm
The building incorporates an addressable Simplex fire alarm system. It includes smoke detector coverage in the corridors and other select locations and ADA compliant pull stations at the building entrances. ADA compliant Audible/Visual annunciation devices are installed throughout the facility.

It should be noted the recently adopted building code requires new fire alarm systems to include Voice Evacuation type annunciation. Although the existing system is grandfathered in, it can be upgraded to this new requirement for educational occupancies by adding the voice communications module and replacing the existing annunciation devices with Speaker/Visual devices.

Network Cabling
Network cabling is obsolete Category 5. This cabling does not provide the bandwidth that is typically required by today's networks. The cabling should be upgraded to Category 6. It is also recommended to add additional Category 6 cables to support Wi-Fi nodes.

Public Address
The building includes a functional intercom and corrected clock systems. Both systems should remain viable beyond the 10-year mark.

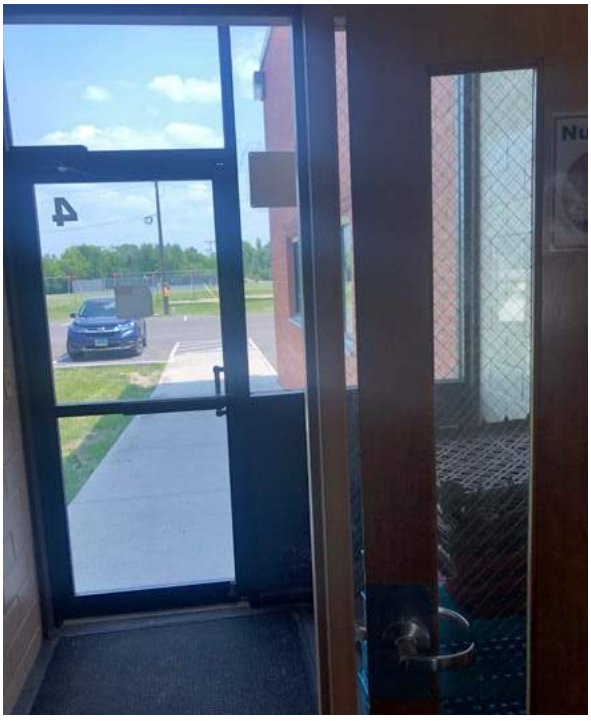
Surveillance
Surveillance cameras cover the interior corridors and exterior building entrances. The system is adequate and should remain viable beyond the 10-year mark.

Security
The district wide access control system controls the exterior doors. Intrusion detection is also included. The system should remain viable beyond the 10-year mark.

PRAIRIE VIEW ELEMENTARY SCHOOL

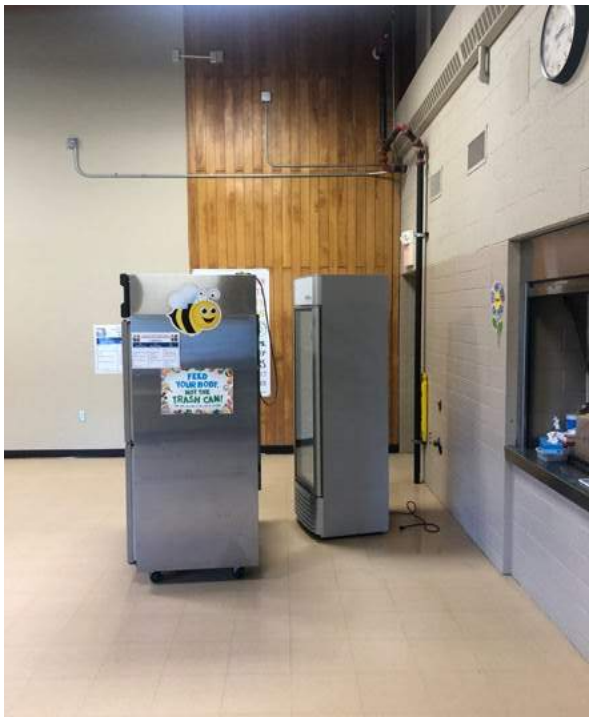
INTERIOR EXISTING CONDITION PHOTOS

Doors and door hardware are aged and is not all code compliant.



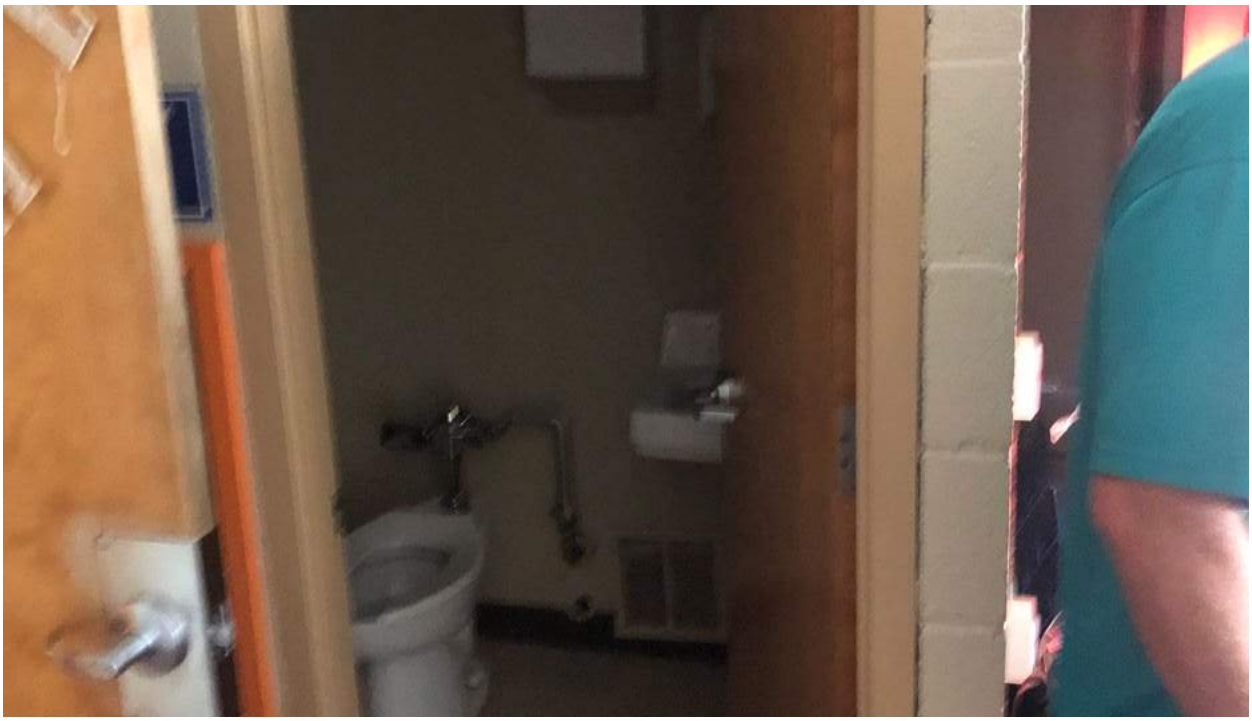
No interior vestibule doors throughout the building.

Kitchen is undersized, and not ADA compliant.

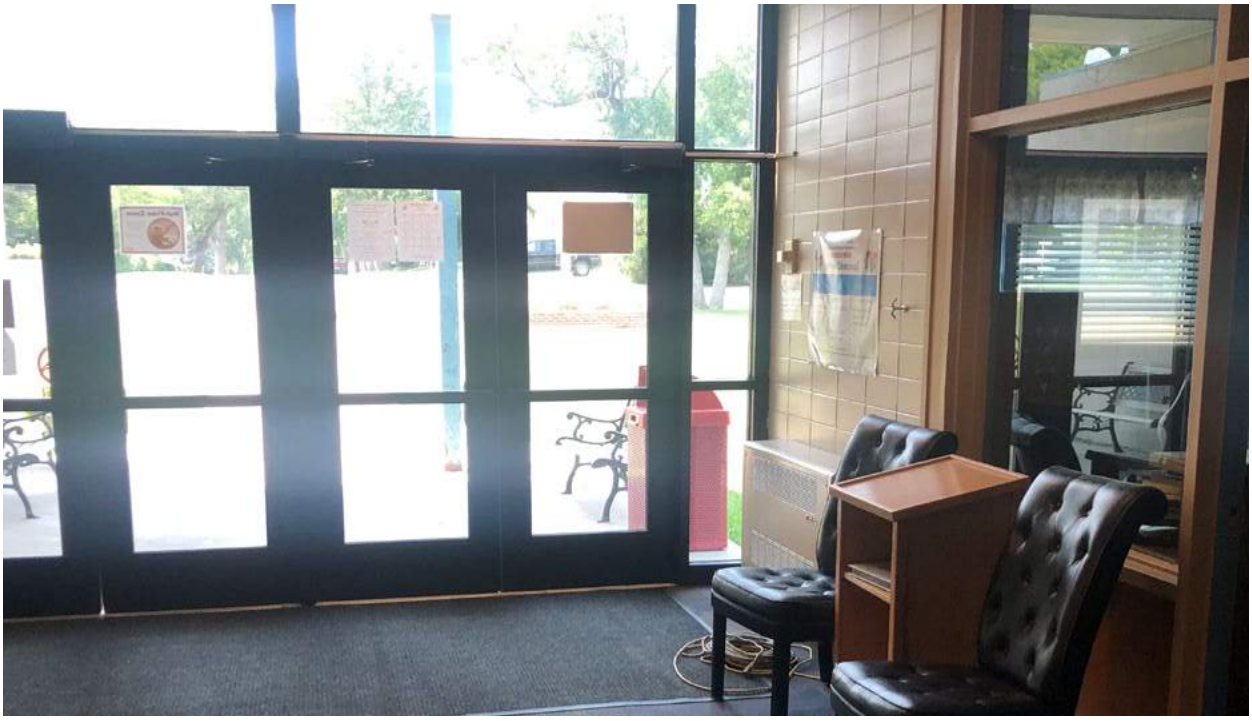


Cafeteria is undersized; kitchen freezers and food lines are kept in lunchroom as well.

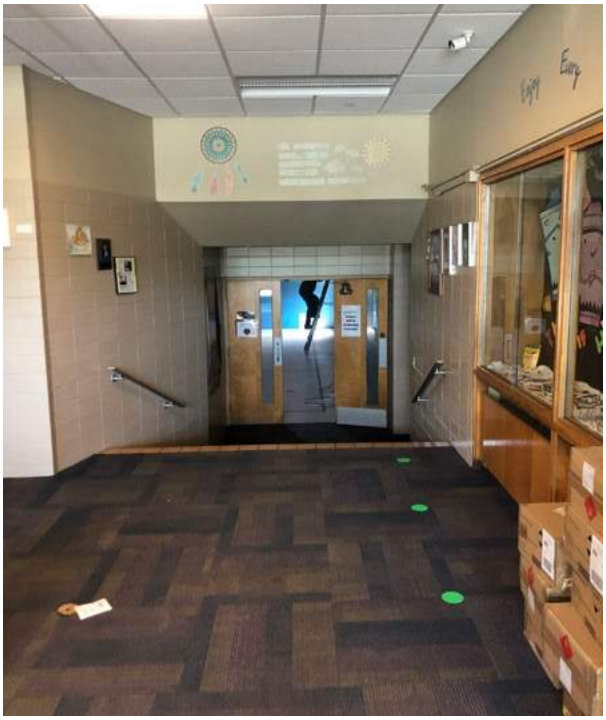
Restrooms in classrooms are very small and do not meet maneuverability and clearance requirements.



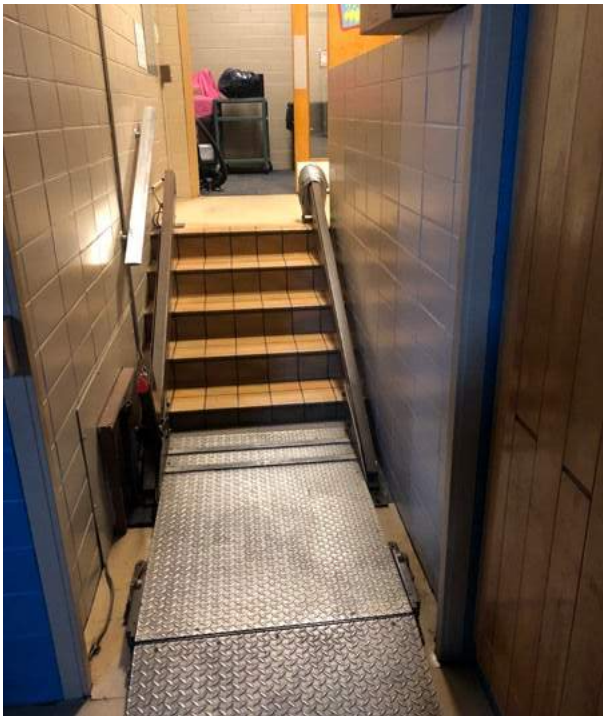
Restroom in Resource Room and Staff Lounge are not handicap accessible.



There is no interior vestibule or secure entry at the main entrance.



Gymnasium and associated spaces are not handicap accessible and lack adequate handrail and guardrails.



Existing ramp is not code compliant.

Gym equipment is stored with food in the pantry, not enough storage space.

Door to kitchen does not meet push/pull clearance.

CONSTRUCTION ENGINEERS

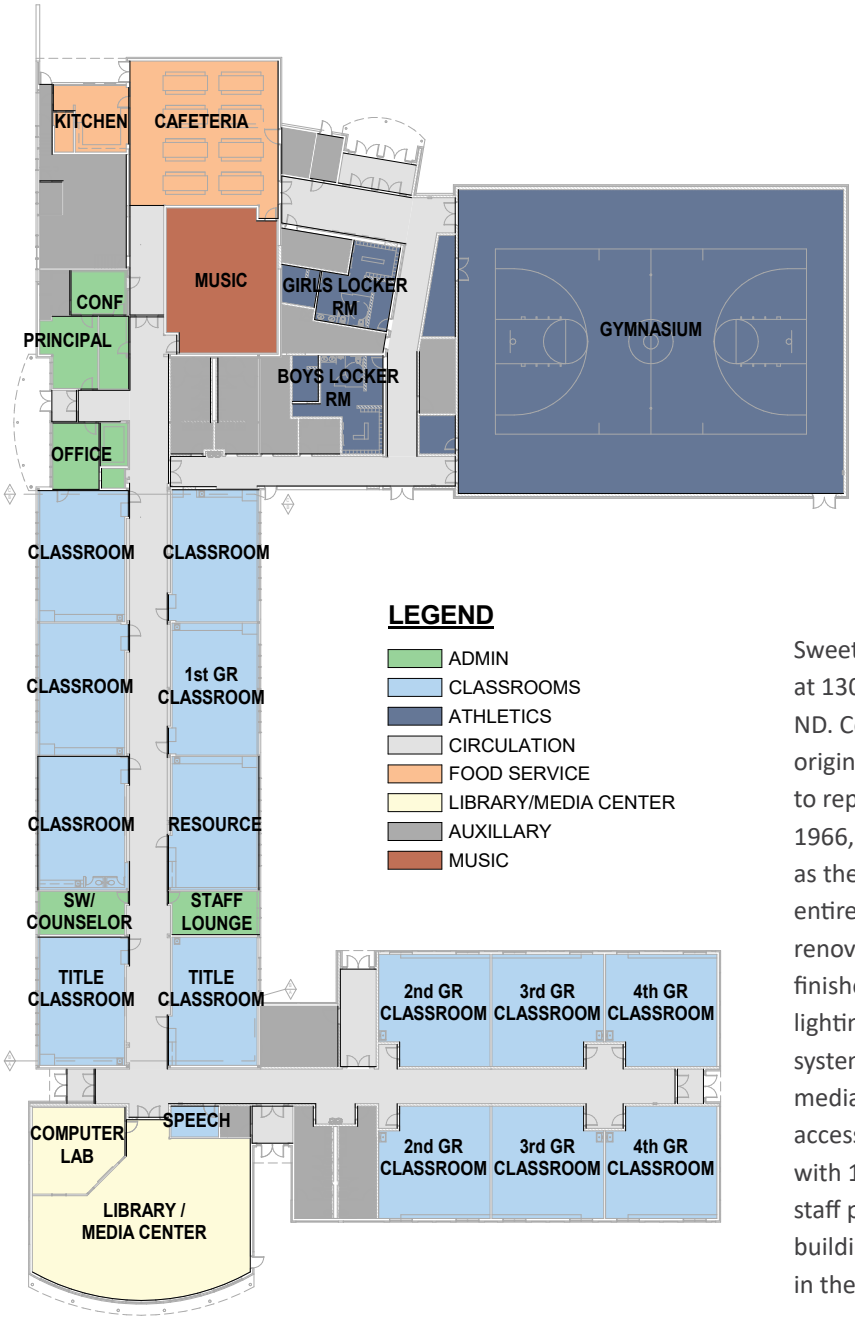
3. Capital Maintenance Costs

Prairie View Elementary School							
Description	Takeoff Quantity	Total Cost/Unit	Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Total Amount
P.V.E.S. Code Compliance							
Vertical Grab Bars at Girls and Boys Restroom	31,500 SF	$0.01 /SF	$292				$292
Add lift in Boiler Room	31,500 SF	$1.52 /SF	$47,856				$47,856
Add Interior Vestibule Entrances to all / adjust door	31,500 SF	$4.70 /SF	$147,903				$147,903
Push Pull Clearances at Kitchen from Cafeteria	31,500 SF	$0.11 /SF	$3,589				$3,589
Add Lift to Stairs to Gym, Kitchen, Cafe	31,500 SF	$1.90 /SF	$59,820				$59,820
Accessible Entrance to Gym	31,500 SF	$0.69 /SF	$21,642				$21,642
Make Restrooms in Classrooms ADA Compliant	31,500 SF	$11.39 /SF	$358,918				$358,918
Staff Lounge ADA Compliant	31,500 SF	$0.57 /SF	$17,946				$17,946
Resource Room Restroom	31,500 SF	$1.33 /SF	$41,874				$41,874
Total P.V.E.S. Code Compliance	**31,500 SF**	**$22.22 /SF**					**$699,839**
P.V.E.S. Security							
General Security Improvements	31,500 SF	$0.00 /SF	$0.00				
Total P.V.E.S. Security	**31,500 SF**	**$0.00 /SF**					**$0.00**
P.V.E.S. Educational Adequacy							
Addition SF Based on DPI Guideline	8,867 SF	$327.05 /SF				$2,899,958	$2,899,958
Total P.V.E.S. Educational Adequacy	**8,867 SF**	**$327.05 /SF**					**$2,899,958**
P.V.E.S. Capital Maintenance							
Replace All Casework in Classrooms - Corridors	31,500 SF	$9.17 /SF		$288,865			$288,865
Replace all Int Doors/Frames/Hardware	31,500 SF	$4.25 /SF		$133,936			$133,936
Patch Paint Ceiling in 10 years	31,500 SF	$0.31 /SF			$9,870		$9,870
Replace Corridor Flooring with LVT 10 years	31,500 SF	$2.33 /SF		$73,318			$73,318
Mechanical upgrades	31,500 SF	$0.57 /SF	$17,946				$17,946
Exhaust system for dishwasher							
Mechanical upgrades in 10 years	31,500 SF	$23.64 /SF			$744,755		$744,755
Add AC to Class rooms							
Replace 2 Air Handlers							
Mechanical upgrades in 5 years	31,500 SF	$7.12 /SF		$224,324			$224,324
Controls							
Feed Water Pumps to Boilers							
Electrical Upgrades	31,500 SF	$3.94 /SF	$124,126				$124,126
Fire Alarm Voice Controls							
Replace Cat 5 with Cat 6							
Replace Roof	31,500 SF	$19.48 /SF			$613,621		$613,621
Total P.V.E.S. Capital Maintenance	**31,500 SF**	**$70.82 /SF**					**$2,230,760**
Totals			**$841,911**	**$720,442**	**$1,368,246**	**$2,899,958**	**$5,830,557**

SWEETWATER ELEMENTARY SCHOOL

02 FACILITY ASSESSMENT

A. SWEETWATER ELEMENTARY SCHOOL
EXISTING BUILDING INVENTORY



Room Schedule

Department	Area
ADMIN	1,504 SF
ATHLETICS	9,796 SF
AUXILLARY	3,495 SF
CIRCULATION	6,793 SF
CLASSROOMS	12,083 SF
FOOD SERVICE	1,937 SF
LIBRARY/MEDIA CENTER	2,680 SF
MUSIC	1,130 SF
Grand total: 65	39,419 SF

41,000 GROSS TOTAL

Sweetwater Elementary School is located at 1304 2nd Avenue North in Devils Lake, ND. Constructed in 1957, Sweetwater was originally one of 3 elementary schools built to replace aging facilities in the 1950's. In 1966, all 3 elementary schools got additions as the enrollments increased. In 2008, the entire building had an extensive interior renovation, replacing floor and ceiling finishes, painting walls, and installing new lighting, fire alarm system and sprinkler system as well as a large gymnasium and media center addition. Sweetwater is accessible from 2nd Avenue NE to the west with 12th Street NE just to the south. Most staff parks in a lot along the north end of the building, and many parents drop off students in the same parking lot.

B. EXISTING CONDITIONS

The analysis of the existing Sweetwater Elementary School has been broken down into three categories: code compliance/Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance.
This includes evaluation of the current building codes required by the City of Devils Lake and the State of North Dakota. Non-compliant items within the building have been Identified and are listed below.

- Both girl's and boy's restrooms do not have handicap accessible sinks.
- The boiler room is below the main grade of the building and is not on a handicap accessible route.
- Clearances around the drinking fountain are not met; it is recessed into hallway casework
    - Code requires two drinking fountains at each location, one high and one low
- The sink in the kitchen is not ADA compliant.
- Sinks in new casework are not handicap accessible; there is exposed piping under the sink.
- Sinks in older casework are not handicap accessible; there is full casework under each sink.
- The interior vestibule doors are lacking closers and do not allow for protection from exterior extreme temperatures per energy code.
- Door into kitchen from the Cafeteria lacks push/ pull clearances.
- Restrooms within classrooms are very small and do not meet maneuverability and clearance requirements.
- Staff restroom does not meet maneuverability and clearance requirements.
- An exit vestibule is used as a classroom space, does not meet fire code.

2. Educational Adequacy
This is a review of applicable Department of Public Instruction recommendations as they relate to Sweetwater Elementary School's curriculum. To understand educational space deficiencies, we have evaluated educational models, curriculum configurations, and quantity and quality of existing spaces in comparison to the option of a modern, purpose-built educational facility.

Space	Current Square Footage	DPI Guideline Square Footage	Difference
Admin	1504	1,430	74
Classroom	855	1,200	345
Computer Lab	531	1,000	469
Gym/PE	9796	6,000	3796
Kitchen	303	2,700	2397
Cafeteria	1578	960	618
Art	N/A	1,000	N/A
Library	2148	1,680	468
Music	1130	1,000	113

ARCHITECTURAL FINISHES

Sweetwater Elementary School was constructed in 1957 and has undergone several additions and renovations. In 2008 there was a huge addition of a large gymnasium and the media center. At that same time there was a full interior renovation. There was new casework put in during the 2008 renovation, but the older casework could be replaced. Overall, the building has been well maintained.

Masonry

The exterior façade of the elementary school is a combination of brick, metal panel, and an exterior insulation finish system (EIFS). General site maintenance such as snow removal and lawn care can cause chips and or cracks in the concrete and several caulk joints need to be removed and replaced.

EIFS

The exterior insulation finish system (EIFS) at Sweetwater was installed in 2008. A majority of this material is on higher wall planes and is in satisfactory condition. There are several areas of damaged EIFS at corners, which is typical and not of concern at this time. Caulking seems to be in acceptable condition with only a few areas requiring removal and replacement. At this time, these do not appear to be critical repairs, but they should be addressed before they do become areas of building envelope failure, potentially leading to further damage.

Roofing

No observable issues at this time.

Openings

General maintenance of the doors and windows is required. This includes replacement of weather stripping, painting, caulking, and general repairs.

Throughout the interior of Sweetwater, door, frame, and hardware replacement is required due to age, code compliance, security, or a combination of these. The extent of window replacement throughout is dependent upon the installation of a sprinkler system.

Ceilings

There are several ceiling types within the elementary school, but most is acoustical ceiling tile. All the ceiling tile is in rather good shape because it was replaced during the 2008 renovation.

There are several areas of gypsum ceiling that need patching, cleaning, and painting. This is not an immediate need but should be phased in through a capital maintenance plan.

Flooring

There are a couple different flooring types throughout Sweetwater. Throughout most of the school is carpet that is in decent shape because of the 2008 renovation. There is floor tile in some areas of the school as well that doesn't need replacing at this time. Overall, the carpeting and floor tile are in acceptable condition.

STRUCTURAL

No observable issues at this time.

MECHANICAL

Fire Suppression

The fire suppression system is a wet sprinkler type. It was installed in 2007/2008 and is in good condition.

Plumbing

Classroom sinks are stainless steel with residential grade, kitchen style faucets. The fixtures appear in good condition.

The plumbing fixtures in the addition feature hands-free operation and are in good condition.
Plumbing fixtures in the original building appear original and should be replaced.

The drinking fountains in the addition are dual level and have been upgraded to include a bottle filler.
The water heater plant for the original school consists of (2) AO Smith tank type, natural draft gas-fired, model FCG 75300, input capacity of 75 MBH, with 73 GPH recovery, and manufacture date of 2014. The heaters are in good condition.

The water heater plant for the 2008 addition consists of (1) AO Smith, ProLine XE series, tank type, forced draft gas fired. The heater is in good condition.

Climate Control

Except as otherwise noted, the school is served by heat pumps for each zone. The heat pumps were installed in 2008 and are in good condition.

Classrooms in the original building are heated by wall mounted fin tube heaters near the floor. The heaters are designed for steam systems. Any plans to remove the steam system would need to include updating the classroom heaters to hydronic type.

Ventilation and Exhaust

Ventilation throughout the school is provided through air-to-air heat exchangers which are in good condition.

The classrooms in the original building are served by a vertical air handler with steam heating coil and no cooling. Ventilation air is delivered via underground tunnels to each classroom. The unit is older and should be scheduled for replacement within the next 10 years.

Ventilation in the original building is returned through the corridors, a method which is not allowed by current safety codes.

The kitchen exhaust hood is a wall mounted range exhaust hood and features a fire suppression system. The hood does not extend over the full surface of the appliance and does not provide adequate capture. The hood should be removed and replaced with a full-size hood.

There is no exhaust system for the dishwasher. A heat and condensate removal hood should be provided along with exhaust fan.

Central Plants

The heating plant for parts of the school not served by the heat pump system is a Preferred Utilities Mfg. steam boiler, manufactured in 1956. The burner is manufactured by Whirl Power and is natural gas-fired with an output capacity of 3,500 MBH. The boiler should be scheduled for replacement within the next 10 years.
The heat pump system is supported by a geothermal well field. The field was installed in 2008 and should have many years of service remaining. The pumps and related hydronic equipment are in good condition.

Temperature Controls

The original building classrooms feature pneumatic controls system. The pneumatic controls systems are becoming increasingly difficult to maintain due to difficulty in obtaining repair parts and components. The system should be scheduled for replacement over the next 5 years.

The remainder of the school is served by direct digital controls manufactured by Johnson Controls. The system should be upgraded within the next 5 years.

ELECTRICAL

Lighting

Light fixtures throughout the entire facility incorporate energy efficient T5 fluorescent lamps with electronic ballasts. The general condition of the interior light fixtures that incorporate T5 lamps is noted as good. Most of the lights were installed in 2009. The lighting system should remain viable beyond the 10-year mark.

Exterior lighting is primarily metal halide wall packs and compact fluorescent downlights. These lights should be replaced with LED fixtures within the 5-10 year time frame. Lamp replacement costs and energy savings will provide a quick payback.

Emergency egress lighting is accomplished with self-diagnostic battery backup units. The batteries have been maintained and the units appear to be functional. Likewise for the LED exit signs. The emergency lighting should remain viable beyond the 10-year mark.

Power

The building's electrical service is a 1600 Amp, 120/208 Volt, 3 Phase system installed with the 2010 library addition. The main distribution panel utilizes circuit breakers to provide power distribution through the building.

There is physical space to install additional circuit breakers if required. Replacement parts are readily available for this Siemens panel. The branch panels in the facility are modern circuit breaker panels by Siemens. The branch panels have spares and spaces, providing room to add additional circuits if required.

Convenience receptacles have been added to all the classrooms, providing adequate power for today's technological requirements.

The power and distribution system should remain viable for many years.

SYSTEMS

Fire Alarm

The building incorporates an addressable Simplex fire alarm system. It includes smoke detector coverage in the corridors and other select locations and ADA compliant pull stations at the building entrances. ADA compliant Audible/Visual annunciation devices are installed throughout the facility.

It should be noted the recently adopted building code requires new fire alarm systems to include Voice Evacuation type annunciation. Although the existing system is grandfathered in, it can be upgraded to this new requirement for educational occupancies by adding the voice communications module and replacing the existing annunciation devices with Speaker/Visual devices.

Network Cabling

Network cabling is Category 6 with a fiber optic backbone between the data racks. This system should be able to support bandwidth requirements beyond the 10-year mark.

Public Address

The building includes a functional intercom and wireless corrected clock systems. Both systems should remain viable beyond the 10-year mark.

Surveillance

Surveillance cameras cover the interior corridors and exterior building entrances. The system is adequate and should remain viable beyond the 10-year mark.

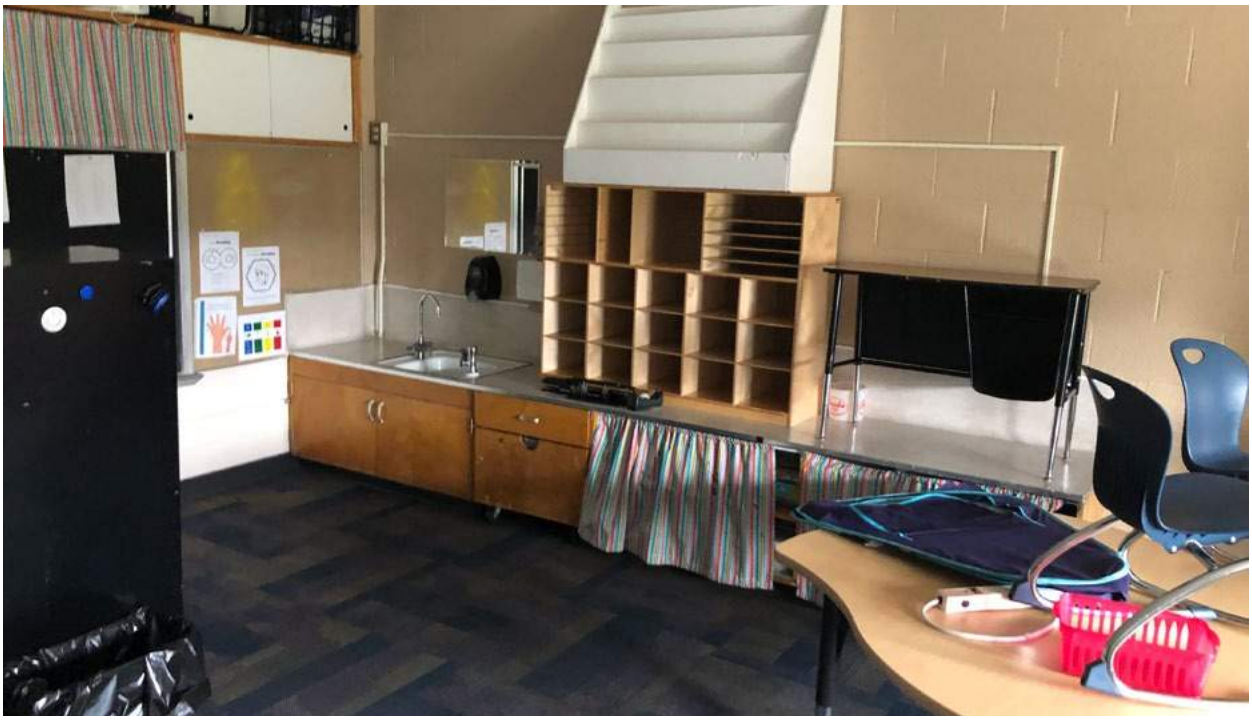
Security

The district wide access control system controls the exterior doors. Intrusion detection is also included. The system should remain viable beyond the 10-year mark.

SWEETWATER ELEMENTARY SCHOOL

INTERIOR EXISTING CONDITION PHOTOS

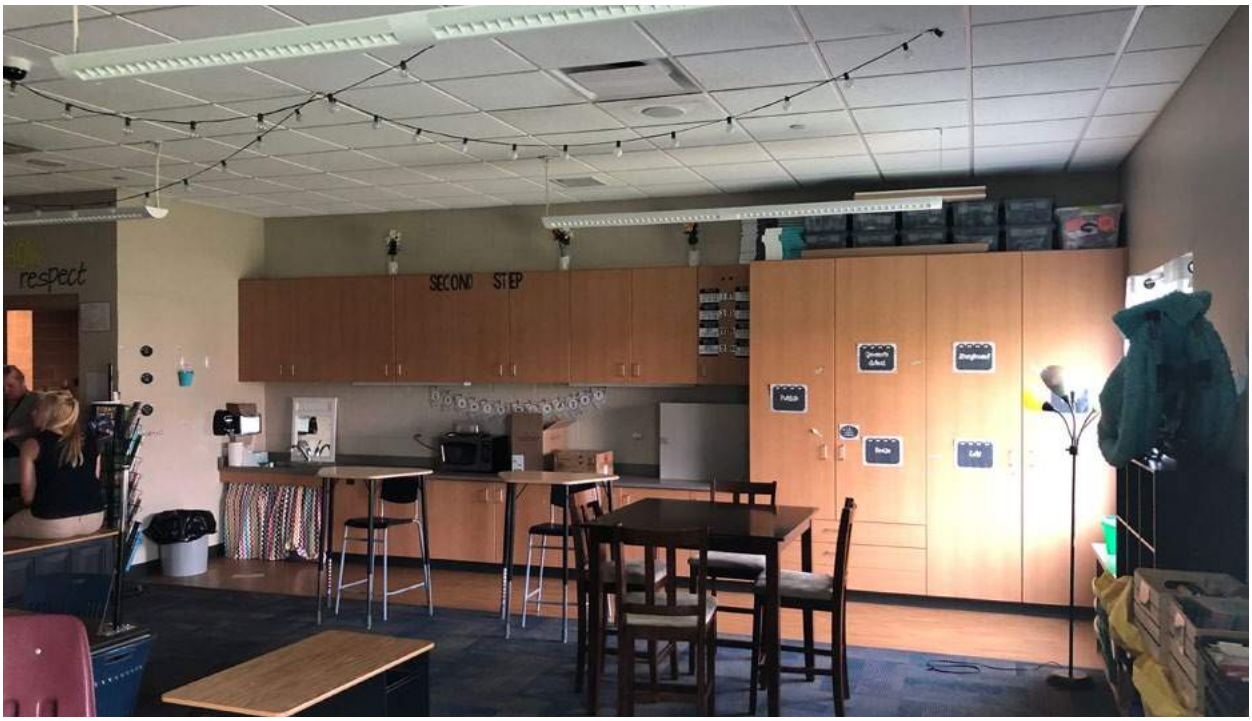
Casework is aged in corridors.



Casework is aged in older classrooms and sinks do not meet handicap accessibility.

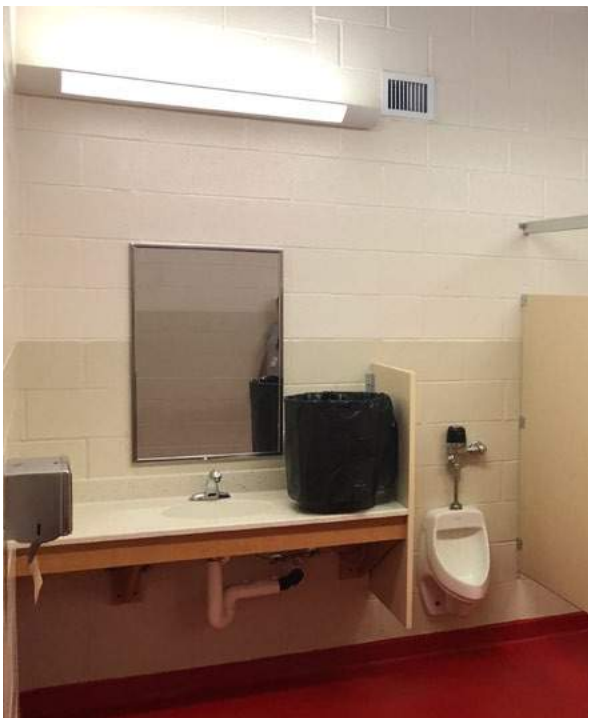
Drinking fountain in corridor is not code compliant.

Sinks are not handicap accessible in both boy's and girl's restrooms.



Sink in new casework is not handicap accessible because of exposed plumbing underneath.

Sink in family restroom is not handicap accessible.



Sink in boy's locker room is not handicap accessible.

Door to kitchen does not meet push/pull clearance.

Exit vestibule used as a classroom space, does not meet fire code.

CONSTRUCTION ENGINEERS

3. Capital Maintenance Costs

Sweetwater Elementary School								
Description	Takeoff Quantity		Total Cost/Unit		Critical	5 yrs. Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Total Amount
S.E.S. Code Compliance									
Boy's and Girl's Restroom ADA Sinks and Countertops	41,000	SF	$1.28	/SF	$52,541				$52,541
Add lift in Boiler Room	41,000	SF	$1.17	/SF	$47,864				$47,864
Drinking Fountains	41,000	SF	$0.41	/SF	$16,752				$16,752
Clearances around drinking fountains	41,000	SF	$0.22	/SF	$9,070				$9,070
Kitchen s ADA Sinks and Countertops	41,000	SF	$0.22	/SF	$9,038				$9,038
Modify Piping under Sinks in new Casework - Assumed 6 classrooms	41,000	SF	$0.09	/SF	$3,590				$3,590
Modify Piping under Sinks in old Casework - Assumed new casework in 6 classrooms	41,000	SF	$0.09	/SF	$3,590				$3,590
Add closers to interior vestibule doors	41,000	SF	$0.13	/SF	$5,331				$5,331
Push Pull Clearances at Kitchen from Cafeteria	41,000	SF	$0.09	/SF	$3,590				$3,590
Make Restrooms in Classrooms ADA Compliant	41,000	SF	$2.04	/SF	$83,657				$83,657
Make Restrooms in Staff ADA Compliant	41,000	SF	$1.02	/SF	$41,881				$41,881
Total S.E.S. Code Compliance	**41,000**	**SF**	**$6.75**	**/SF**					**$276,904**
S.E.S. Security									
General Security Improvements	41,000	SF	$0.00	/SF	$0				
Total S.E.S. Security	**41,000**	**SF**	**$0.00**	**/SF**					**$0**
S.E.S. Educational Adequacy									
Addition SF Based on DPI Guideline	4,766	SF	$327.11	/SF				$1,558,993	$1,558,993
Total S.E.S. Educational Adequacy	**4,766**	**SF**	**$327.11**	**/SF**					**$1,558,993**
S.E.S. Capital Maintenance									
Replace Selective Casework	41,000	SF	$2.02	/SF		$82,696			$82,696
Masonry Tuck Pointing/ Repair - critical	41,000	SF	$1.46	/SF	$59,830				$59,830
EIFS Repair/ Caulking Repair - 5 year	41,000	SF	$0.73	/SF		$29,915			$29,915
Replace Glass Block Windows near Gyp (assume 10)	41,000	SF	$0.54	/SF	$21,971				$21,971
General Maintenance of Doors and Windows	41,000	SF	$1.46	/SF	$59,830				$59,830
Fix Int Water Damage from Window opening Failure	41,000	SF	$0.58	/SF	$23,932				$23,932
Replace all Interior Doors	41,000	SF	$3.41	/SF		$139,961			$139,961
Window Replacement - Do not have enough information	41,000	SF		/SF					
Patch Paint Ceiling in 10 years	41,000	SF	$0.77	/SF			$31,371		$31,371
Replace Plumbing fixtures in older part of school - assume 30	41,000	SF	$3.06	/SF		$125,643			$125,643
Mech Upgrades 10 years	41,000	SF	$13.85	/SF			$567,669		$567,669
Replace Air Handlers Old Building									
Replace Ventilation that returns to corridors									
Add AC to Class rooms									
Boiler Replacement	41,000	SF	$11.66	/SF	$478,037				$478,037
Mech Upgrades	41,000	SF	$1.90	/SF	$77,779				$77,779
Exhaust system for dishwasher									
Upgrade hood at kitchen									
Mechanical upgrades in 5 years	41,000	SF	$5.98	/SF		$245,303			$245,303
Controls									
Elect Upgrades 10 Years	41,000	SF	$2.39	/SF			$98,121		$98,121
Replace Exterior Lights									
Elect Upgrades	41,000	SF	$0.73	/SF	$29,915				$29,915
Fire Alarm Voice Upgrade									
Replace Roof	41,000	SF	$19.48	/SF			$798,680		$798,680
Replace Casework in Corridors	41,000	SF	$1.41	/SF		$57,709			$57,709
Total S.E.S. Capital Maintenance	**41,000**	**SF**	**$71.42**	**/SF**					**$2,928,361**
Total					**$1,028,197**	**$681,226**	**$1,495,841**	**$1,558,993**	**$4,764,259**

CENTRAL MIDDLE SCHOOL

02 FACILITY ASSESSMENT

A. CENTRAL MIDDLE SCHOOL
EXISTING BUILDING INVENTORY

Central Middle School is located at 325 7th Street NE in Devils Lake, ND. Constructed in 1937, the original facility used to be Central High School, the primary high school for the town of Devils Lake. In 1965, the East Wing addition was constructed at Central High School. The high school became Central Middle School in 1992 when the new Devils Lake High School opened as an addition to the Sports Center. The middle school houses grades 5 through 8. A kitchen addition to the middle school were constructed in 1989. In 1996, the heating system was renovated and in 1999 the windows were replaced. The roof for the whole building was replaced in 2009.

The middle school is accessible from 7th Street NE to the south, 8th Street NE to the north, and Kelly Avenue to the west. There are parking lots along the north end and east side of the building. Staff mostly parks in the parking lot to the north.

Room Schedule

Department	Area
ADMIN	2,884 SF
ATHLETICS	8,229 SF
AUXILLARY	12,195 SF
CIRCULATION	18,052 SF
CLASSROOMS	33,884 SF
FOOD SERVICE	4,180 SF
LIBRARY/MEDIA CENTER	2,713 SF
MUSIC	5,025 SF
Grand total: 175	87,163 SF

B. EXISTING CONDITIONS

The analysis of the existing Sweetwater Elementary School has been broken down into three categories: code compliance/Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance.
This includes evaluation of the current building codes required by the City of Devils Lake and the State of North Dakota. Non-compliant items within the building have been Identified and are listed below.

- The building is not fully sprinklered
    - Buildings that are larger than 12,000 s.f. are required by fire code to be fully sprinklered
- Interior stairs do not meet code requirements
    - Handrails must be 36” tall and guardrails must be 42” tall
    - A sphere no larger than 4” can pass through any portion
    - A 4” kick plate is required.
    - Handrails don’t meet code specified profile and dimensions; must be 1 1/2” diameter.
    - Nothing can be stored under the stairs
    - Code requires stairs to lead directly to an exit and that the staircases are enclosed.
- The entrances are lacking interior vestibule doors and do not allow for protection from exterior extreme temperatures per energy code.
- Certain doors do not have the minimum push/pull clearances required for handicap accessibility
    - 18” on the pull side, 12” on the push side
- Stage in gymnasium is not handicap accessible, there is no ramp.
- There is no handicap accessible entrance to the courtyard.
- There is no door to roof access.
- In classroom 214, the stage is not handicap accessible.
- Room 206 teacher’s platform is not handicap accessible (has a step up)
- FACS Room 114 does not appear to provide a handicap accessible kitchen workspace.
- Staff restrooms do not meet maneuverability and clearance requirements.
- Drinking fountain alcoves are not handicap accessible.
    - 30” wide minimum
    - Code requires two drinking fountains; one high and one low.
- In most rooms, there is not an accessible sink that meets ADA code.
- Doors within the 1964 addition of the building lack hardware that does not require tight grasping or other special abilities to operate.
- Exterior entrances do not meet code requirements and are not handicap accessible
    - Middle railings are missing, exterior handrails are missing at all doors
    - Handrails must be 36” tall and guardrails must be 42” tall
    - Only Doors 3, 4, and 11 either have a ramp or are handicap accessible
    - There is no secure entry for students or staff
- Art Room 123 requires two exits because the square footage of the room is over 1,000 sf.

- Corridor leading from 1964 addition into main building and corridor in basement both lead to dead ends.
    - Corridors are to terminate at fire rated stairs or exits leading directly outside
- Restroom in Coach's Office does not meet maneuverability and clearance requirements.
- There is only one exit door in the library, which does not meet fire code as the maximum occupancy of the room is over 50 people.
    - A second exit door is required
- Counter in Room 117 does not include a section that is handicap accessible which is required by ADA code
    - 34" handicap counter
    - Apron underneath can't be more than 29"
- 60% of public entrances need to be handicap accessible per code. Currently the only public entrances that are handicap accessible are Doors 3 and 4 on the original 1936 portion of the building. Other public entrances either contain stairs at exterior or interior, or have concrete/ pavement that's sunk forming a step in front of the entrance.
- Tech Ed classroom: stair is not code compliant, emergency eye wash station is broken, sink does not meet accessibility requirements, not HCAP accessible work station, ACT ceilings are in bad shape.
- Main office staff break room is not accessible and is undersized.
- Band room doors and vestibule doors swings overlap
- Kitchen is a tight space that lacks maneuverability clearances. The stairs in the back are not up to code.
- 1964 addition bathrooms and corridor doors are too close together and not ADA compliant
- Locker rooms do not have adequate ADA toilets, sinks or showers.
- Bleachers in gymnasium are not accessible.
- Basement issues:
    - Some classrooms are intervening spaces; only accessible through other classrooms.
    - Choir room risers are not HCAP accessible.
    - Windows into the courtyard are too high off the ground, not code compliant.
    - Dead end corridors throughout basement
- Public toilet rooms are not ADA compliant due to reach ranges, clearances, door sizes, ADA stall sizes,and grab bars. There are also missing ADA height toilets, sinks, and urinals.
- Boiler room is only accessible by ramp that is lacking adequate handrails and guardrails.

2. Educational Adequacy

This is a review of applicable Department of Public Instruction recommendations as they relate to Devils Lake Public Schools' curriculum. To understand educational space deficiencies, we have evaluated educational models, curriculum configurations, and quantity and quality of existing spaces in comparison to the option of a modern, purpose-built educational facility.

Space	Current Square Footage	DPI Guideline Square Footage	Difference
Admin	2,884	1,430	1454
Classroom	798	900	102
Conference/Teach Collab. Lounge	407	1,625	1218
Computer Lab	753	1,100	347
Gym/PE	8229	14,200	5971
Kitchen	1194	4,440	3206
Cafeteria	2986	5,040	2054
Health	1168	900	268
Art	971	1,350	379
Library	1784	1,412	372
Music	5025	4,400	625
Vo-Ag/CTE	2542	4,400	1858

ARCHITECTURAL FINISHES

Central Middle School was constructed in 1937 and has undergone several additions and renovations. Overall, the building has been well maintained; however, due to aging, the finishes show significant signs of wear and tear and deterioration. When considering classroom spaces, bathrooms, corridors, staff spaces, and back of house and mechanical spaces, parts of Central Middle School are affected by damaged finishes. This includes damaged ceiling tiles, chipping paint, aged flooring, and water damage. Many of the finishes throughout the middle school have exceeded their useful life expectancy and should be addressed.

Masonry

The exterior façade of the middle school is brick and concrete masonry. There are several areas where the mortar is cracking that will require tuckpointing to avoid moisture infiltration. In addition, brick replacement is required at areas where large cracks and chips are apparent which is typical of masonry buildings within North Dakota's climate. General site maintenance such as snow removal and lawn care can cause chips and or cracks in the concrete and several caulk joints need to be removed and replaced.

Roofing

The roof is currently leaking and requires immediate attention or replacement to fix the leaking areas.

Openings

General maintenance of the doors and windows is required. This includes replacement of weather stripping, painting, caulking, and general repairs. There are some areas of noticeable interior water damage from window opening failure that should be addressed. Throughout the interior of the middle school, door, frame, and hardware replacement is required due to age, code compliance, security, or a combination of these. The extent of window replacement throughout the middle school is dependent upon the installation of a sprinkler system.

Ceilings

There are several ceiling types within the middle school, but all types can be categorized into either acoustical ceiling tile or painted gypsum. The ceiling tile throughout the middle school shows signs of water damage and staining that should be addressed. There are also several ceiling tiles that have been modified for technology upgrades that should be replaced. Overall, the ceiling tile is not in good shape and is either damaged or exceeded its useful life. There are several areas of gypsum ceiling that need patching, cleaning, and painting. This is not an immediate need but should be phased in through a capital maintenance plan. There are original ceiling tiles in the main entry vestibule that are missing and falling off. There is possible asbestos in this area as well.

Flooring

There are many different flooring types throughout the middle school. The terrazzo flooring within the original 1937 structure is not in good condition. There is significant wear to the terrazzo at the stairs at the entrances. There are some areas of the concrete slab that are experiencing cracking that is transferring through the terrazzo. This is very difficult to repair due to the age of the material and difficulties in matching color, aggregate, and finish in a cost-effective manner. Overall, the carpeting and hardwood floor are in adequate condition.

Conveying Equipment
The elevator in the middle school is in good working condition but does not meet current building codes or handicap accessibility. The level of modification required is dependent upon the installation of a fire sprinkler system.

STRUCTURAL

No observable issues at this time.

MECHANICAL

Fire Suppression
Fire protection is provided by dry standpipes located in corridors. The protection it offers is inadequate for providing safety for students and should be replaced with a more effective system.

Plumbing
Plumbing fixtures in toilet rooms are vitreous china with hands free operation. The fixtures appear in good condition and should continue to operate with occasional maintenance on the flush valves.

The lavatories in the toilet rooms are a mixture of wall-hung and counter mounted, made from vitreous china. The faucets are hands free and should remain functions with occasional maintenance on the faucets.

The drinking fountains have been upgraded to include a bottle filler.
The locker room showers have been updated and appear in good condition.

Waste piping is cast iron which is approaching end of life. The piping should be scheduled for replacement within the next 10 years.

The supply water piping is galvanized and is approaching end of life. The piping should be scheduled for replacement within the next 10 years.

The water heating plant consist of two Bradford-White tank-type water heaters, model DM100L1993N with an input 200 MBH of natural gas heating a 100-gallon tank to produce a recovery performance of 194 GPH. The water heaters are commercial grade and natural draft venting. They are in fair condition and should be scheduled for replacement in 10 years.

Climate Control
Some classrooms are heated by wall mounted convectors which run the length of the exterior wall with operable windows for ventilation. This system lends itself to poor ventilation conditions during the winter months, reducing the quality of the indoor environment. The system should be replaced or supplemented with a system that will provide adequate ventilation for learning environments.

Some classrooms are heated and ventilated by unit ventilators. The units show signs of wear and should be

scheduled for replacement in the next 10 years.

The lunchroom area is served by two McQuay air handlers, model LSL117DH, featuring a hot water coil, economizer, no cooling, and are fully ducted into the space. The air handler dampers and valves have pneumatic actuators which should be replaced with electronic actuators. Destratification fans in the gym provide additional air movement. The air handlers and destratification fans are in good condition. The hot water for the air handlers is provided by a steam-to-hot water heat exchanger in the air handler mechanical room.
Heaters in the corridors and entries are primarily convectors with old style cabinetry. The units could be updated with unit having a modern appearance.

The gymnasium, locker rooms, toilet rooms, some classrooms and corridors feature exposed steam radiator heaters which present burn hazards for students. The heaters should be replaced with heaters having a low surface temperature.

Some classrooms are cooled with window AC units. The units should be replaced with a full cooling system.

Ventilation and Exhaust Systems
Mechanical code requires ventilation for occupied spaces at specified rates and exhaust for certain types of spaces. Ventilation can be delivered through mechanical systems or through natural ventilation systems. Exhaust must be accomplished by mechanical systems.

The kitchen cooking appliances are under an exhaust hood with fire suppression. The hood is a Type 1 for grease removal, but the grease baffles were not in the hood at the time of our visit. The grease baffles should be installed to reduce the risk of fire in the grease exhaust duct.

A Type II exhaust hood is over the dishwasher for condensate and heat removal. The hood appeared in good condition. The toilet rooms have fully ducted exhausts and power roof fans.
The gymnasium receives ventilation from an air handler/fan system in the boiler room. The air handler is reaching the end of its expected lifespan and should be replaced.

Central Plants
The heating plant consists of two Kewanee steam boilers with gas-fired burners. The burners were manufactured by Dunham-Bush, model PAGO-2-6 and an input capacity of 6,300 MBH. The boilers have reached the end of their expected lifespan and will incur ongoing maintenance costs to remain operational. The boilers should be replaced.
The boiler plant has a steam-to-hot water heat exchanger. The hydronic pumps for the hot water system are in poor condition and should be replaced.

The insulation on the steam and hot water piping should be tested for asbestos.

Condensate receiver tank shows rust on exterior from leaking ports. Leaks should be repaired to prevent premature failure.

Temperature Controls

The facility features a pneumatic controls system. The pneumatic controls systems are becoming increasingly difficult to maintain due to difficulty in obtaining repair parts and components. The system should be scheduled for replacement over the next 5 years.

ELECTRICAL

Lighting

Light fixtures in the facility are a mixture of obsolete T12 fluorescent lamps with magnetic ballasts, and T8 fluorescent lamps with electronic ballasts. The general condition of the light fixtures incorporating T12 lamps is poor. Lenses are yellowed and some broken. The general condition of the light fixtures that incorporate T8 lamps is noted as good. The lighting system is reaching the end of its viable life. T12 lamps are no longer being manufactured. Replacing the existing lighting with new LED fixtures should be considered in the near future.

Exterior lighting has partially been replaced with LED fixtures. It is the intent to continue this upgrade as lamps in the existing lights fail.

Emergency egress lighting is accomplished with self-diagnostic battery backup units. The batteries have been maintained and the units appear to be functional. Likewise for the LED exit signs. The emergency lighting should remain viable beyond the 10-year mark.

Power

In the winter of 2007, the building's electrical system experienced a catastrophic failure. At that time, the entire electrical distribution system including the distribution wiring was updated. The building incorporates a 1200 Amp 120/208 Volt, 3 Phase system that can be increased to 2000 Amps to accommodate future Air Conditioning loads. Replacement parts are readily available for this Siemens panel. The branch panels in the facility are modern circuit breaker panels by Siemens. The branch panels have spares and spaces, providing room to add additional circuits if required.

Convenience receptacles have been added to all the classrooms, providing adequate power for today's technological requirements.

The power and distribution system should remain viable for many years.

SYSTEMS

Fire Alarm

The fire alarm control panel was recently upgrade to a Johnson Controls addressable type. However, none of the outdated initiation devices (smoke detectors) were replaced. Smoke detector coverage is installed in the corridors and other select locations. Pull stations at the building entrances are not ADA compliant. ADA compliant Audible/ Visual annunciation devices are installed throughout the facility. The smoke detectors should be upgraded, and the ADA pull station requirement addressed in the near future.

It should be noted the recently adopted building code requires new fire alarm systems to include Voice Evacuation

type annunciation. Although the existing system is grandfathered in, it can be upgraded to this new requirement for educational occupancies by adding the voice communications module and replacing the existing annunciation devices with Speaker/Visual devices.

Network Cabling

Network cabling is obsolete Category 5. This cabling does not provide the bandwidth that is typically required by today's networks. The cabling should be upgraded to Category 6. It is also recommended to add additional Category 6 cables to support Wi-Fi nodes.

Public Address

The building includes a functional intercom and corrected clock systems. Both systems should remain viable beyond the 10-year mark.

Surveillance

Surveillance cameras cover the interior corridors and exterior building entrances. The system is adequate and should remain viable beyond the 10-year mark.

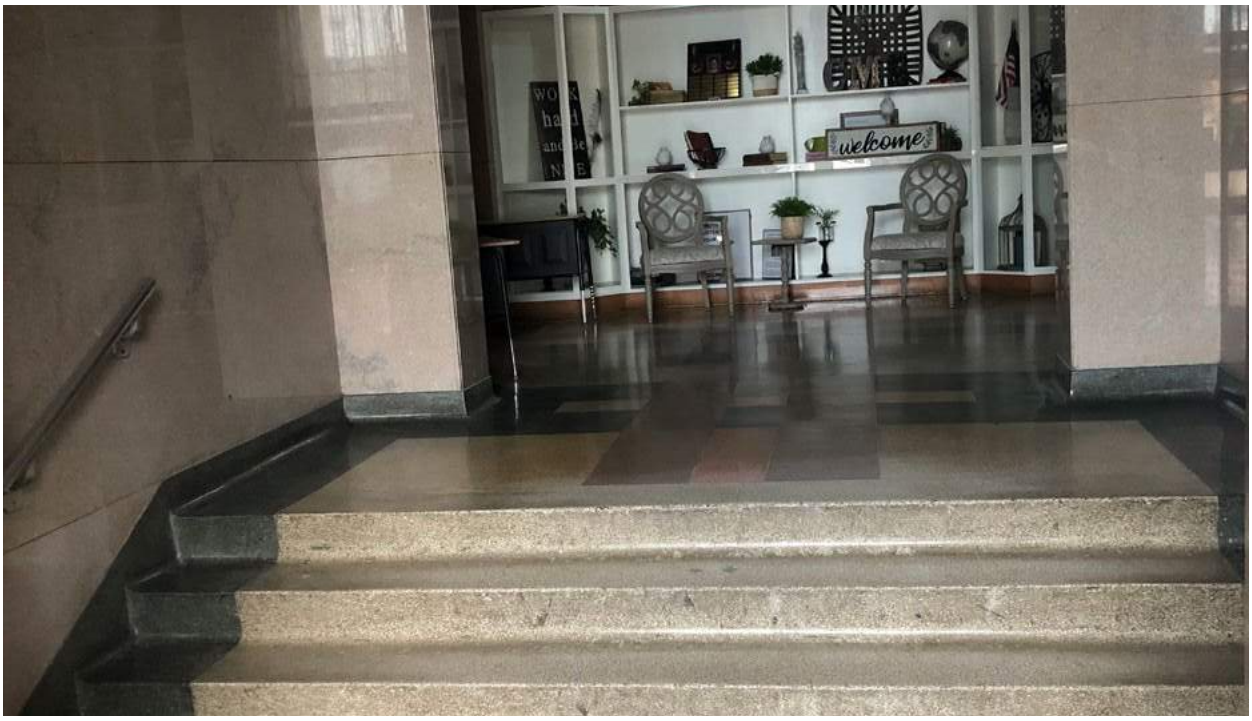
Security

The district wide access control system controls the exterior doors. Intrusion detection is also included. The system should remain viable beyond the 10-year mark.

CENTRAL MIDDLE SCHOOL

INTERIOR EXISTING CONDITION PHOTOS

No interior vestibule doors.



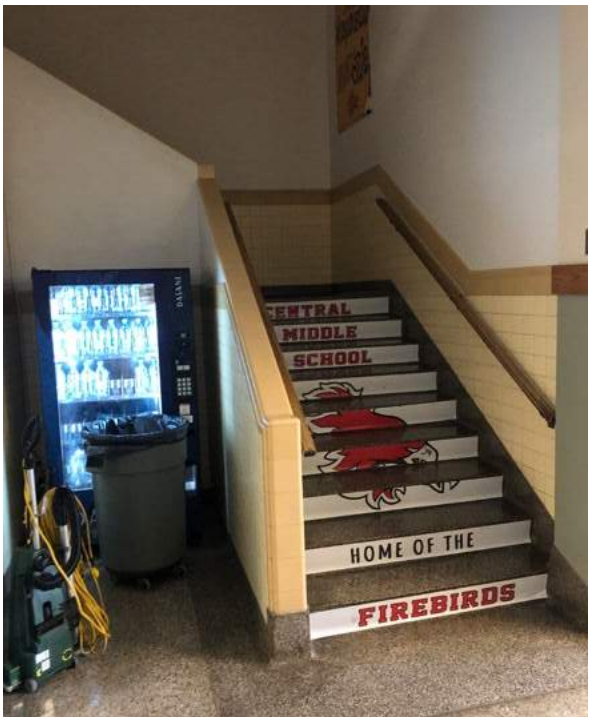
Main entrance not accessible. Handrails not to code. There is no ramp or middle railing.

Terrazzo on steps is wearing.

Missing ceiling tiles in main entrance area.

No sprinkler system throughout entire building.

Drinking fountain alcoves around the building are not wide enough.



Staircases are not enclosed and do not lead directly to exterior. Handrail and guardrails are missing or not code compliant.

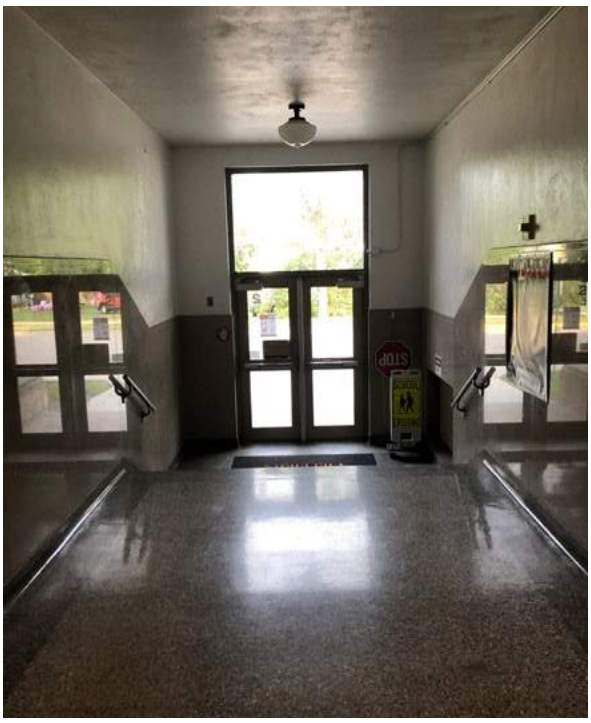
Missing ceiling tiles, and exposed wiring throughout the school.

Classroom entrances are not wide enough for maneuverability clearances for ADA compliance.

Vestibule and corridor doors overlap.

Classroom doors do not all have the minimum push/pull clearances required for handicap accessibility.

Ceiling tiles are in bad shape throughout the building.



Door 2: Handrails are not to code. No middle railing. Not an accessible entrance.

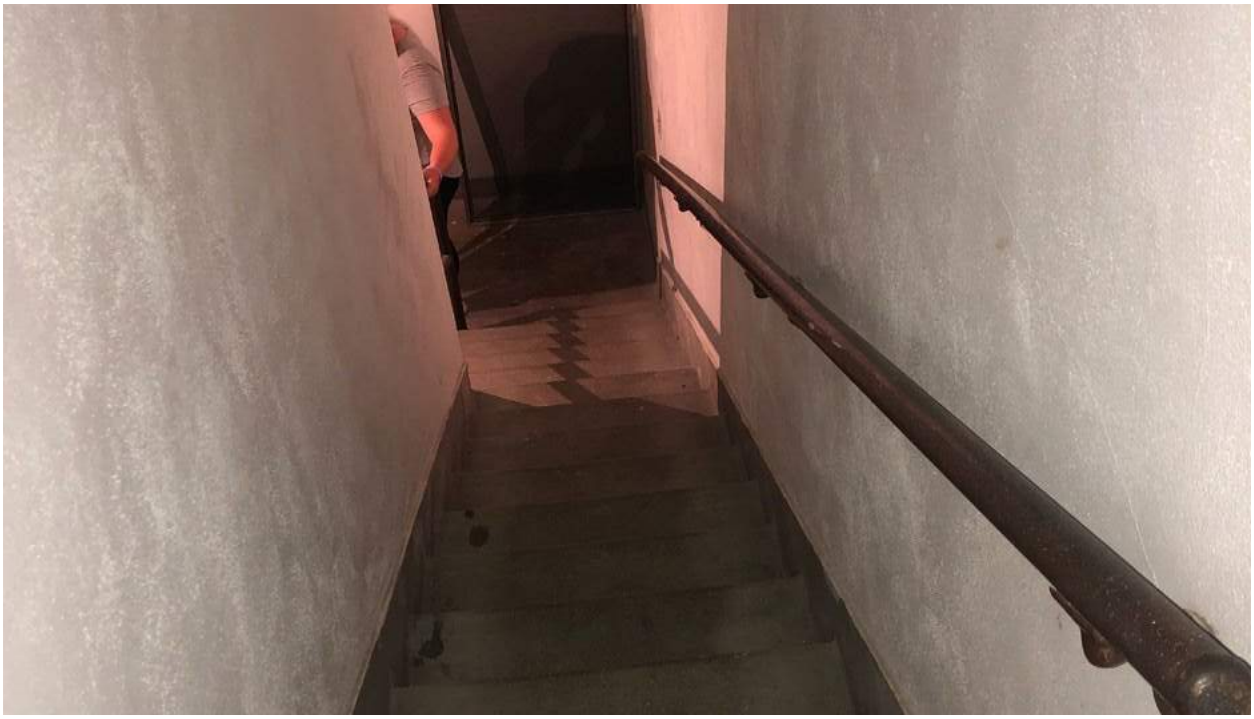
Exposed electrical wiring in storage area.

Basement windows in classrooms are not up to code. Egress windows are too high, and do not allow to adequate egress into the courtyard.

Room 104 Shop: Ceiling tiles in very bad shape. Water leaks on the ceiling.

Room 104 stairs, sinks, and emergency eye wash station not up to code or handicap accessibility requirements.

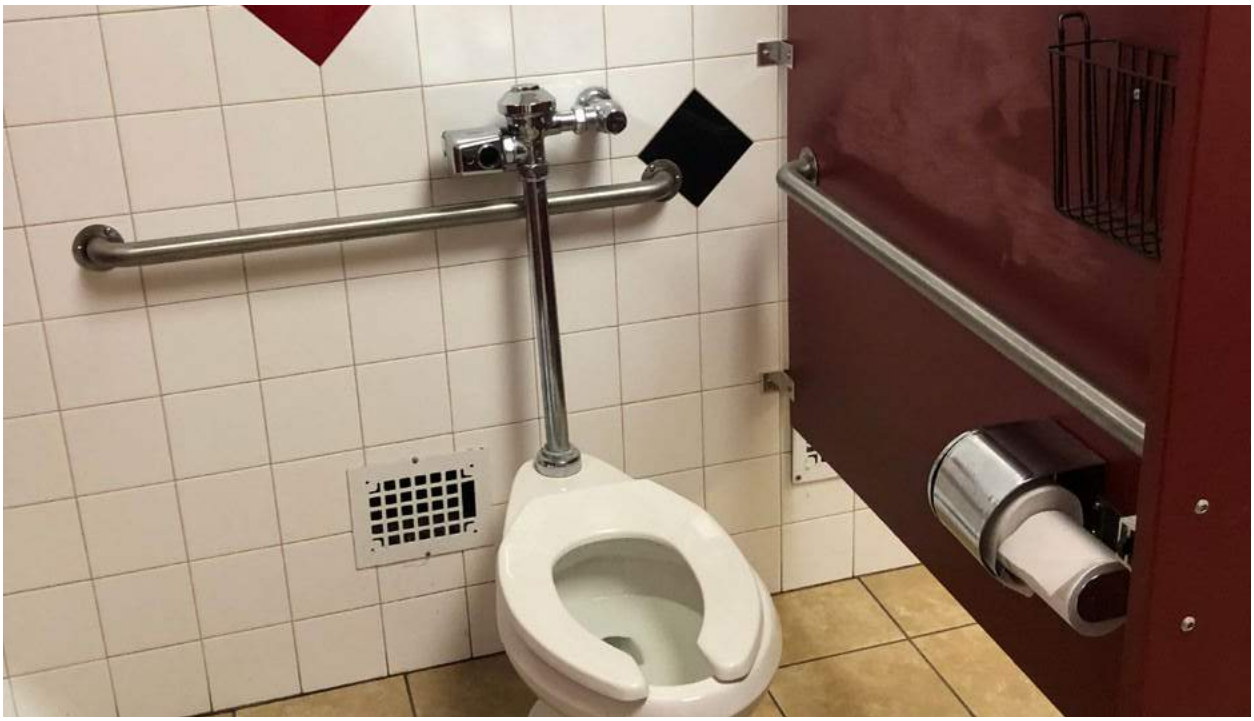
Break room in main office is not handicap accessible. Sink is too small, too high, and too far back. Space does not meet maneuverability clearance requirements.



Stairs to basement from main office are not code compliant.

Ceiling tiles and grid are sagging and falling apart.

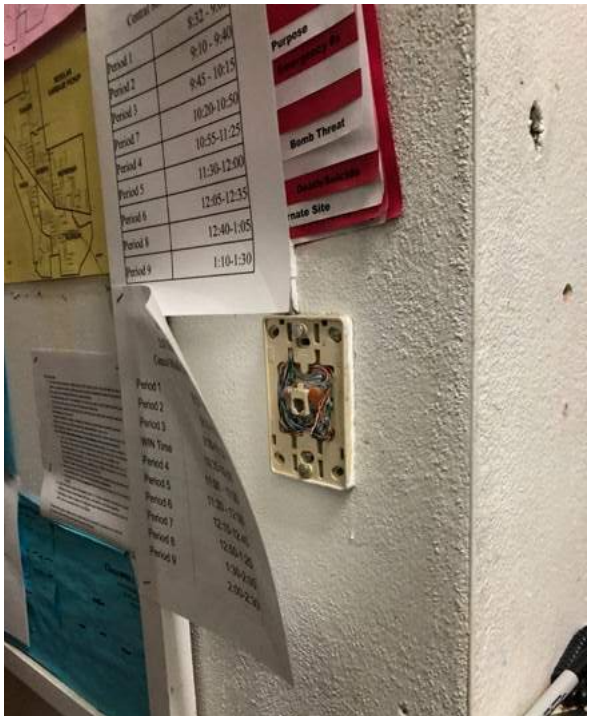
Sinks do not meet handicap accessibility. They are too low and have exposed piping that does not meet required clearances.



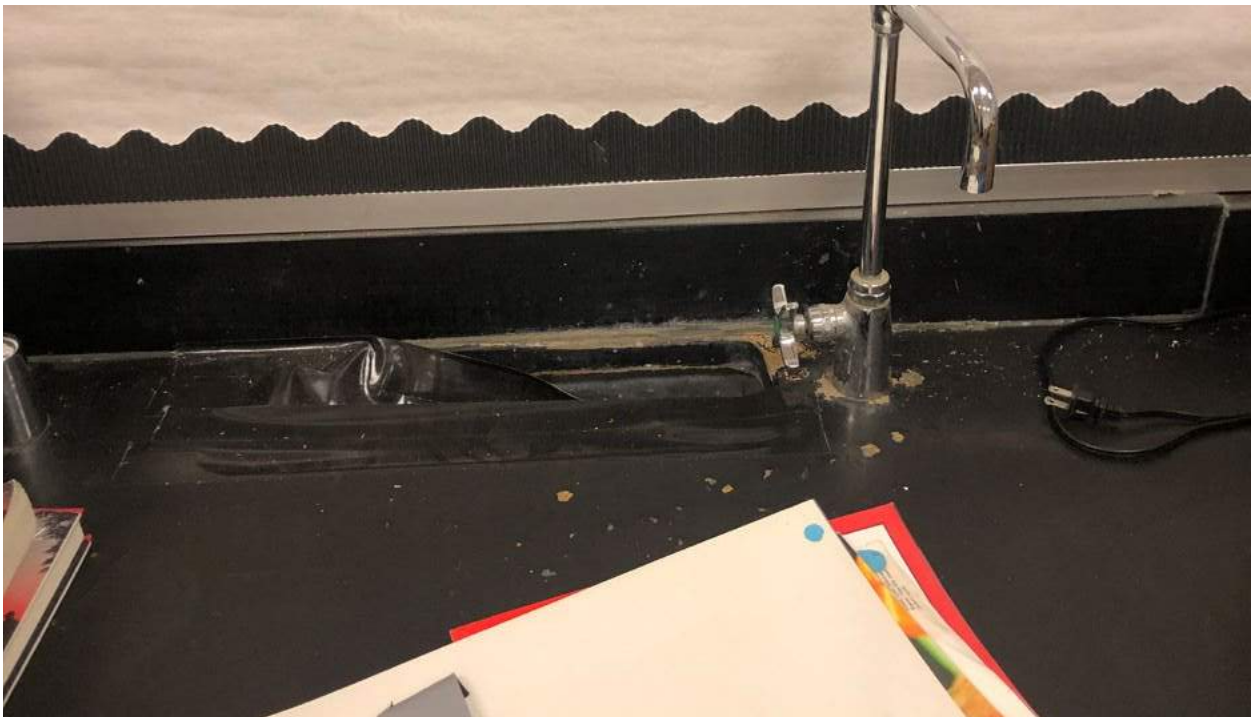
There is no vertical grab bar in the ADA stall in boy's bathroom.

There is a lack of privacy looking into the bathrooms.

Exposed pipes underneath means this sink is not handicap accessible.



Exposed wiring in custodial closet.



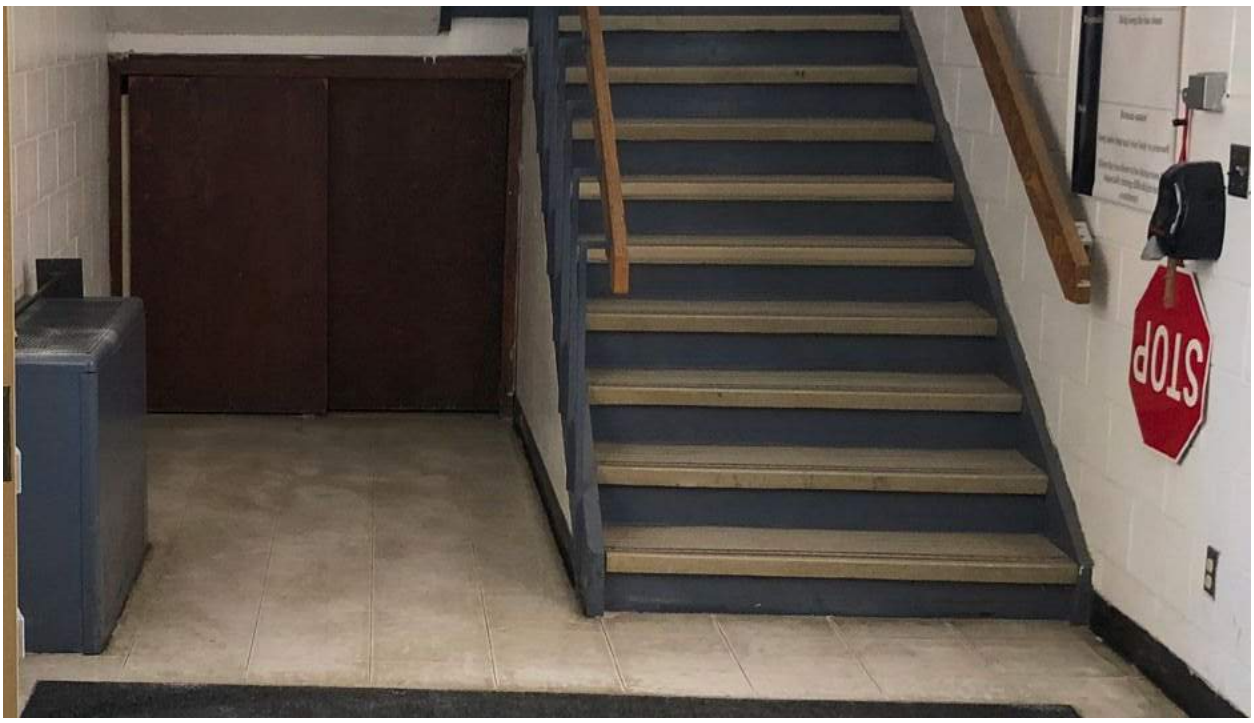
Sinks in science classroom are not working and are not accessible or code compliant.

Staff restrooms are not handicap accessible. Stalls are not ADA compliant, sinks are not accessible.

Crack and/or water damage on corridor wall.

Ceiling tile in bad shape and has water damage in bathrooms.

Art Room 123 sink is not handicap accessible.



Code does not allow storage rooms under stairs.

Door 10 has wire in the vestibule windows, this is no longer to code.

Kitchen cooler is in rough shape.

Kitchen spaces are tight and lack proper storage areas.

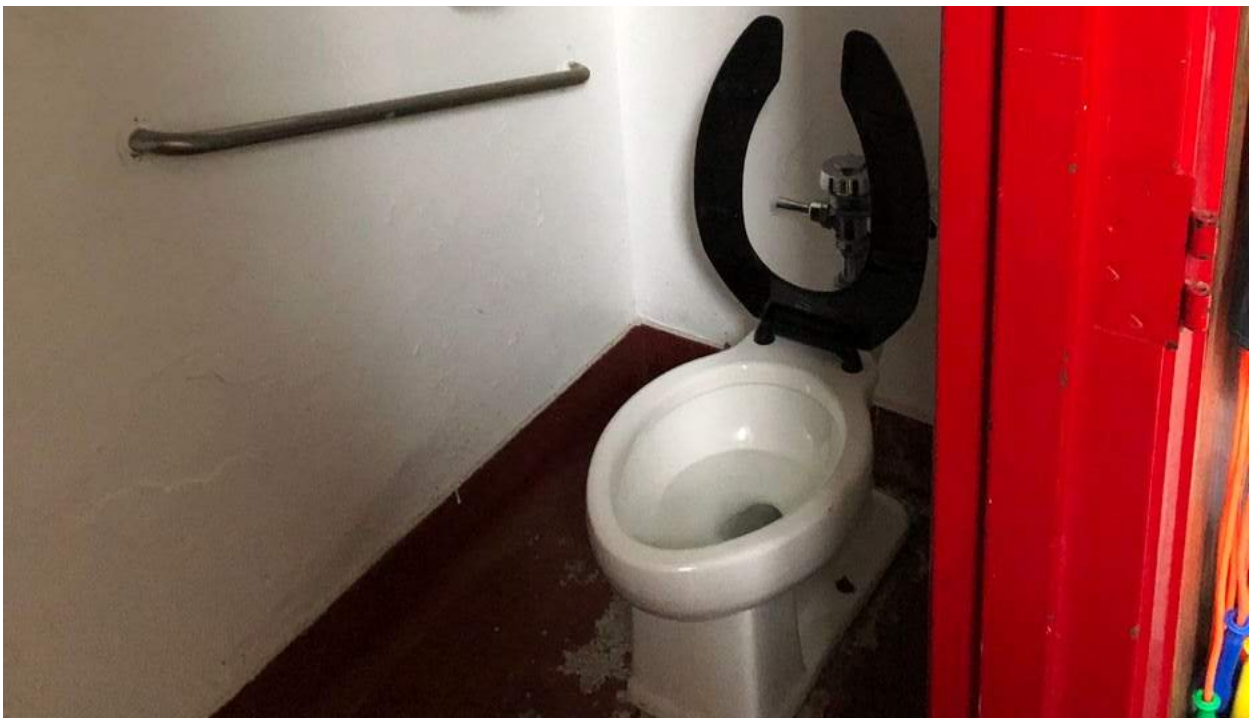
Sink is not handicap accessible in women's bathroom.

No handicap accessible toilet or sink in women's locker room.

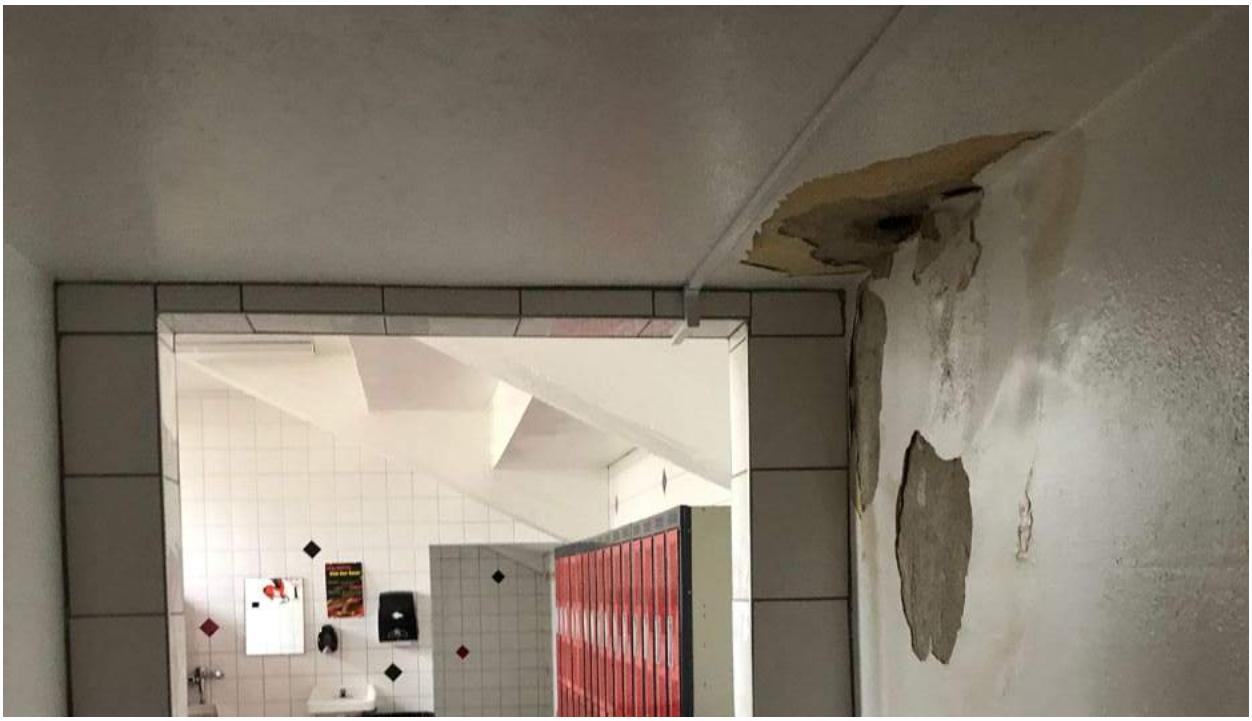
Stage is not handicap accessible, only has stairs.

Library only has one exit. A space of this size requires a second exit.

Wall has various damage marks.

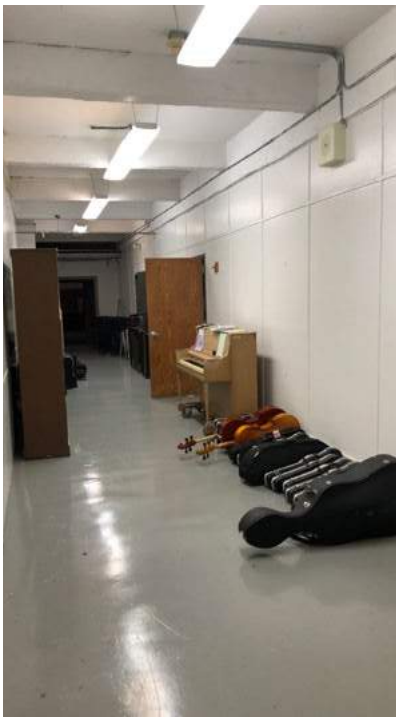


Bathroom in coach's office not accessible.



Water damage on ceiling and wall in boy's locker room.

Ceiling caving in boy's locker room.



Basement lacks corridor direction, has dead end spaces and various intervening rooms.

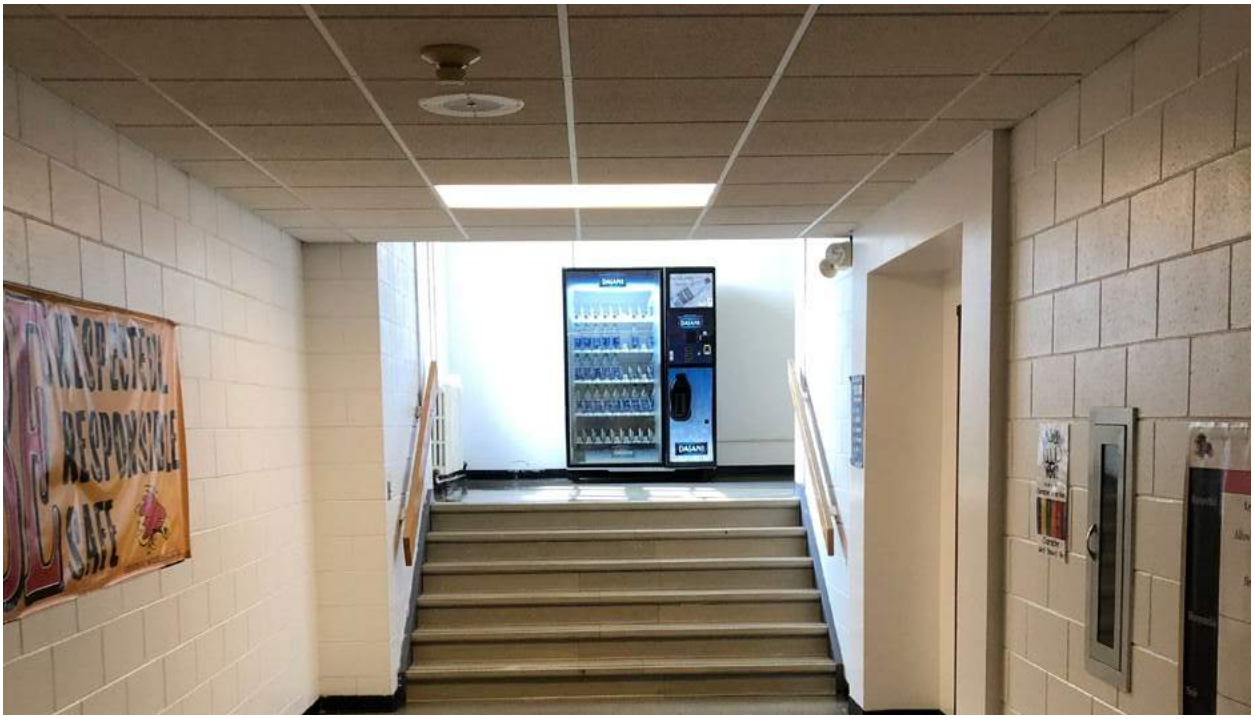
Doors are overlapping.

Stairs to basement do not meet code requirements; missing adequate handrail and guardrails.

Choir room is not handicap accessible.

There is no door to the roof access.

Stage in Room 214 is not handicap accessible.

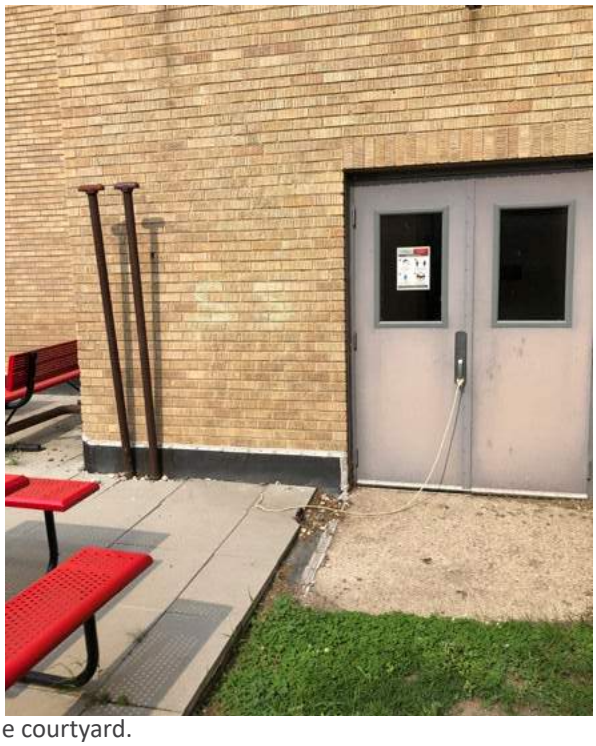


Dead end corridor coming from 1964 addition into the main building.

CENTRAL MIDDLE SCHOOL

EXTERIOR EXISTING CONDITION PHOTOS

Exterior entrances are missing adequate handrails and guardrails, and do not have required ramps or handicap accessible entrances.



No accessible entrance to the courtyard and no exit out of the courtyard.

Exposed piping in the courtyard area.

Handrails on steps in courtyard are not to code.

3. Capital Maintenance Costs

Central Middle School							
Description	Takeoff Quantity	Total Cost/Unit	Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Total Amount
C.M.S. Code Compliance							
Fully Sprinkler Building - Add 6" Water Line	95,719 SF	$4.54 /SF	$434,585				$434,585
Modify Stair Railings to Meet Code	95,719 SF	$0.78 /SF	$74,223				$74,223
Add 3 stair towers since existing stairs are not enclosed and do not lead to	95,719 SF	$5.20 /SF	$497,900				$497,900
Add Doors to Interior Vestibules	95,719 SF	$0.45 /SF	$43,127				$43,127
Push Pull Clearances (assume 50)	95,719 SF	$1.88 /SF	$179,696				$179,696
Ramp to Stage in Gym	95,719 SF	$0.14 /SF	$13,445				$13,445
ADA accessible entrance to courtyard	95,719 SF	$0.12 /SF	$11,740				$11,740
Door to Roof Access	95,719 SF	$0.06 /SF	$5,990				$5,990
Ramp in Room 214 - Stage	95,719 SF	$0.02 /SF	$2,327				$2,327
Ramp in Room 206	95,719 SF	$0.02 /SF	$2,322				$2,322
ADA Kitchen Workspace FACS Rm 114	95,719 SF	$0.25 /SF	$23,960				$23,960
Make Restrooms in Staff ADA Compliant	95,719 SF	$0.88 /SF	$83,858				$83,858
Widen Drinking Fountain Alcove	95,719 SF	$0.37 /SF	$35,853				$35,853
Most rooms do not have ADA Sink	95,719 SF	$0.38 /SF	$35,939				$35,939
Doors within building lack hardware - assumed 20	95,719 SF	$0.17 /SF	$16,454				$16,454
Add Ramp to Exterior Entrances	95,719 SF	$0.67 /SF	$63,732				$63,732
Add a door to art room 123	95,719 SF	$0.13 /SF	$11,980				$11,980
Basement Corridor dead end	95,719 SF	$1.75 /SF	$167,717				$167,717
Make Restrooms in Coaches Office ADA Compliant	95,719 SF	$0.88 /SF	$83,858				$83,858
Add exit for Library	95,719 SF	$1.75 /SF	$167,717				$167,717
Counter in Room 117 ADA	95,719 SF	$0.13 /SF	$11,980				$11,980
Public Entrances not ADA or Meet Code	95,719 SF	$1.56 /SF	$149,747				$149,747
Upgrade Ted Ed Classroom	95,719 SF	$0.63 /SF	$59,899				$59,899
Make Breakroom in Staff ADA Compliant	95,719 SF	$0.44 /SF	$41,929				$41,929
Reverse Door swing at band room doors and vest doors	95,719 SF	$0.04 /SF	$3,851				$3,851
Bathroom and Corridor Doors too Close Together	95,719 SF	$0.13 /SF	$11,980				$11,980
Locker Rooms ADA Compliant	95,719 SF	$1.25 /SF	$119,798				$119,798
Modify Bleachers at Gym ADA	95,719 SF	$0.31 /SF	$29,949				$29,949
Basement Issues	95,719 SF	$1.25 /SF	$119,798				$119,798
Water Damage/Crack at Corridor Wall	95,719 SF	$0.56 /SF	$53,909				$53,909
Replace Kitchen Cooler	95,719 SF	$0.31 /SF	$29,949				$29,949
Exposed Piping in courtyard	95,719 SF	$0.13 /SF	$11,980				$11,980
Add lift in Boiler Room	95,719 SF	$0.50 /SF	$47,804				$47,804
Total C.M.S Compliance	95,719 SF	$27.67 /SF					$2,648,994

CONSTRUCTION ENGINEERS

Central Middle School							
Description	Takeoff Quantity	Total Cost/Unit	Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Total Amount
C.M.S. Security							
Add 2 Secure Entrances for Students and Staff	95,719 SF	$3.71	$354,778				$354,778
Total C.M.S Security	**95,719 SF**	**$3.71 /SF**					**$354,778**
C.M.S. Educational Adequacy							
Addition SF Based on DPI Guideline	13,175 SF	$327.49 /SF				$4,314,650	$4,314,650
Total C.M.S Educational Adequacy	**13,175 SF**	**$327.49 /SF**					**$4,314,650**
C.M.S. Capital Maintenance							
Replace all Ceiling Tiles	95,719 SF	$5.47 /SF		$523,604			$523,604
Repair Damaged Paint/ Paint all Walls Ceilings	95,719 SF	$5.99 /SF		$573,345			$573,345
Replace flooring in corridors	95,719 SF	$2.12 /SF	$203,383				$203,383
Masonry Tuckpointing	95,719 SF	$0.94 /SF		$89,848			$89,848
General Maintenance of Doors	95,719 SF	$0.63 /SF	$59,899				$59,899
General Maintenance of Windows	95,719 SF	$0.63 /SF	$59,899				$59,899
Fix Int Water Damage from Window opening Failure	95,719 SF	$0.63 /SF	$59,899				$59,899
Replace all Interior Doors (assumed 170)	95,719 SF	$3.93 /SF			$376,039		$376,039
Window Replacement - assumed 200	95,719 SF	$13.76 /SF		$1,317,289			$1,317,289
New Elevator - Expand Shaft for ADA	95,719 SF	$2.75 /SF	$263,555				$263,555
Mechanical Upgrades - 10 Years	95,719 SF	$13.14 /SF			$1,257,875		$1,257,875
Replace waste piping							
Replace water supply piping							
Replace unit ventilators in (20) classrooms							
Mechanical Upgrades	95,719 SF	$15.67 /SF	$1,499,842				$1,499,842
Replace unit ventilators in (20) classrooms							
Replace pneumatic with electronic actuators							
Replace steam radiator heaters in corridors and entries							
Install grease baffles at kitchen hood							
Replace gym air handler							
Replace hydronic pumps							
Test steam pipe insulation for asbestos							
Fix leaky ports on condensate receivers							
Boiler Replacement	95,719 SF	$12.49 /SF	$1,195,093				1,195,093.34
Elect Upgrades 5 years	95,719 SF	$9.46 /SF		$905,885			$905,885
Replace all Interior Lights							
Replace Smoke Detectors and add ADA pull stations							
Elect Upgrades	95,719 SF	$5.69 /SF	$544,646				$544,646
Fire Alarm Voice Controls							
Replace Cat 5 with Cat 6							
Exposed Wiring Throughout							
Replace Roof	95,719 SF	$10.38 /SF	$993,481				$993,481
Total C.M.S Capital Maintenance	**95,719 SF**	**$103.67 /SF**					**$9,923,582**
Totals			**$7,883,469**	**$3,409,972**	**$1,633,913**	**$4,314,650**	**$17,242,004**

DEVILS LAKE HIGH SCHOOL & SPORTS CENTER

02 FACILITY ASSESSMENT

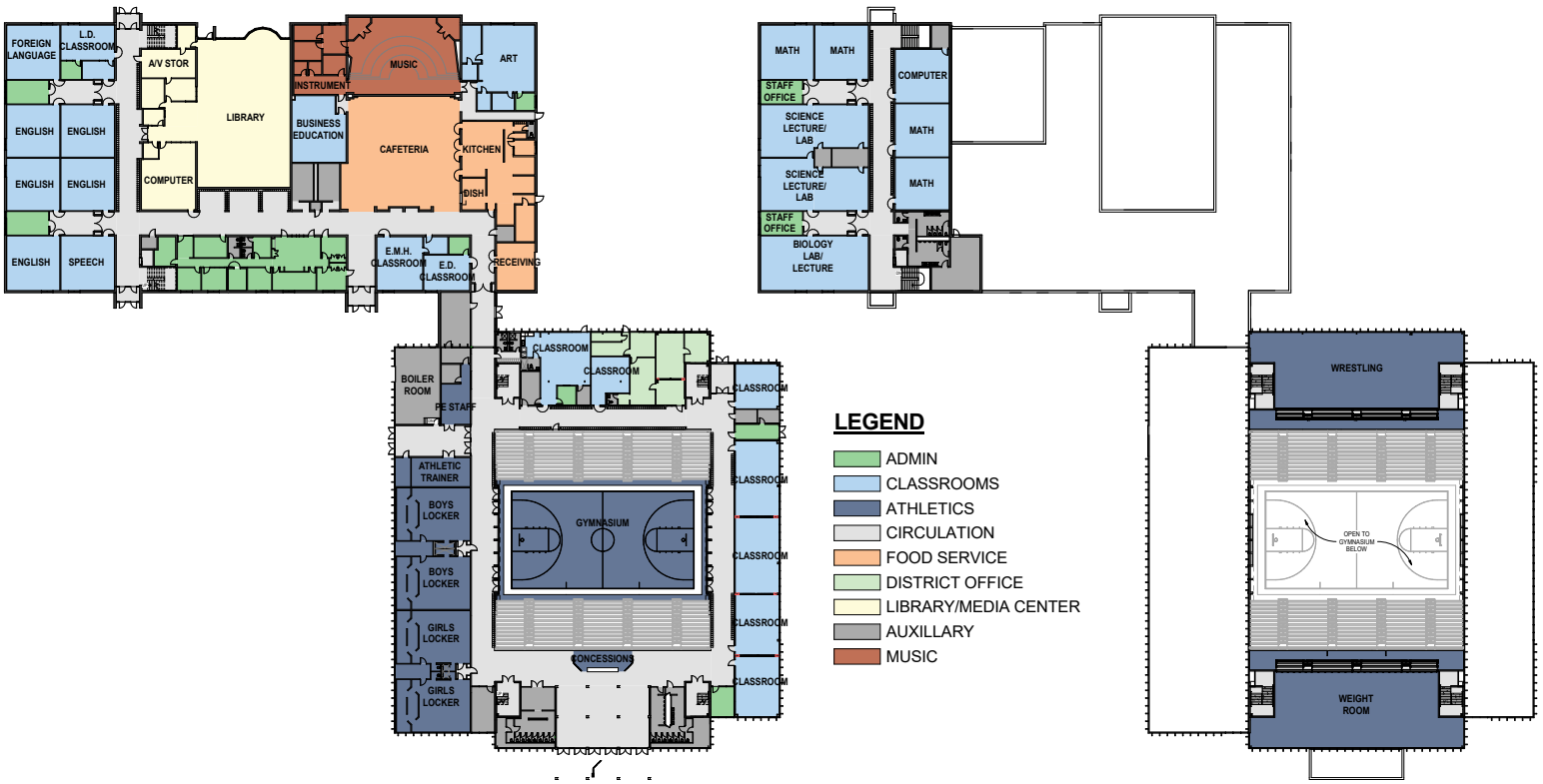
A. DEVILS LAKE HIGH SCHOOL AND SPORTS CENTER EXISTING BUILDING INVENTORY

Room Schedule

Department	Area
ADMIN	4,750 SF
ATHLETICS	27,629 SF
AUXILLARY	6,078 SF
CIRCULATION	22,164 SF
CLASSROOMS	22,867 SF
DISTRICT OFFICE	1,488 SF
FOOD SERVICE	5,734 SF
LIBRARY/MEDIA CENTER	6,134 SF
MUSIC	2,967 SF
Grand total: 200	99,811 SF

Devils Lake High School & Sports Center are located at 1601 College Drive N in Devils Lake, ND. The Sports Center was constructed first in 1981. The High School wasn't constructed until 11 years later and was built as an addition the Sports Center in 1992. In 2009, the Sports Center had a renovation to replace all the bleachers in the gymnasium.

The facilities are accessible from three separate streets. 5th Avenue NW and 16th Street NW are primarily accessed from College Drive N. These three streets border both facilities. There are multiple parking lots with the primary lot on the southwest side of the buildings. These lots are used for student, staff, and event parking.



First Level Floor Plan

Second Level Floor Plan

B. EXISTING CONDITIONS

DEVILS LAKE HIGH SCHOOL

The analysis of the existing Devils Lake High School has been broken down into three categories: code compliance/ Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance.
This includes evaluation of the current building codes required by the City of Devils Lake and the State of North Dakota. Non-compliant items within the building have been Identified and are listed below.

- The building is not fully sprinklered
    - Buildings that are larger than 12,000 s.f. are required by fire code to be fully sprinklered
- The public restrooms are not ADA compliant due to reach ranges, clearances, door sizes, stall sizes, and grab bars. There are also missing ADA height toilets, sinks, and urinals.
- Stairs do not meet code requirements
    - Handrails must be 36” tall and guardrails must be 42” tall
    - A sphere no larger than 4” can pass through any portion
    - A 4” kick plate is required.
    - Handrails don’t meet code specified profile and dimensions; must be 1 1/2” diameter.
    - Nothing can be stored under the stairs
- Elevator is too small to meet code required maneuverability and clearance requirements
- Exterior entrances and sidewalks don’t all meet accessibility requirements
    - Door 2 has stairs and no ramp. The handrail at the stairs does not meet code
    - Door 3 concrete has sunk and there is a lip that does not meet accessibility
    - Sidewalk to the LACTC building does not meet accessibility
- Stage, Music room, and associated offices and practice rooms are not handicap accessible and are only accessible by stairs.
- Main office does not have a handicap accessible reception desk
- Science labs have raised teaching stations that are only accessible by a stair, and do not have handicap accessible workstation/sink for students or staff.
- Roof access and the mechanical room are not code compliant. They are only accessible through the Boys bathroom.
- The main entrance into the high school is not ADA compliant due to the steps and there is no handicapped parking near the entrance.
- Staff restrooms do not meet maneuverability and clearance requirements.

2. Educational Adequacy

This is a review of applicable Department of Public Instruction recommendations as they relate to Devils Lake Public Schools' curriculum. To understand educational space deficiencies, we have evaluated educational models, curriculum configurations, and quantity and quality of existing spaces in comparison to the option of a modern, purpose-built educational facility.

Space	Current Square Footage	DPI Guideline Square Footage	Difference
Admin	4750	7,150	2400
Classroom (average)	733	900	167
Computer Lab	1131	1,200	69
Gym/PE	27629	19,400	8229
Kitchen	3196	7,580	4384
Cafeteria	3483	15,600	12117
Health	913	900	13
Art	973	1,500	527
Library	6134	5,000	1134
Music	2963	23,700	20737
Vo-Ag/CTE	20641	17,700	2941

DEVILS LAKE SPORTS CENTER

The analysis of the existing Devils Lake Sports Center has been broken down into three categories: code compliance/Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

Code Compliance/Americans with Disabilities Act (ADA) Compliance.
This includes evaluation of the current building codes required by the City of Devils Lake and the State of North Dakota. Non-compliant items within the building have been Identified and are listed below.

- The building is not fully sprinklered
    - Buildings that are larger than 12,000 s.f. are required by fire code to be fully sprinklered
- Corridor doors, frames, and hardware are not fire rated and they are required to be if the corridor is required to be fire rated
- The restrooms are not ADA compliant due to reach ranges, clearances, door sizes, stall sizes, and grab bars
- The men's restroom lacks a handicap accessible urinal
- The locker rooms lack proper handicap accessible toilets, urinals, and shower stalls, and drinking fountains.
- Stairs do not meet code requirements
    - Handrails must be 36" tall and guardrails must be 42" tall
    - A sphere no larger than 4" can pass through any portion
    - A 4" kick plate is required.
    - Handrails don't meet code specified profile and dimensions; must be 1 1/2" diameter.
    - Nothing can be stored under the stairs
    - Code requires stairs to lead directly to an exit
- Weight Room on the second floor on the south side of the gym is not handicap accessible, only accessible by stairs.
- The boiler room is below the main grade of the building and is not on a handicap accessible route.
- Staff restroom does not meet maneuverability and clearance requirements.
- Doors within the building lack hardware that does not require tight grasping or other special abilities to operate
- Railings on second floor overlooking the gymnasium do not meet code requirements. Handrails must be 36" tall and a sphere no larger than 4" can pass through any portion.

ARCHITECTURAL FINISHES

The Sports Center was constructed in 1981 and the High School in 1992. Since then, there's been minimal renovations besides the bleachers being replaced in the gymnasium in 2009. Overall, the building has been well maintained; however, due to aging, the finishes show signs of wear and tear. This includes damaged and yellowing ceiling tiles, beat up doors, and aged door hardware. Some of the finishes throughout the high school and sports center have exceeded their useful life expectancy and should be addressed.

Masonry

The exterior façade of the High School is white concrete masonry units and concrete tiles. The Sports Center is mostly made of precast concrete double-tees. This is in adequate condition.

Roofing

No observable issues at this time.

Openings

General maintenance of the doors and windows is required. This includes replacement of weather stripping, painting, caulking, and general repairs. Throughout the interior of the school, door, frame, and hardware replacement is required due to age, code compliance, security, or a combination of these. The extent of window replacement throughout the facilities is dependent upon the installation of a sprinkler system.

Ceilings

There are several ceiling types within the building, but mostly can be categorized as either acoustical ceiling tile or painted gypsum. The ceiling tile throughout the High School shows signs of water damage and staining that should be addressed. In the Sports Center, the ceiling tile is in decent shape, but the grids around the ceiling tiles are turning yellow. There are also several ceiling tiles that have been modified for technology upgrades that should be replaced. There are several areas of gypsum ceiling that need patching, cleaning, and painting. This is not an immediate need but should be phased in through a capital maintenance plan.

Flooring

There are many different flooring types throughout the High School and Sports Center. Overall, the carpeting and floor tile are in satisfactory condition.

Conveying Equipment

The elevator is in good working condition but does not meet current building codes. The level of modification required is dependent upon the installation of a fire sprinkler system.

STRUCTURAL

No observable issues at this time.

MECHANICAL

Fire Suppression

The facility does not feature a fire suppression system.

Plumbing

Plumbing fixtures in toilet rooms are vitreous china with hands free operation. The fixtures appear in good condition and should continue to operate with occasional maintenance on the flush valves.

The lavatories in the toilet rooms are a mixture of wall-hung and counter mounted, made from vitreous china. The faucets are hands free and should remain functions with occasional maintenance on the faucets.The showers in the locker room are multi-station surface mounted with stainless steel covers. The exterior appears in good condition. The internal valves may be needing replacement. The shower controls are manual twist type and do not show signs of leaking. The shower stations are open and exposed with no stall dividers.

Several of the drinking fountains have been upgraded to include bottle fillers and appear in good condition. Original piping on the main lines is galvanized steel. Some of the piping has been converted to copper in the mechanical room.

Vent piping in the toilet room chases is galvanized steel. It should remain viable for more than 10 years. Waste piping is cast-iron. Old cast iron piping may accumulate build-up and suffer blockage, requiring frequent maintenance.

The hot water heating plant consists of three separate pieces of heating equipment and one large storage tank. It was not clear at the time of the visit which pieces are currently operational. There is a 1993 gas-fired Rheem Commercial Energy Miser water heater, model G600-84A, with an input of 600 MBH and storage capacity of 84 gallons, and recovery of 545 GPH. The heater appeared operational and is reaching the end of its expected lifespan. The second heater is a gas-fired Lochinvar, model CRN0700-065, with an input of 714 MBH, recovery of 600 GPH, of unknown age. The heater is in poor condition and should be removed. The last heater is a 2008 gas-fired AO Smith Cyclone, model BTH 400A 100, with an input of 400 MBH and recovery of 465 GPH. The heater is in good condition and should remain operational for more than 10 additional years.

The recirculation pump appears in poor condition and should be replaced.

The toilet rooms are served by a residential-style tank-type electric water heater. The heaters show signs of leaking and could be removed entirely by extending the primary water heating system to the toilet rooms.

The kitchen is served by a Bradford White tank-type water heater, commercial, gas-fired with induced draft. The unit is in good condition and should last for more than 10 years. The hot water piping coming off the water heater is missing insulation.

The water supply comes through a 3” meter. The pipe flanges and bolts are rusted and are showing some signs of

beginning to leak. It may become necessary to replace the aboveground supply piping near the meter within the next 10 years.

Climate Control

SPORTS CENTER

The west classroom block in the Sports Center is served by an old air handler with a DX cooling coil. The refrigerant is likely older and is no longer produced due to its potential for negative impact on the environment. The refrigeration should be replaced to prevent refrigerant leak to the surroundings. The control components on the air handler are pneumatic powered which are becoming increasingly difficult to replace. The controls should be upgraded to direct digital controls. The air handling unit is a constant air volume type with no ability to reset fan speed. Reducing fan speed would save significant percentage of energy consumed by the air handler.

A ducted hydronic reheat coil serves each classroom. The reheat coil receives cold air from the air handler and opens a control valve to heat the air as required to meet the zone heating demands. The valve seats the coil does not have a motorized damper to reduce air flow during periods when the classroom is satisfied and does not meet current energy codes.

Classrooms with large sections of glass wall also have fin tube type, baseboard hydronic heaters. The cabinet finish on the heaters is outdated and could be replaced. The control valves for the heaters are approaching end of life and should be replaced.

The gymnasium is served by (4) heating-only air handlers. If cooling is desired in the gym, it may be necessary to replace the air handlers.

Diffusers in offices are ceiling mounted, 4-way type with perforated steel faces. The air distribution is adequate but could be improved with modern ceiling diffusers which provide a more uniform air distribution with reduced drafts. Heat is provided in entry vestibules by surface-mounted hydronic cabinet unit heaters. The heaters function by opening a valve and activating a fan. Old valves may leak and will cause overheating in the space. The heater cabinets show some wear and could be replaced to improve appearance.

Storage rooms and toilet rooms are served by hydronic convector heaters. The heaters function by opening a hydronic valve on a call for heat. The heaters show signs of wear but remain operational.

Hydronic heaters feature control valves to regulate the flow of water in the heating coil. The seats in older valves often wear down and are unable to fully stop the flow of hot water, resulting in space overheating. The valve actuators are pneumatic and are not compatible with a digital control system. The heating control valves on all heating units should be replaced.

HIGH SCHOOL

Classrooms are served by heat pumps. The heat pumps are older and are reaching the end of their expected

lifespan and will require regular replacement maintenance as individual units fail.

Ventilation and Exhaust
Mechanical code requires ventilation for occupied spaces at specified rates and exhaust for certain types of spaces. Ventilation can be delivered through mechanical systems or through natural ventilation systems. Exhaust must be accomplished by mechanical systems.

The locker rooms are ventilated by inline centrifugal fans without any heating, cooling, or energy recovery. To meet energy codes, locker room ventilation should be provided with air-to-air energy recovery units.

The kitchen dishwasher exhaust hood is not compatible with the dishwasher. The hood is a Type 2 hood for heat and condensate removal, designed to capture steam that billows up when the dishwasher doors open. However, the dishwasher features integral ducted hoods over the doors, and is designed for a ducted exhaust. The exhaust hood should be replaced with ducting from the exhaust fan to improve steam and heat capture.

The exhaust hoods over the cooking lines are Type 1 hoods with grease baffles for capturing grease. The primary hood is a single-island style, and the secondary hood is back shelf (or proximity) type hood. Both hoods feature a fire suppression system. Both hoods are older models but appear in good condition.

The kitchen make-up air unit is an indoor, direct gas-fired Temp-Air model CFA-18 with a 990 MBH input capacity, delivering 9,700 cfm of air. The unit has reached the end of its expected lifespan and should be scheduled for replacement.

Central Plants
The sports center HVAC system is hot water hydronic system. It features a gas-fired boiler plant for heating and DX condensing units for cooling.

The DX condensing units show significant signs of wear and will likely need replacement within the next 5 years. The high school HVAC system is a conventional heat pump type system. It features a cooling tower for rejecting heat and connects into the sports center hot water heating system.

The heating plant is gas-fired hydronic boilers. There are two 1980 Burnham three-pass full wetback boilers, model 4FW-240-50-LB, each with a 1,607 MBH output capacity. The boilers are at their expected lifespan and should be scheduled for replacement within the next 10 years.

The heating system hydronic pumps are base-mounted pumps and appear quite old. It will likely be necessary to replace failing pumps in the next 10 years.

The heat-rejection pumps serving the cooling tower and heat pump system are (2) 25 HP, single speed, base-mounted pumps made by Taco, model FI3013 that appear in good condition. Energy efficiency could be improved by converting the pumps to variable speed.

The heat rejection plant is a closed-circuit, counter flow, forced draft cooling tower similar to the BAC model VF1 product. The cooling tower has been repainted but shows signs of corrosion under the paint. The unit should be scheduled for replacement within the next 5 years.

Temperature Controls

Temperature controls in the Sports Center are pneumatic which has become difficult to maintain due to difficulty in obtaining repair parts and components. The system should be scheduled for replacement over the next 5 years. Temperature controls in the High School are electronic digital.

ELECTRICAL

Lighting

Light fixtures throughout the entire facility incorporate T8 fluorescent lamps with electronic ballasts. The general condition of the interior light fixtures that incorporate T8 lamps is noted as good. Most of the lights are original, except the Gymnasium which has been upgrade to energy efficient fixtures utilizing T5HO lamps. The rest of the lighting system is reaching the end of its viable life. Replacing the existing lighting with new LED fixtures should be considered in the near future. Most of the existing fixtures are 4-lamp and an equivalent LED fixture will consume 1/2 the energy, going from 125 watts to approximately 60 watts.

Exterior lighting has been updated to LED type fixtures.

Emergency egress lighting is accomplished by the backup generator, energizing select light fixtures throughout the facility. Exit signs are LED.

Power

The building's electrical service is split between a 2000 Amp, 120/208 Volt, 3 Phase "General Power" service and a 1600 Amp 120/208 Volt 3 Phase "Interruptible Rate" heating system. The main distribution panels utilize fused disconnect switches to provide power distribution through the building. There are very few spare switches, and there is not physical space to install additional switches if required. Replacement parts are readily available for these Siemens distribution systems and the system should remain viable beyond the 10-year mark. However, if a significant addition would be built onto this facility, it is likely that the existing switchgear would need to be modified or replaced.

The branch panels in the facility are modern circuit breaker panels by Siemens and Westinghouse. The branch panels do not have very many spares and spaces to accommodate additional circuits if required. Replacement circuit breakers are readily available for these panels, and they should remain viable beyond the 10-year mark.

The heating service is backed up with a 400kW diesel powered generator, thus allowing the building to be on the lower cost "Interruptible Power Rate" offered by Otter Tail Power Company. The generator was installed when the high school was constructed and has logged 5,900 hours. Based on the parts availability and usage, this generator will likely need to be replaced around the 10-year mark.

The emergency/life safety panel also receives its backup power from the 400kW generator. The panel is connected to the same distribution system that also provides power to the heating/cooling panels. Although it is allowable to utilize the same generator, the life safety panel cannot share the same transfer switch and distribution system as non-critical equipment. A separate transfer switch, dedicated to the life safety panel, needs to be installed. This code violation should be addressed as soon as possible.

The amount of convenience receptacles appears to be adequate in some classroom areas, but not others. This item should be thoroughly investigated, and additional receptacles be added where required.

SYSTEMS

Fire Alarm

The building incorporates an addressable Simplex fire alarm system. The Fire Alarm panel was recently replaced, but none of the existing initiation or annunciation devices were updated. Smoke detector coverage is sporadic in the corridors and other select locations. Pull stations at the building entrances are not ADA compliant. Audible/ Visual annunciation devices are installed throughout the facility, but their coverage does not appear to be complete in certain areas. The entire system should be re-evaluated and updated to comply with current codes.

It should be noted the recently adopted building code requires new fire alarm systems to include Voice Evacuation type annunciation. Although the existing system is grandfathered in, it can be upgraded to this new requirement for educational occupancies by adding the voice communications module and replacing the existing annunciation devices with Speaker/Visual devices.

Network Cabling

Network cabling is a mixture of Category 5e and Category 6. The Category 5e cable should be phased out as it only marginally supports the bandwidth requirements of today's networks. There are Wi-Fi nodes installed in the corridors, operating on Category 6 cable. This appears to be adequate for the current needs.

Public Address

The building includes recently updated intercom and corrected clock systems. Both systems should remain viable for many years.

Surveillance

Surveillance cameras cover the interior corridors and exterior building entrances. The system is adequate and should remain viable beyond the 10-year mark.

Security

The district wide access control system controls the exterior doors. Intrusion detection is also included. The system should remain viable beyond the 10-year mark.

DEVILS LAKE HIGH SCHOOL

INTERIOR EXISTING CONDITION PHOTOS

No sprinkler system.

Stage, band room, storage spaces, and work room are not handicap accessible.

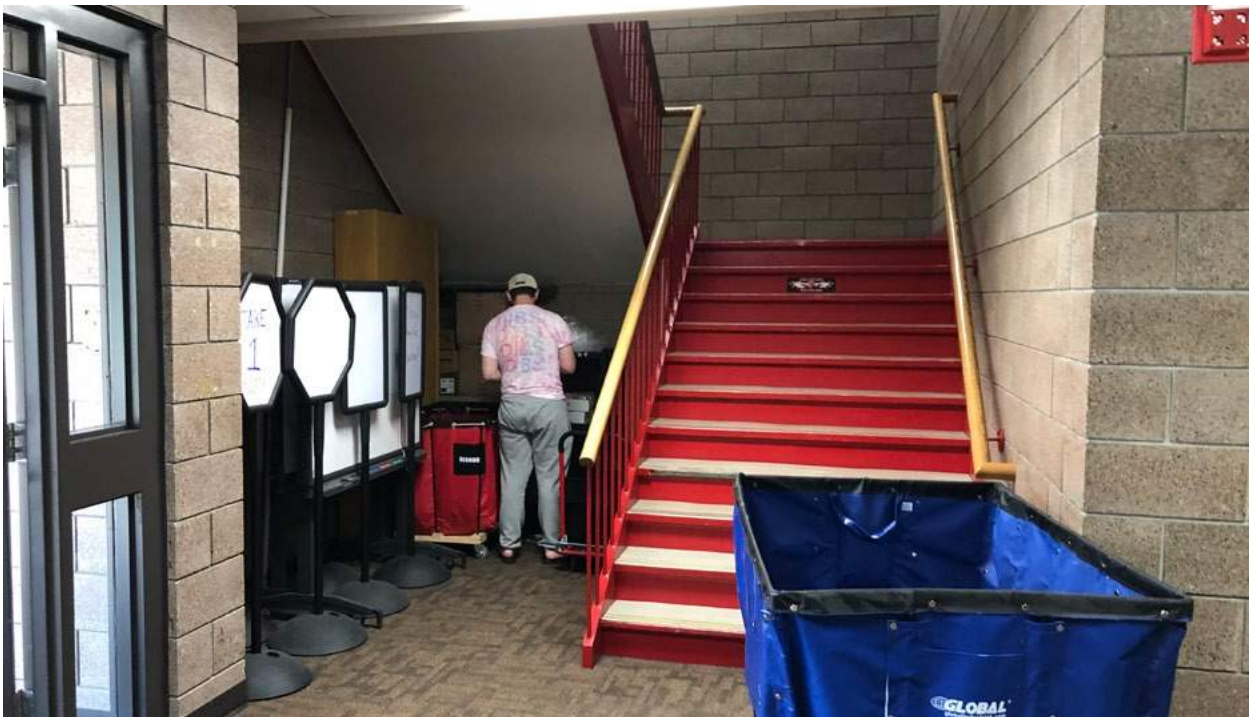
Main office does not have a handicap accessible reception desk and there is a lack of waiting space.

Sinks, soap dispensers, and paper towel holders in men's and women's restrooms are not handicap accessible due to reach ranges.

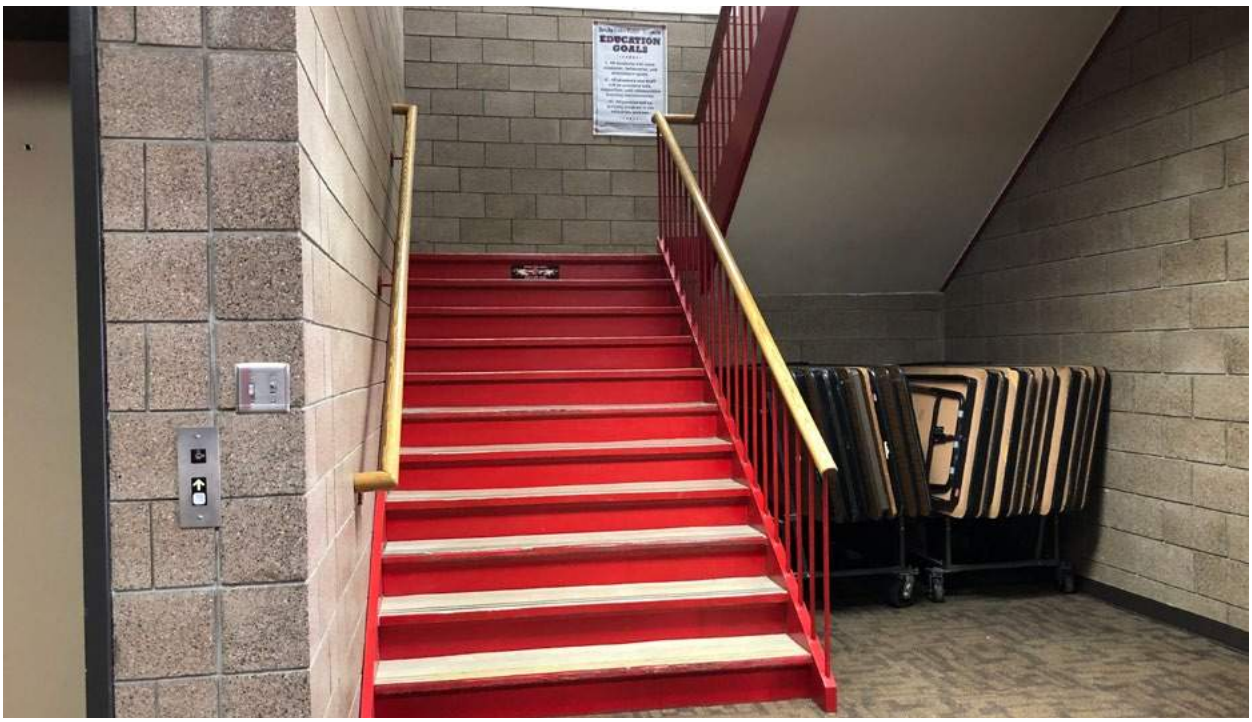
Missing stall doors in men’s restroom.

Staff restrooms are not handicap accessible and are missing grab bars.

Grab bars in ADA stalls are not all code compliant in men’s and women’s restrooms.



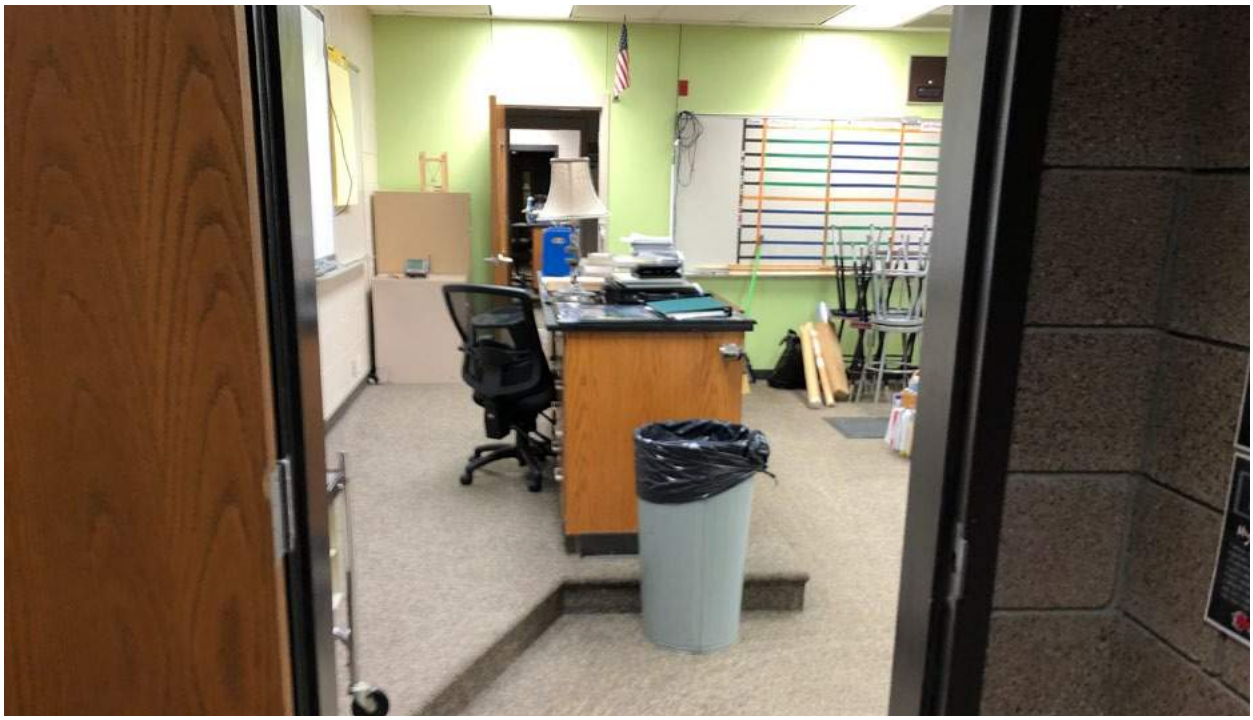
Storage being stored under staircase next to the Media Center.



Hand and guard rails for stairs are not to code. Storing things under stairs does not meet code.

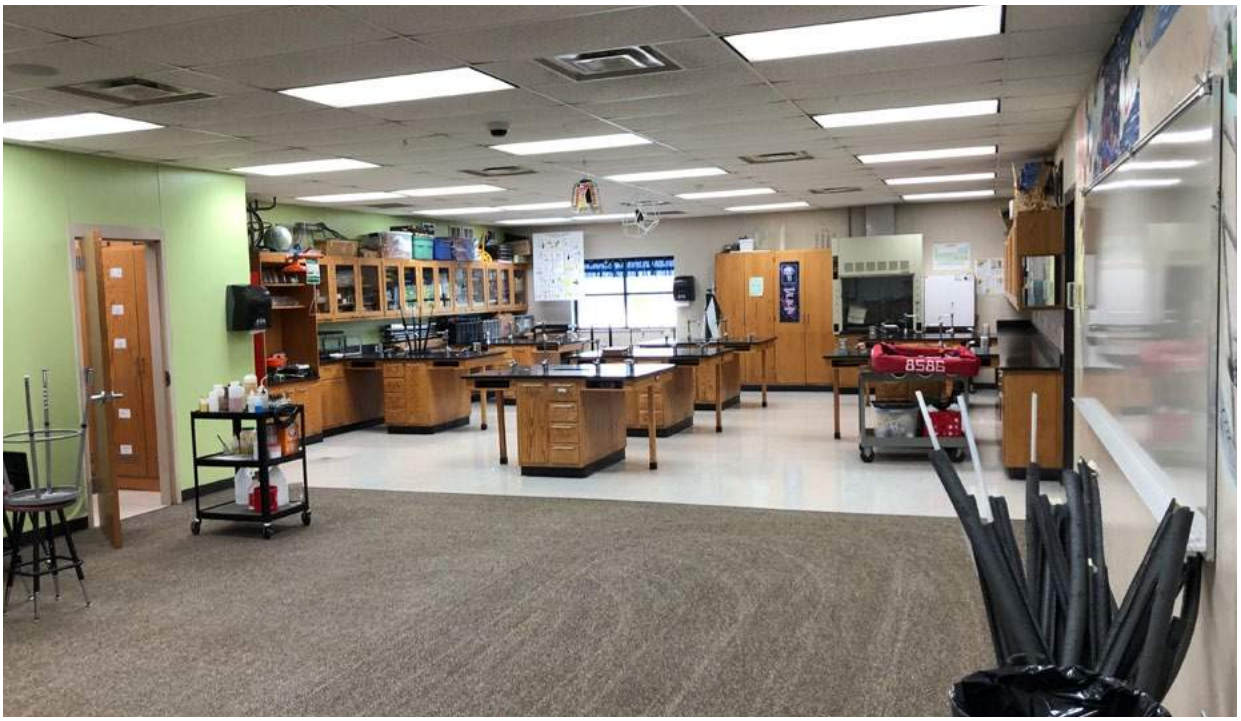
The elevator equipment room cannot be used for storage.

Ceiling tile is in bad shape thoughout all the classrooms.



Raised teaching platforms in Science rooms are not accessible.

The Media Center could benefit from improved lounge furniture for students.



There is not a handicap accessible lab desk in the science rooms.

There is no emergency eye wash station or handicap accessible sink in Science Room 208.

The single restroom on the second floor is not handicap accessible.

DEVILS LAKE HIGH SCHOOL

EXTERIOR EXISTING CONDITION PHOTOS

Sidewalk outside of Door 3 has sunk and is no longer handicap accessible.

The main entrance into the high school is not handicap accessible.

The sidewalk coming from LACTC is not handicap accessible.

DEVILS LAKE SPORTS CENTER

INTERIOR EXISTING CONDITION PHOTOS

No sprinkler system.

Corridor doors and frames are not fire rated and are aged. Panics on some doors are aged.

Certain doorknobs are not handicap accessible.

District Office Board Room is undersized and has no privacy or acoustic control. Superintendent's office is only accessible through this Board Room.

Ceiling tiles are in adequate shape, but the grids are yellow.

There are no handicap accessible shower stalls, sinks, or drinking fountains in the locker rooms.

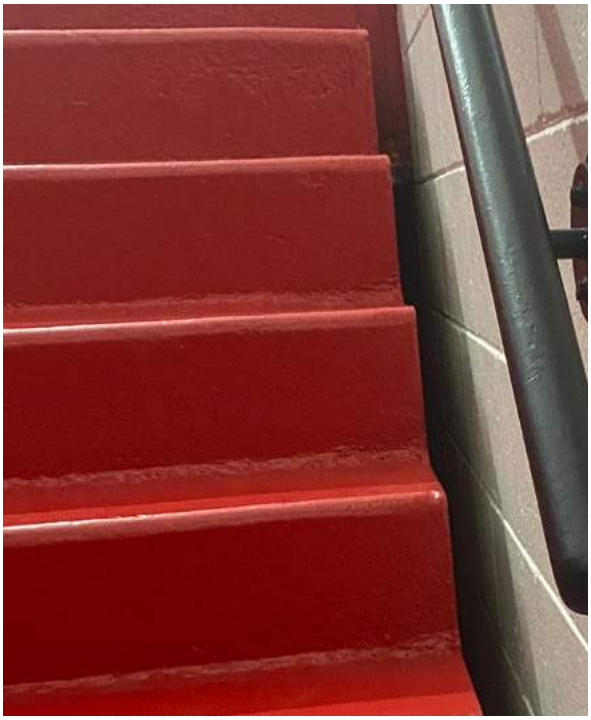
There is no proper handicap accessible toilet or urinal in the locker rooms.

Toilet partitions need a refresh in the women's restroom.

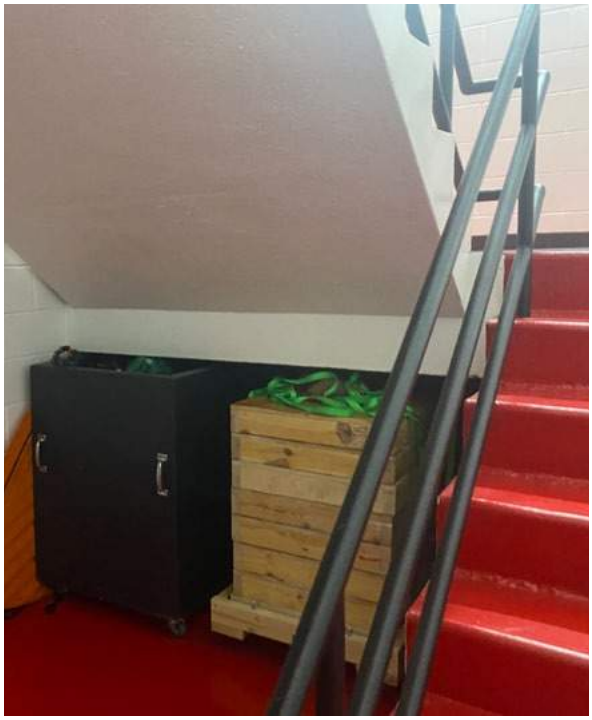
The ADA stall is not handicap accessible in the women's restroom due to grab bars, vertical bar, and stall width. The sinks in the women's restroom are not handicap accessible.

The men's restroom lacks a handicap accessible urinal.

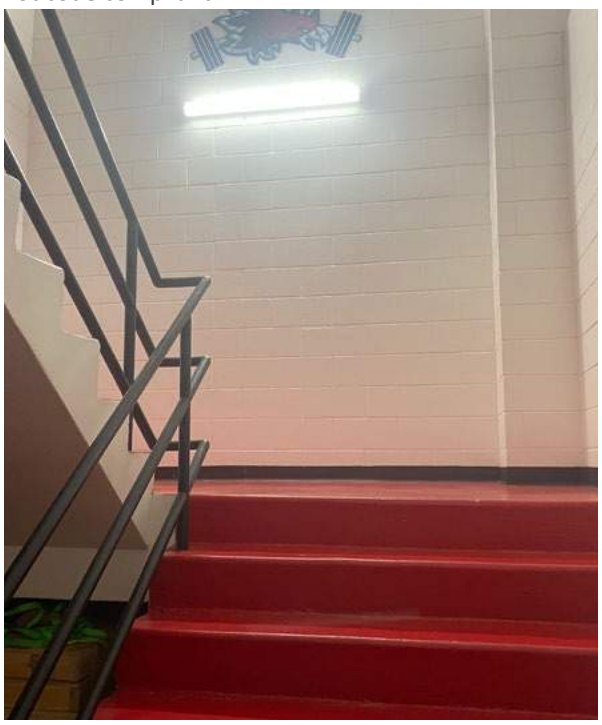
Southwest entrance is used as an office area.



There is a gap between the stairs and the wall that is not code compliant.



Space underneath stairs cannot be used for storage and is not up to code.



Hand and guard rails on stairs are not to code.

CONSTRUCTION ENGINEERS

3. Capital Maintenance Costs

Devils Lake High School and Sports Center

Description	Takeoff Quantity	Total Cost/Unit	Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Total Amount
D.L.H.S. & S.C. Code Compliance							
Fully Sprinkler Building - Add 6" Water Line	106,657 SF	$4.49 /SF	$478,997				$478,997
Public Restrooms and Locker room restrooms not ADA Compliai	106,657 SF	$4.48 /SF	$477,744				$477,744
Stairs do not Meet Code	106,657 SF	$2.28 /SF	$243,062				$243,062
New Elevator - Expand Shaft for ADA	106,657 SF	$2.46 /SF	$262,759				$262,759
Ramp at Door 2 with Railing	106,657 SF	$0.37 /SF	$38,946				$38,946
Repair Door 3 Concrete	106,657 SF	$0.08 /SF	$8,958				$8,958
Replace Sidewalk to LACTC Building to make it ADA	106,657 SF	$0.25 /SF	$26,198				$26,198
Add Ramp to Music room stage	106,657 SF	$0.02 /SF	$2,321				$2,321
Modify reception desk at Main Office	106,657 SF	$0.21 /SF	$22,217				$22,217
Add Ramp to Science labs teaching station	106,657 SF	$0.09 /SF	$9,290				$9,290
Rough access to mech room not code compliant	106,657 SF	$0.56 /SF	$59,718				$59,718
Add Ramp at main entrance to HS	106,657 SF	$0.37 /SF	$38,946				$38,946
Make Staff Bathrooms ADA	106,657 SF	$1.57 /SF	$167,313				$167,313
DL.SC. Corridor Door frames and hardware fire rated	106,657 SF	$0.10 /SF	$10,499				$10,499
Weight Room not Handicap accessible	106,657 SF	$0.90 /SF	$95,549				$95,549
Boiler Room not handicap accessible	106,657 SF	$0.45 /SF	$47,844				$47,844
Doors within building lack hardware - assumed 30	106,657 SF	$0.23 /SF	$24,616				$24,616
ADA workstations in science rooms	106,657 SF	$0.18 /SF	$19,508				$19,508
New Railings Overlooking Gym	106,657 SF	$0.62 /SF	$66,501				$66,501
Total D.L.H.S. & S.C. Code Compliance	**106,657 SF**	**$19.70 /SF**					**$2,100,987**
D.L.H.S. & S.C. Security							
General Security Improvements	106,657 SF	$0.00 /SF	$0				
Subtotal D.L.H.S. & S.C. Security	**106,657 SF**	**$0.00 /SF**					**$0**
D.L.H.S. & S.C. Educational Adequacy							
D.L.H.S. & S.C. Educational Adequacy	40,165 SF	$326.49 /SF				$13,113,424	$13,113,424
Subtotal D.L.H.S. & S.C. Educational Adequacy	**40,165 SF**	**$326.49 /SF**					**$13,113,424**
D.L.H.S. & S.C. Capital Maintenance							
Replace all Ceiling Tiles	106,657 SF	$5.45 /SF	$581,766				$581,766
Replace (50) Int Doors Frames and Hardware	106,657 SF	$1.27 /SF		$135,332			$135,332
Upgrade Aged Finishes	106,657 SF	$9.45 /SF		$1,008,429			$1,008,429
General Maintenance of Doors	106,657 SF	$0.56 /SF	$59,718				$59,718
General Maintenance of Windows	106,657 SF	$0.56 /SF	$59,718				$59,718
Window Replacement - Do not have enough information	106,657 SF	/SF					
Mechanical Upgrades	106,657 SF	$1.40 /SF	$149,295				$149,295
Replace recirculation pump							
Remove elect water heaters in bathrooms extend water heating system							
Pipe insulation at kitchen hot water heater							
Add eye wash station and ADA sink to science lab							
Mechanical Upgrades 10 years	106,657 SF	$18.08 /SF			$1,928,718		$1,928,718
Replace water meter piping							
Replace the rest of HVAC system							
Mechanical Upgrades 5 years	106,657 SF	$17.92 /SF		$1,910,803			$1,910,803
Replace the half of HVAC system							
Electrical Upgrades	31,500 SF	$13.28 /SF	$418,261				$418,261
Transfer switch for generator							
Fire Alarm Voice Controls							
Replace Cat 5 with Cat 6							
Elect Upgrades 5 years	106,657 SF	$8.96 /SF		$955,401			$955,401
Replace all interior lighting							
Elect Upgrades 10 years	106,657 SF	$1.68 /SF			$179,154		$179,154
Replace Generator							
Replace Roof	106,657 SF	$14.92 /SF			$1,591,518		$1,591,518
Total D.L.H.S. & S.C. Capital Maintenance	**106,657 SF**	**$84.18 /SF**					**$8,978,114**
Total			**$3,369,745**	**$4,009,965**	**$3,699,390**	**$13,113,424**	**$24,192,525**

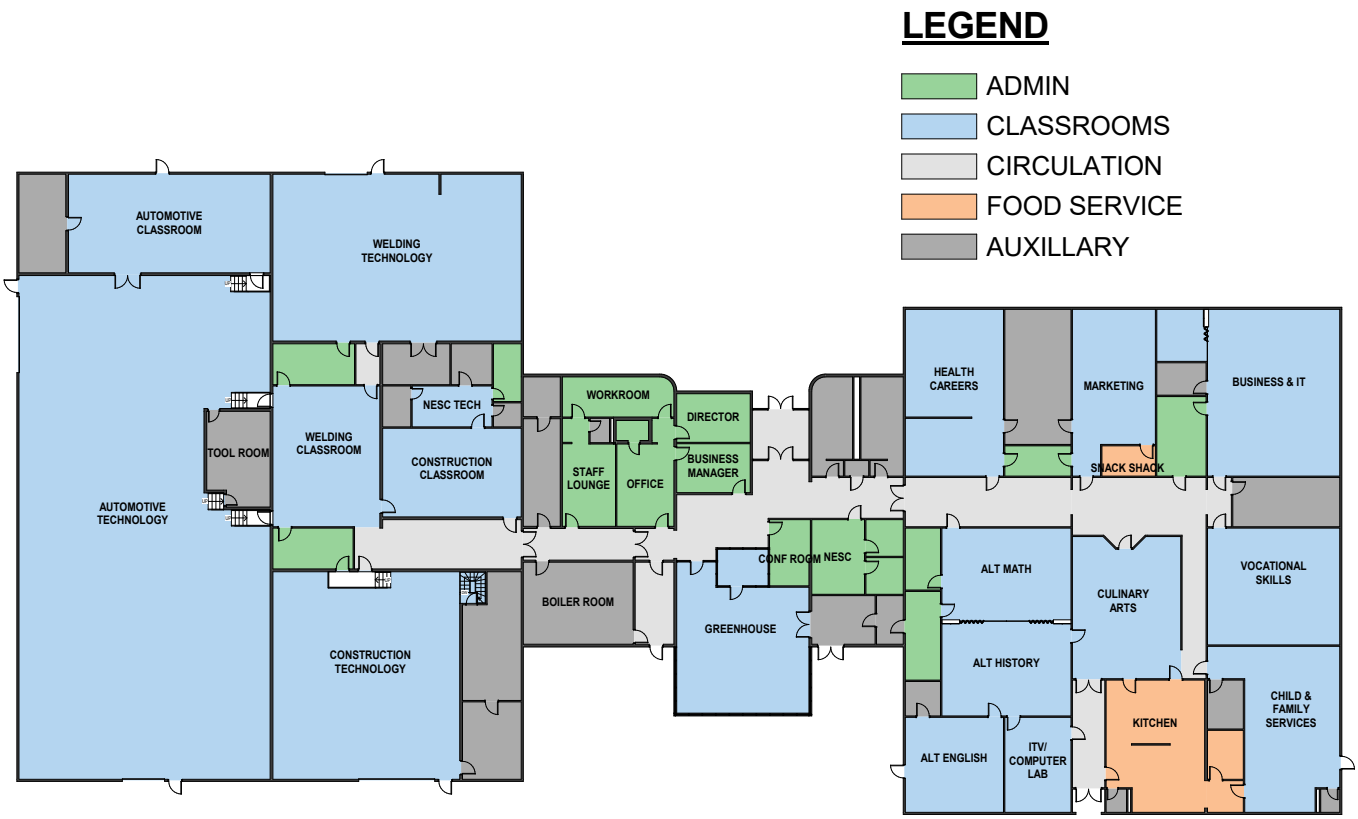
LAKE AREA CAREER & TECHNOLOGY CENTER

02 FACILITY ASSESSMENT

A. LAKE AREA CAREER AND TECHNOLOGY CENTER
EXISTING BUILDING INVENTORY

Room Schedule	
Department	**Area**
ADMIN	2,878 SF
AUXILLARY	4,210 SF
CIRCULATION	3,162 SF
CLASSROOMS	23,069 SF
FOOD SERVICE	945 SF
Grand total: 74	34,264 SF

Lake Area Career & Technology Center (LACTC) is located at 205 16th Street NW in Devils Lake, ND. Originally known as Lake Area Vo-Tech School, it was constructed in 1975. The roof was replaced 17 years later in 1992. LACTC is accessible from 5th Avenue NW and 16th Street NW. Most staff parks in the lot located North of the building, while most students park in the lot to the Southeast that is also used by the High School and the Sports Center.



B. EXISTING CONDITIONS

The analysis of the existing Lake Area Career & Technology Center has been broken down into three categories: code compliance/Americans with Disabilities Act (ADA) compliance, educational adequacy, and capital maintenance. The facility has been assessed for deficiencies as defined below:

1. Code Compliance/Americans with Disabilities Act (ADA) Compliance.
This includes evaluation of the current building codes required by the City of Devils Lake and the State of North Dakota. Non-compliant items within the building have been Identified and are listed below.

- The building is not fully sprinklered
    - Buildings that are larger than 12,000 s.f. are required by fire code to be fully sprinklered
- Corridor doors, frames and hardware are not fire rated and they are required to be if the building is not sprinklered
- Both men's and women's restrooms lack a vertical grab bar in handicap accessible stall
- The south entrance that most students come through lacks a vestibule and does not allow for protection from exterior extreme temperatures per energy code.
    - Lacks a secure entry for students
- The stair handrails and guards in the Construction Trades area (Room 202/204) of the building do not meet code requirements.
    - Handrails must be 36" tall and guardrails must be 42" tall
    - A sphere no larger than 4" can pass through any portion
    - A 4" kick plate is required.
    - Handrails don't meet code specified profile and dimensions; must be 1 1/2" diameter.
- Staff restroom does not meet maneuverability and clearance requirements.

2. Educational Adequacy
This is a review of applicable Department of Public Instruction recommendations as they relate to Devils Lake Public Schools' curriculum. To understand educational space deficiencies, we have evaluated educational models, curriculum configurations, and quantity and quality of existing spaces in comparison to the option of a modern, purpose-built educational facility.

Space	Current Square Footage	DPI Guideline Square Footage	Difference
Admin	4750	7,150	2400
Classroom (average)	733	900	167
Computer Lab	1131	1,200	69
Gym/PE	27629	19,400	8229
Kitchen	3196	7,580	4384
Cafeteria	3483	15,600	12117
Health	913	900	13
Art	973	1,500	527
Library	6134	5,000	1134
Music	2963	23,700	20737
Vo-Ag/CTE	20641	17,700	2941

ARCHITECTURAL FINISHES

Lake Area Career and Tech Center was constructed in 1975. There has been no significant renovations or replacements since initial construction other than a roof replacement in 1992. Overall the building has been well maintained, however due to aging the finishes show significant signs of wear. Acoustic ceiling tile and VCT flooring in particular have exceed their useful life expectancy, and a majority of the wood doors and casework are dated and could use a refresh. A majority of the spaces seem to have evolved out of necessity without thought to exiting or circulation, making areas confusing to navigate. Additional surface mounted electrical and data drops have been added in many locations, adding to the unfinished look to certain areas within the building.

Exterior

The exterior façade of the building consists of precast concrete double tees and precast concrete flat panels along with red metal panel. Double tees have been painted, and metal panel looks good as does the parapet cap and flashing. The concrete could use some paint touch-up at locations, but overall is in good condition. The majority of the windows and exterior entrances are aluminum and are in good condition. Remaining exterior doors and frames are hollow metal and again are in good condition. As stated earlier, the roof was replaced in 1992 and will need attention in the next 5 to 10 years if not sooner.

Openings

General maintenance of the doors and windows is required. This includes replacement of weather stripping, painting, caulking, and general repairs. Throughout the interior of the school, door, frame, and hardware replacement is required due to age, code compliance, security, or a combination of these. The extent of window replacement throughout the facilities is dependent upon the installation of a sprinkler system.

Ceilings

There are several ceiling types within the building, but mostly can be categorized as either acoustical ceiling tile or painted gypsum. The ceiling tile throughout the School shows signs of water damage and staining that should be addressed. There are also several ceiling tiles that have been modified for technology upgrades that should be replaced. There are several areas of gypsum ceiling that need patching, cleaning, and painting. This is not an immediate need but should be phased in through a capital maintenance plan.

Flooring

There are many different flooring types throughout LACTC. Overall, the carpeting and floor tile are in satisfactory condition.

STRUCTURAL

No observable issues at this time.

MECHANICAL

Fire Suppression

The facility does not feature a fire suppression system.

Plumbing
Plumbing fixtures in toilet rooms are vitreous china with hands free operation. The fixtures appear in good condition and should continue to operate with occasional maintenance on the flush valves.

The lavatories in the toilet rooms are a mixture of wall-hung and counter mounted, made from vitreous china. The faucets are hands free and should remain functions with occasional maintenance on the faucets.

Some of the drinking fountains have been upgraded to include bottle fillers and appear in good condition while others are an older style with no bottle filling capabilities. The older drinking fountains should be replaced.

The Construction Technology, Automotive Technology, and Welding Technology shops feature half-round wash stations which appear in good condition.

The Construction Technology, Automotive Technology, Welding Technology shops have an emergency shower/ eyewash station which are piped from the half-round handwash station. The emergency stations are newer and in good condition, although the piping and mixing valve are all exposed and subject to tampering. The mixing valve and piping to the emergency station should be concealed.

The Automotive shop features a trench drain system that appears in good condition.

The cold and hot water piping is copper and is in good condition.

The hot water plant consists of two Navien tankless water heaters, model CR-240, gas-fired.

Provide commentary on water supply.

Climate Control
The offices are served by a Trane air handler, Climate Changer model, and includes a DX cooling coil which was not functioning at the time of the visit. An inline DX coil was installed in the supply ducting downstream of the air handler as a replacement of the original coil. Reheat coils are in each zone supply duct for zone control. The control valves feature pneumatic actuators and show signs of leaking. The control valves should be replaced.

The supply duct to each office zone is not insulated and does not meet the current energy code.

The entry vestibule is heated by a fan-forced, hydronic, cabinet unit heater. The cabinet appeared in good condition and should remain functional the foreseeable future.
Toilet room heaters are convector type and appear in good condition.

The Construction Technology shop, Automotive Technology shop, and Automotive Classroom are each supported by Trane Torrivent air handlers which feature a hydronic heating coil and economizer dampers. The air handlers are

older and feature a mixture of pneumatic and electronic controls. Fan belt guards are missing on some of the air handlers and should be re-installed. The pneumatically actuated control valves should be replaced with electrically actuated control valves. The air handlers should be scheduled for replacement in the next 10 years.

The classrooms in the shop addition are supported by a Trane air handler, heating only, suspended above the ceiling. The unit should be scheduled for replacement within the next 10 years and cooling capability added. The pneumatically actuated control valves should be replaced with electrically actuated control valves.

The greenhouse hydronic unit heaters should be scheduled for replacement in the next 10 years. The piping to the fin tube heaters along the wall is showing signs of some leaking and should be scheduled for replacement in the next 10 years.

The culinary arts and family science classrooms are supported by a Daikin packaged roof-top unit, gas fired. The unit is in good condition and should require only normal maintenance over the next 10 years. Reheat coils are in each zone supply duct for zone control. The control valves feature pneumatic actuators and show signs of leaking. The control valves should be replaced.

Ventilation and Exhaust
Mechanical code requires ventilation for occupied spaces at specified rates and exhaust for certain types of spaces. Ventilation can be delivered through mechanical systems or through natural ventilation systems. Exhaust must be accomplished by mechanical systems.

The kitchen exhaust system features a Type 1 wall mount hood with fire suppression and grease capture system. The hood appears in good condition.

The dishwasher does not have an exhaust system to remove heat and humidity. Ceiling tiles and grid are showing signs of decay due to excessive humidity. A hood and exhaust fan should be provided.

The Automotive shop is supported by an inline exhaust fan with low intake for removing heavier-than-air fumes. The system appears in good condition.

The Welding Technology shop is supplied with a relatively new variable-volume York air handler for providing make-up air for the exhaust systems. The air handler is in good condition. There are two weld exhaust systems. A newer exhaust system with flex arms for spot exhaust is in good condition. The welding booths are supported by an exhaust hood with localized exhaust ducts at each booth table. The welding booth exhaust system shows signs of wear and should be replaced within the next 10 years.
The greenhouse exhaust fans show signs of wear and should be scheduled for replacement in the next 10 years.

Central Plants
The heating plant consists of two Weil-McLain boilers, model 88, gas-fired with 2,050 MBH input each. The water

heating capacity is 1,420 MBH each. The boilers are older and should be scheduled for replacement within the next 10 years.

Pipe insulation should be tested for asbestos.

Temperature Controls
Temperature controls are a mixture of pneumatic and electric. The pneumatic controls systems are becoming increasingly difficult to maintain due to difficulty in obtaining repair parts and components. The system should be scheduled for replacement over the next 5 years.

ELECTRICAL

Lighting
Light fixtures throughout the entire facility incorporate T8 fluorescent lamps with electronic ballasts. The general condition of the interior light fixtures that incorporate T8 lamps is noted as good. Most of the lights are original, except the main shop areas which have been upgrade to energy efficient fixtures utilizing T5HO lamps. The rest of the lighting system is reaching the end of its viable life. Replacing the existing lighting with new LED fixtures should be considered in the near future.

Exterior lighting is primarily metal halide wall packs and compact fluorescent downlights. These lights should be replaced with LED fixtures within the 5-10 year time frame. Lamp replacement costs and energy savings will provide a quick payback.

Emergency egress lighting is accomplished with self-diagnostic battery backup units. The batteries have been maintained and the units appear to be functional. Likewise for the LED exit signs. The emergency lighting should remain viable beyond the 10-year mark.

Power
The building's electrical service is a 2000 Amp, 120/208 Volt, 3 Phase system. The main distribution panel utilizes fused disconnect switches to provide power distribution through the building. There are very few spare switches, and there is not physical space to install additional switches if required. There is a sub-distribution panel (Panel DP2) on the east end of the building that shows signs of significant water intrusion. This corroded panel should be replaced as soon as possible.

The branch panels in the facility are circuit breaker panels by General Electric. The branch panels do not have very many spares and spaces to accommodate additional circuits if required. Replacement circuit breakers are readily available for these panels, and they should remain viable beyond the 10-year mark.

SYSTEMS

Fire Alarm
The building incorporates an addressable Simplex fire alarm system. It includes smoke detector coverage in the corridors and heat detector coverage in the shop spaces. ADA compliant Audible/Visual annunciation devices are

installed throughout the facility. Pull stations at the building entrances are not ADA compliant. The pull stations should be lowered to comply with ADA requirements in the near future.

It should be noted the recently adopted building code requires new fire alarm systems to include Voice Evacuation type annunciation. Although the existing system is grandfathered in, it can be upgraded to this new requirement for educational occupancies by adding the voice communications module and replacing the existing annunciation devices with Speaker/Visual devices.

Network Cabling
Network cabling is obsolete Category 5. This cabling does not provide the bandwidth that is typically required by today's networks. The cabling should be upgraded to Category 6. It is also recommended to add additional Category 6 cables to support Wi-Fi nodes.

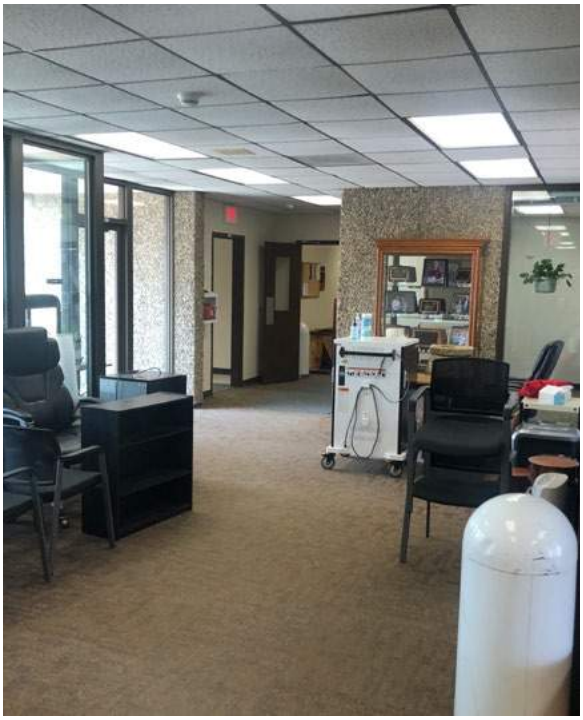
Public Address
The building includes a functional intercom and corrected clock systems. Both systems should remain viable beyond the 10-year mark.

Surveillance
Surveillance cameras cover the interior corridors and exterior building entrances. The system is adequate and should remain viable beyond the 10-year mark.

Security
The district wide access control system controls the exterior doors. Intrusion detection is also included. The system should remain viable beyond the 10-year mark.

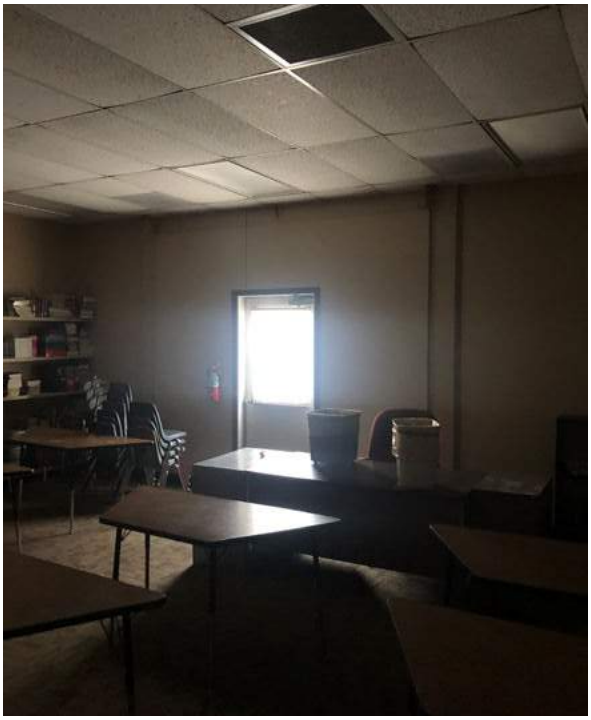
LAKE AREA CAREER & TECHNOLOGY CENTER

INTERIOR EXISTING CONDITION PHOTOS

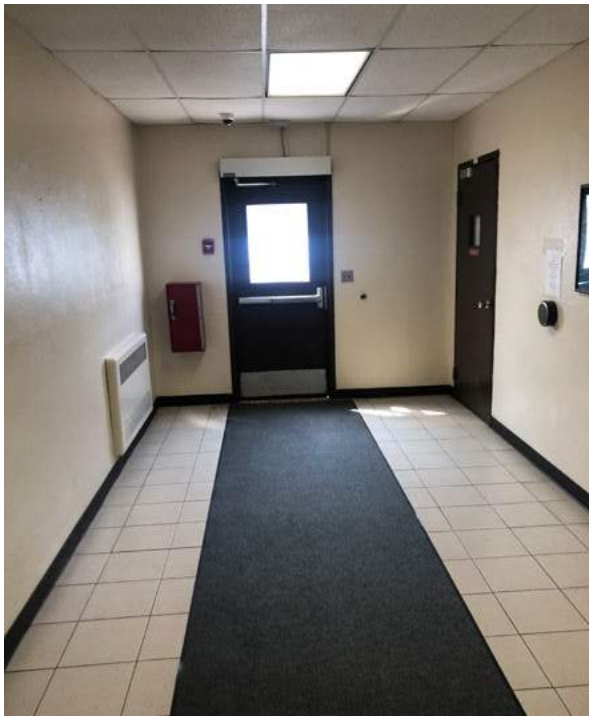


No sprinkler system.

Doors and frames in corridor are not all fire rated.



No insulation in Room 301, used to have a garage door.



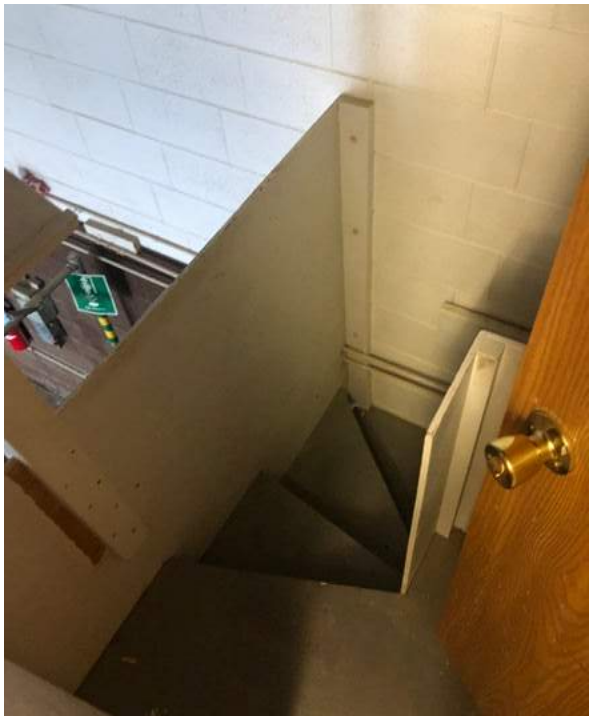
No vestibule at back door where students enter the building.

Casework in main office is not handicap accessible.

Sink and countertop not handicap accessible in staff room.

Toilet in staff room restroom is not handicap accessible.

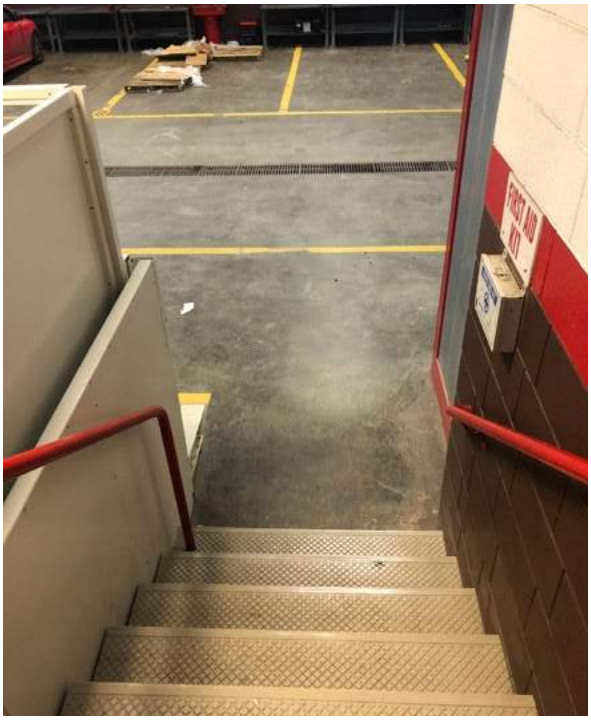
"Snack Shack" school store is only accessible through the Marketing classroom.

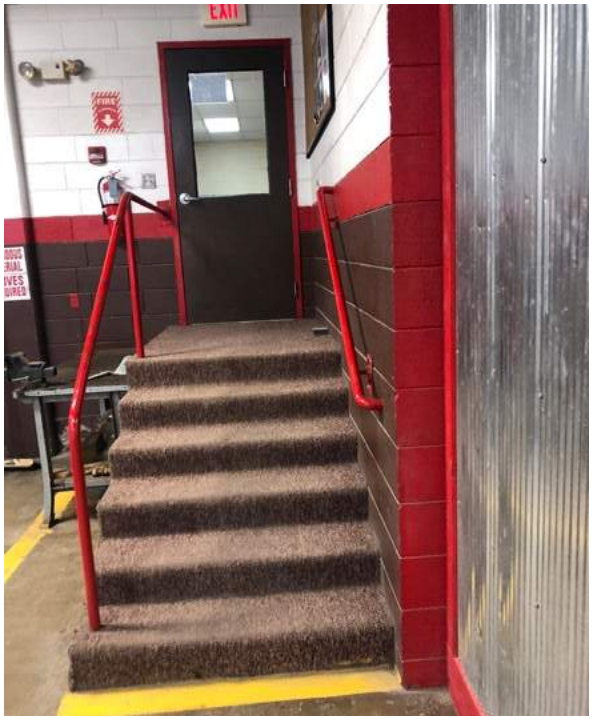


Mezzanine in construction technology area is not handicap accessible and is not to code because it is enclosed.

Walls for culinary arts classroom don't meet the ceiling.

Alternative HS classrooms have no acoustic control and are considered intervening spaces, and are not code compliant.





Hand and guard rails are not handicap accessible in automotive technology and construction trades classrooms.

Ceiling tile is not in good shape.

LAKE AREA CAREER & TECHNOLOGY CENTER

EXTERIOR EXISTING CONDITION PHOTOS

Sidewalk coming from High School to LACTC is not handicap accessible.

Student entrance is not a secure entry and lacks an interior vestibule.

CONSTRUCTION ENGINEERS

3. Capital Maintenance Costs

Lake Area Career and Technology Center

Description	Takeoff Qty	Total Cost/Unit	Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Total Cost
L.A.C. & T.C. Code Compliance							
Fully Sprinkler Building - Add 6" Water Line	34,264 SF	$5.17 /SF	$177,161				$177,161
Replace Corridor Doors, Frames, and Hardware with Fire Rated	34,264 SF	$1.62 /SF	$55,337				$55,337
Add Vertical Grab Bars in Handicap Accessible Stall (assume 8)	34,264 SF	$0.04 /SF	$1,473				$1,473
South Entrance - Add Interior Vestibule	34,264 SF	$0.65 /SF	$22,145				$22,145
Replace Railings at Construction Trades	34,264 SF	$0.61 /SF	$20,876				$20,876
Make Staff Restroom Larger/ Expand into Office for ADA	34,264 SF	$1.15 /SF	$39,401				$39,401
Enclose Mezz in Construction Technology Area	34,264 SF	$0.13 /SF	$4,375				$4,375
Sidewalk High School to L.A.C.T. ADA Accessible	34,264 SF	$0.77 /SF	$26,315				$26,315
Add Door to School Store	34,264 SF	$0.09 /SF	$2,956				$2,956
Insulation Room 301	34,264 SF	$0.17 /SF	$5,975				$5,975
Total Code Compliance	**34,264 SF**	**$10.39 /SF**					**$356,013**
L.A.C. & T.C. Security							
Secure Entrance - Buzz Window for Call in	34,264 SF	$0.88 /SF	$29,992				$29,992
Total Security	**34,264 SF**	**$0.88 /SF**					**$29,992**
L.A.C. & T.C. Educational Adequacy							
Addition SF Based on DPI Guideline - waiting on updated chart	SF	/SF				$0	
Total Adequacy	**SF**	**/SF**					**$0**
L.A.C. & T.C. Capital Maintenance							
Interior Upgrades	34,264 SF	$28.60 /SF		$979,796			$979,796
Replace outdated flooring ceiling casework doors and paint							
Exterior Upgrades	34,264 SF	$1.75 /SF	$59,984				$59,984
Touch up paint at precast double tees							
Replace Roofing	34,264 SF	$19.48 /SF		$667,463			$667,463
Mechanical Upgrades	34,264 SF	$3.35 /SF	$114,869				$114,869
Conceal piping at eye wash							
Replace old drinking fountains							
Fix leaking control valves							
Fan belt guards CT AT AC							
Leaking controls at CA FSC RTU							
Dishwasher hood and exhaust systems							
Mechanical Upgrades - in 10 years	34,264 SF	$13.25 /SF			$454,135		$454,135
Replace Air Handlers in CT AT AC							
Replace Class Room Shop Air handler add cooing							
Greenhouse hydro unit heaters and fin tube							
CA FSC RTU Maintenance							
Welding booths exhaust system							
Greenhouse fans							
Testing pipe insulation for asbestos							
Boiler replacement	34,263 SF	$13.95 /SF	$478,037				$478,037
Mechanical Upgrades - in 5 years	34,264 SF	$6.00 /SF		$205,529			$205,529
Upgrade Controls							
Electrical Upgrades	34,264 SF	$14.97 /SF	$513,031				$513,031
Elect Panel							
Fire Alarm Pull Systems							
Fire Alarm Voice Upgrade							
Replace Cat 5 with Cat 6							
Replace Lighting Interior and Exterior							
General Maintenance of Doors and Windows	34,264 SF	$1.74 /SF	$59,755				$59,755
New ADA Casework in Main Office	34,265 SF	$1.20 /SF	$41,053				$41,053
Frame Walls in Culinary Arts Classroom past Ceiling in 5 Years	34,264 SF	$0.89 /SF		$30,442			$30,442
Total Capital Maintenance	**34,264 SF**	**$105.19 /SF**					**$3,604,093**
Total			**$1,652,734**	**$1,883,229**	**$454,135**	**$0**	**$3,990,098**

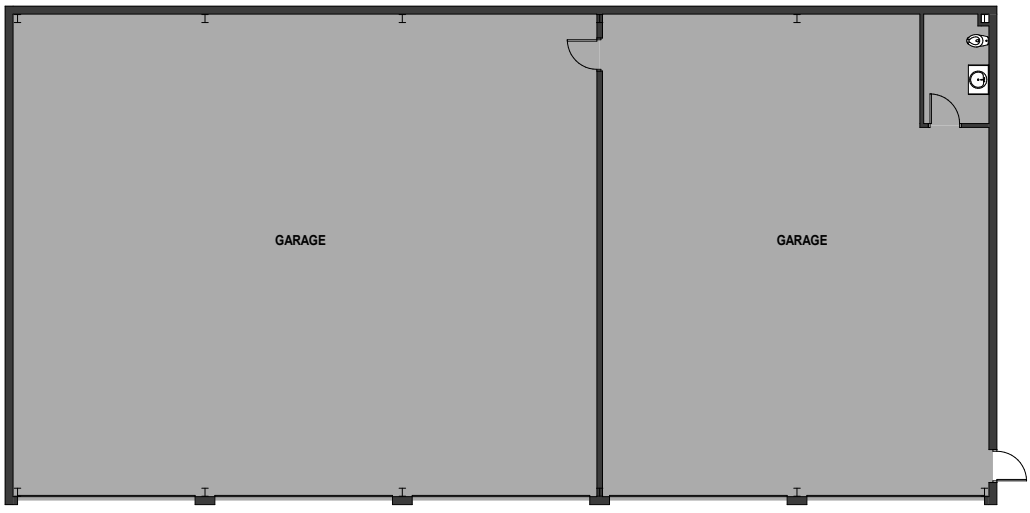
BUS GARAGE

02 FACILITY ASSESSMENT

A. BUS GARAGE
EXISTING BUILDING INVENTORY

Bus Storage	
Department	**Area**
AUXILLARY	4,728 SF
Grand total: 2	4,728 SF

The Bus Garage is located at 1601 College Drive N in Devils Lake, ND. It is located on the same site as the High school, Sports Center, and LACTC. The building is technically located on the nearby technical college's land, but the facilities share their adjoining lands. The District Transportation Department maintains a fleet of 24 school buses, 2 transit buses, and 2 motor coaches and operate 17 routes on a daily basis. They also have 3 mini buses, 4 vans, a car, and a pickup. Currently, the bus garage only has space for 5 buses, and only two of those bays are heated.



First Level Floor Plan

B. EXISTING CONDITIONS

Currently the bus garage only has space for 5 out of 24 school buses, and only two of those bays are heated. This space is sufficiently undersized for the needs of the district and there is no indoor, heated location for staff to maintain the vehicles. It has been studied sufficiently that the maintenance costs for vehicles that are stored outside is significantly higher than vehicles stored indoors.

There is one existing toilet room located within the bus garage; this facility does not meet handicap accessibility or code requirements.

ARCHITECTURAL FINISHES

There have been no significant renovations or repairs since initial construction. Overall, the building has been well maintained, however due to aging, the finishes show signs of wear and overall the building has exceeded its useful life expectancy. The building is also significantly undersized for a District of Devils Lake's size and does not properly serve the school district.

Exterior

The exterior facade of the building is red and white metal panel, with corrugated metal roof. There are various dents and cracks in the metal panel that should be considered. The overall building is in decent condition.
The exterior man doors lack hardware that does not require tight grasping or other special abilities to operate.

BUS GARAGE

EXISTING CONDITION PHOTOS

3. Capital Maintenance Costs

Bus Garage							
Description	Takeoff Quantity	Total Cost/Unit	Critical	Deferred	Deferred	Adequacy	Total Amount
Bus Garage Code Compliance							
Restrooms ADA Compliant	4,728 SF	$8.85 /SF	$41,828				$41,828
Total Compliance	**4,728 SF**	**$8.85 /SF**					**$41,828**
Bus Garage Storage Adequacy							
Heated Bus Storage Facility for 28 busses	26,476 SF	$94.90 /SF				$2,512,655	$2,512,655
Total Adequacy	**26,476 SF**	$94.90 **/SF**					**$2,512,655**
Totals			**$41,828**	**$0**	**$0**	**$2,512,655**	**$2,554,483**

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