WINSHIP ELEMENTARY SCHOOL

A. EXISTING BUILDING INVENTORY

Winship Elementary School is located at 1412 5th Avenue N in Grand Forks. The original building was built in 1973 and there was a remodel in 2001 to rework the hallways in the building to allow for more emergency exits.

The school is accessible by N 15th Street to the west, 6th Avenue N to the north, N 14th Street to the east, and 5th Avenue N to the south. There is a small, staff parking lot to the southeast of the school and parent drop off/pick up happens directly on 15th St.

FLOOR PLAN

MAIN LEVEL

B. ARCHITECTURAL FINISHES

SUMMARY

Winship Elementary School was completed in 1973 and underwent a remodel in 2001. The school lacks smaller learning spaces to accommodate breakout sessions for a variety of needs. Many of the classrooms are split by shelves and partial walls to simulate smaller areas for individualized learning, which is not ideal (001). There are two kindergarten classrooms that have entrances directly off the building's main entryway vestibule, creating a safety and security concern. The nurse's office lacks space to accommodate both the nurse and a student (002). A larger room would allow for more than one student at a time to be there with the nurse. More storage space within the building is needed as the mechanical room is filled with surplus furniture and other materials (003). The casework in the building is dated but is functionally sound (004). The finishes on the interior of the school are in relatively good shape with flooring in the cafeteria and gymnasium being recently replaced. The exterior of the building is in very poor condition and needs attention.

SITE

The asphalt on the site has a lot of cracking and is uneven near the entrances, which creates issues for accessibility (005). Numerous downspouts do not have concrete splash blocks underneath them to reduce water damage to the site (006). Downspouts near the main entry door wash rainwater from the roof drainage over the site paving causing for ice damming in winter months. This creates a hazard for students, staff, and parents entering the school from this door as this area becomes extremely slippery. Door 4 needs a concrete stoop on the exterior (007). Several emergency exit doors do not provide access to a public way (008). Neither of the playgrounds are accessible and both have sand bases which should be swapped with a safer alternative (009). There is a parking shortage causing staff and visitors to park on the street. The current drop-off area is not ideal as it takes place directly off the street. The residential streets are narrow creating congestion and potentially unsafe drop-off and pick-up conditions. Winter months only heighten these concerns.

MASONRY

The exterior brick is overall in good condition. There is some cracking seen near the exterior doors of the mechanical room. Caulking around the windows could use some attention (010).

ADDITIONAL EXTERIOR MATERIALS

Besides the brick, the rest of the exterior is made of different types of painted wood siding. The wood on the exterior is in very poor condition and should be replaced in the coming years. The wooden baseboard does not have the appropriate flashing for water protection (011), therefore the wood is rotting and falling off in several areas (012, 013 ,014). The paint is peeling off as well, further reducing the water protection of the exterior (015, 016). The plastered wood over the entrance is showing signs of age and is deteriorating (017).

ROOF

The roof is around 12 years old, but there haven't been any major issues. There is paint flaking off certain portions of the coping and flashing (018). The gutter adjacent to Door 3 is damaged (019).

ARCHITECTURAL FINISHES CONTINUED

OPENINGS
The current windows are original from 1973 and could use replacement as they are nearing the end of their lifespan and are not energy efficient. No visible issues were noted with the doors.

CEILINGS
The majority of the ceilings are acoustical ceiling tile (ACT) and are in great condition. There are only a few water spots seen in the resource room (020).

WALLS
The main interior wall types are painted concrete masonry units (CMU) and painted gypsum board. There is some cracking in the CMU seen within the gymnasium (021, 022). A gypsum board wall in the gymnasium needs painting after an attached bench was removed (023). In Room 147C, the CMU paint has patches and could use some retouching (024).

FLOORING
The floors in Winship are either carpet or various types of tile. The carpet in the hallway was recently replaced, but the classrooms still have old carpet (025). Some portions of original tile in the bathrooms, offices and support spaces are dated, but still in relatively good shape. The vinyl flooring in the cafeteria was recently updated. The gym floor was recently redone and is in great shape (026).

SECURITY
Although security cameras are present at the doors, there is no direct visibility from the office to the main entrance. Ideally, all visitors should be directed into the office upon entry, before gaining access into the school.

C. MECHANICAL/ELECTRICAL ASSESSMENT

FIRE PROTECTION

There are no fire sprinkler systems currently installed anywhere in the building. Depending on the level of work performed in the building, a fire suppression sprinkler system may need to be installed throughout the building.

PLUMBING

Plumbing piping throughout the building is concealed in the walls and above the ceilings in public areas. Piping that can be observed in mechanical spaces appears to be in good condition. Maintenance staff reported that there have not been issues with leaking pipes or other similar deficiencies.

The restroom plumbing fixtures throughout the building are white vitreous china fixtures. Student area water closets and urinals have manual operated flush valves and lavatories have manual faucets. Staff restroom water closets have sensor activated flush valves. The sinks in the classrooms and break rooms are stainless steel with manually operated faucets. Classroom sinks also have bubblers for drinking water.

Domestic hot water for the building is produced by a single 76 MBH gas fired water heaters with integral storage tanks. The water heater was built in 2017 and is in good condition.

Thermostatic mixing valves meeting ASSE 1070 requirements should be added to public lavatories for scald protection.

HEATING

Heating for the building comes from ten (10) gas fired rooftop units and one (1) gas fired furnace. Rooftop units were installed in 2017 and are in good condition. Rooftop units have indirect fired gas burners. Two-stage gas valves are provided for some heat output modulation but have limited turndown. During shoulder seasons, when outside air is cooler, but the space heating requirements are minimal, this can lead to significant swings in discharge air temperature and reduced thermal comfort.

An existing hot water heating system was installed throughout the building but has been removed. Piping and hot water cabinet unit heaters have been abandoned and can be seen in vestibules and by exterior doors. No new supplemental heating system was provided.

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED

CMTA

VENTILATION AND EXHAUST

The ventilation and exhaust systems in the school comes from ten (10) rooftop units, one (1) furnace, and various exhaust fans. Rooftop units were installed in 2017 and are in good condition.

With the limited capacity and modulation for the heating and cooling of the single zone rooftop units, outside air is often limited to mitigate some comfort issues. The rooftop units did not appear to have controls or systems in place for outdoor air measuring and monitoring. Indoor Air Quality should be addressed throughout the building to meet ASHRAE 62.1 for controllable ventilation rates.

Roof mounted exhaust fans are provided for the building with the exhaust fan for the kitchen being an upblast grease exhaust time. The exhaust fans serving the restrooms in the building were not operational at the time of the walkthrough and should be replaced with new.

AIR CONDITIONING

Air conditioning systems in the school consists of ten (10) packaged DX rooftop units, and one split system AC unit with associated cased indoor coil. Rooftop units were installed in 2017 and are in good condition. Compressors for the air conditioning system are either single stage or two stage depending on size. These single zone cooling units offer little dehumidification during part load cooling days when the cooling either cycles on and off, or when significant cooling is not required.

AUTOMATIC TEMPERATURE CONTROLS

Standalone controls with low voltage thermostats are provided for each of the rooftop units and the furnace in the building. These offer limited control of the equipment and no capability for monitoring or alarm from the system. There is no building wide Building Automation System (BAS) currently installed in the building.

A Johnson Controls Inc. (JCI) control system was installed originally in the building but has since been abandoned.

There are not proper controls or air flow monitoring to control ventilation rates based on occupancies or to verify ASHRAE 62.1 requirements for recommended outdoor air are being met. It is recommended that all existing pneumatic controls be replaced with DDC systems. The DDC system should be integrated with the existing Grand Forks Public School's Building Automation System (BAS). The system would be integrated across the district to allow for single stop monitoring and controls of all buildings in the district.

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED

ELECTRICAL SERVICE

- Power is delivered to facility via electrical service provided by Xcel Energy.
- The electrical service consists of a 225kVA 208/120V 3-phase padmount transformer located near southeast entrance of the building. Power is routed underground from the transformer to a CT cabinet located within the service entrance electrical room to the north. Power is then routed to the main service entrance switchboard adjacent to the CT cabinet.
- Peak load on this transformer in the past 12 months was 65kW (181A), as provided by Xcel Energy.
- Electrical service appears to be acceptable, as is. Capacity is more than adequate.

STANDBY POWER

- A generator is not currently located on-site.
- No improvements are suggested for generator power. While emergency generator power is useful, it is not required.

POWER DISTRIBUTION

- The building's main electrical service is delivered underground into a 208/120V 3-phase 1200A main fused disconnect. Power is the routed from the disconnect to a 1200A ITE FC-20 switchboard. Switchboard was installed in 1974 and is original to building. Power to all areas of the building is supplied from this main switchboard via fused disconnects. This includes various distribution panels, branch panels, and mechanical equipment.
- All electrical panels are also original to building and are at or nearing their end of useful life.
- While all electrical distribution equipment is still operating correctly, it is suggested that all equipment be replaced in the near future. All equipment is near or past its end of useful life and can, at some point in the near future, present a safety concern.
- No maintenance receptacles were observed at the roof level for the maintenance of mechanical equipment. Receptacles are required by Code.

LIGHTING

- The large majority of the building interior consists of fluorescent lighting. Original gym light fixtures remain, but bulbs have been replaced with LED.
- An upgrade of all interior lighting to energy-efficient LED lighting is suggested. This would cut lighting energy usage by 50-75%.
- Limited exterior lighting was observed. Lighting at exterior has been upgraded to energy-efficient LED lighting with either new light fixtures, or new LED bulbs within existing light fixtures.
- It is suggested that additional exterior lighting be added for safety and security purposes. All new lighting is recommend to be LED.
- Emergency egress lighting provided via battery pack lighting. Exit signage appeared to be adequate.
- The addition of building mounted exterior emergency egress lighting at each and every exit door is suggested.

LIGHTING CONTROL SYSTEMS

- All lighting within school was noted to be controlled via manual toggle switch. Very few areas capable of dimming control.

MECHANICAL/ELECTRICAL ASSESSMENT CONTINUED

- Upgrade of all lighting controls throughout to digital lighting management is suggested. This includes, but is not limited to, occupancy sensors, vacancy sensors, daylight sensors, dimming controls in majority of spaces, and digital monitoring of all controls via manufacturer provided software.
- All exterior lighting is controlled via centrally-located photocell.
- All exterior lighting control is suggested to be tied into digital lighting management, as outline in interior lighting portion above.

COMMUNICATIONS SYSTEMS

- Majority of data cabling within school consists of Category 5 and 5e cabling, with all newly-installed cabling being Category 6. Several wireless access points were noted throughout building. Coverage seemed to be adequate for general use.
- Telecom service appears to be adequate and is being updated over time, internally.
- Intercom system consists of Simplex 5100 Series Building Communication System. Recessed speakers were noted to be located all throughout circulation areas, in all classrooms, and in almost all “normally-occupied” spaces.
- IP phones are located in all classrooms for room-to-room communication.
- Centrally-controlled clock system is manufactured by Simplex with clocks located all throughout school. All communication between clocks and central system is done via hardwiring. Clocks consist of primarily analog devices. It was stated that as clocks become unusable, they are replaced by simply battery-power clocks.
- It is suggested that the existing intercom system be updated to new IP system throughout entire school. This would provide the functionality to adjust the utilization and grouping of each individual speaker, as desired. This system would also include an upgraded wireless clock system. The intercom system and clock system would communicate with manufacturer provided software to set schedules, announcements, bells, etc.
- Classroom technology varied between classrooms. Technology observed consisted of digital displays and classroom sound reinforcement.

SAFETY & SECURITY SYSTEMS

- Electronic door security was observed on three out of five exterior doors.
- It is suggested that additional door security is added to all exterior doors for the purposes of access control and monitoring.
- Security camera systems, at the interior and exterior, have been updated over time to IP-based cameras. A buzz-in system consisting of a 2-way speaker and camera is located at the main entrance.
- System appears to be adequate and can be easily added to by school’s IT department, as necessary.
- Fire alarm control panel is Simplex 4020. Pull stations noted to be located at each exit of building. Fire detection noted to be adequate. Notification consists of strobes and horn/strobe devices. Devices were noted to have been updated within the past several years.
- It is suggested that the fire alarm system be upgraded to a voice-capable system as is currently required by the North Dakota Building Code This system would emit voice messages instructing occupants what to do in an emergency situation. This would be in lieu of a horn sounding in an emergency, as the system currently does.

D. EXISTING DEFICIENCIES

The analysis of the existing Winship 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 Grand Forks and the State of North Dakota. Non-compliant items within the building have been identified and are listed below.

- The building does not have a sprinkler system.
- Classrooms that have no sprinkler system need two ways of egress per fire codes.
- Traditional wire glass throughout the building is no longer to code as an acceptable type of safety glass. (027)
- Sinks in classrooms and offices are not accessible. (028)
- Many doors throughout the building have hardware that is not accessible. (029)
- The bathrooms accessed through Room 102D are not accessible. (030)
- Doors 1, 3 and 7 are not protected with an enclosed vestibule, as required by energy code. (031, 032)
- Prep surfaces in the kitchen need to be stainless steel for food safety. (033)
- Staff restroom is not accessible. (034)
- The library is lacking a secondary exit per its' size and occupancy load requirements.
- Interior windows in the library and main office do not have safety glass as required by code. (035)
- The door into the food safety office is not fire-rated.
- Numerous doors have glass windows that are not safety glass as required by code. (036)
- Sinks outside of the student restrooms are not accessible. (037)
- The pathway to the accessible stalls in the restrooms does not meet maneuverability requirements. (038)

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIN-ES 001

Many of the classrooms are split by shelves and partial walls to simulate smaller areas for individualized learning which is not ideal.

WIN-ES 002

The nurse's office lacks space to accommodate both the nurse and a student. A larger room would allow for more than one student at a time to be there with the nurse.

WIN-ES 003

More storage space within the building is needed at the mechanical room is filled with objects.

WIN-ES 004

The casework in the building is dated but is functionally sound.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIN-ES 005

The asphalt on the site had lots of cracking and was uneven near the entrances which creates issues for accessibility.

WIN-ES 006

Numerous downspouts did not have concrete splash blocks underneath them to reduce water damage to the site.

WIN-ES 007

Door 4 needs a concrete stoop on the exterior.

WIN-ES 008

Several emergency exit doors do not provide access to a public way.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS


WIN-ES 009

Neither of the playgrounds are accessible and both have sand bases which should be swapped with a safer alternative


WIN-ES 010

Caulking around the windows could use touching up.


WIN-ES 011

The wooden baseboard does not have the appropriate flashing for water protection


WIN-ES 012

The wooden baseboard does not have the appropriate flashing for water protection, therefore the wood is rotting and falling off in a number of areas.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIN-ES 013

The wooden baseboard does not have the appropriate flashing for water protection, therefore the wood is rotting and falling off in a number of areas.

WIN-ES 014

The wooden baseboard does not have the appropriate flashing for water protection, therefore the wood is rotting and falling off in a number of areas.

WIN-ES 015

The paint is peeling off as well, further reducing the water protection of the exterior.

WIN-ES 016

The paint is peeling off as well, further reducing the water protection of the exterior.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

The plastered wood over the entrance is showing signs of age and is deteriorating.

There is paint flaking off certain portions of the coping and flashing.

The gutter adjacent to Door 3 is damaged.

There are only a few water spots seen in the resource room.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIN-ES 021

There is some cracking in the CMU seen within the gymnasium.

WIN-ES 022

There is some cracking in the CMU seen within the gymnasium.

WIN-ES 023

A gypsum board wall in the gymnasium needs painting after an attached bench was removed.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

In Room 147C, the CMU paint has patches and could use some.

The carpet in the hallway was recently replaced, but the classrooms still have old carpet.

The gym floor was recently redone and is in great.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

Traditional wire glass throughout the building is no longer to code as an acceptable type of safety glass.

Sinks in classrooms and offices are not accessible.

Many doors throughout the building have hardware that is not accessible.

The bathrooms accessed through Room 102D are not accessible.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIN-ES 031

Doors 1, 3 and 7 are not protected with an enclosed vestibule, as required by energy code.

WIN-ES 032

Doors 1, 3 and 7 are not protected with an enclosed vestibule, as required by energy code.

WIN-ES 033

Prep surfaces in the kitchen need to be stainless steel for food safety.

WIN-ES 034

Staff restroom is not accessible.

INTERIOR AND EXTERIOR EXISTING DEFICIENCIES PHOTOS

WIN-ES 035

Interior windows in the library and main office do not have safety glass as required by code.

WIN-ES 036

Numerous doors have glass windows that are not safety glass as required by code.

WIN-ES 037

Sinks outside of the student restrooms are not accessible.

WIN-ES 038

The pathway to the accessible stalls in the restrooms does not meet maneuverability requirements.

EXISTING DEFICIENCIES CONTINUED

EDUCATIONAL ADEQUACY

This is a review of applicable Department of Public Instruction recommendations as they relate to Grand Forks 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.

Area	Current Square Footage	DPI Recommended Square Footage	Difference
Administration	1,339 SF	1,990 SF	-651
Athletics	3,685 SF	3,300 SF	385
Circulation	2,874 SF	7,952 SF	-5,074
Classrooms	8,304 SF	10,900 SF	-2,596
Food Service/Cafeteria	3,142 SF	3,528 SF	-386
Library/Media	1,491 SF	1,083 SF	408
Mechanical/Electrical	2,004 SF	1,988 SF	16
Music	870 SF	1,600 SF	-730
Restrooms	617 SF	663 SF	-46
Special Education	2,029 SF	3,000 SF	-971

Total Missing Square Footage	-9,645

EXISTING DEFICIENCIES CONTINUED

ADMINISTRATION/PTO COMMENTS AND FEEDBACK

AIR QUALITY/CONTROL

- It is not consistent throughout the school. One room may be hot while the other is cold.
- It can get very humid in the school.

LACK OF COLLABORATION/LEARNING/SUPPORT SPACES

- There are several classrooms within the same grade level that are very different sizes.
- There are not enough collaboration spaces.
- Four special education teachers share one room.
- There are not enough quiet spaces for students.
- There is a need for trauma response areas for trauma-exposed students.
- Band and orchestra shares spaces with PT and OT.

PARKING AND STUDENT DROP-OFF/PICK-UP

- Parking lot is too small.
- The drop-off/pick-up area can get very congested.

UPDATED FINISHES/EXTERIOR AND MORE NATURAL LIGHT

TOP PRIORITIES

1. Additional Classroom Space
2. Updated Security
3. Improved Exterior Maintenance

E. COST ANALYSIS

Winship Elementary School
Grand Forks, ND
11/2/2022

CONSTRUCTION ENGINEERS

Facility Assessment Estimate

Description	Item Number	Takeoff Qty		Total Cost/Unit			Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other needs	Total Cost
ADA and Building Code Compliance												
Replace wire glass throughout the building that is no longer up to code (frame to remain)	1	320	SF	$33.65	/	SF	$10,768					$10,768
Replace casework (20lf of base, top, and upper) per classroom and sinks in classrooms are not accessible	2	17	Ea.	$27,897.46	/	Ea.	$474,257				X	$474,257
Upgrade door hardware with ADA hardware	3	50	Ea.	$983.61	/	Ea.	$49,180					$49,180
Remodel the restroom through 102D by expanding one toilet stall into room 102C to make it the stall accessible	4	1	Ea.	$25,753.35	/	Ea.	$25,753				X	$25,753
Add interior vestibules to doors 1, 3 and 7 per the energy code	5	3	Ea.	$29,683.02	/	Ea.	$89,049					$89,049
Replace prep surfaces in the kitchen with stainless steel for food safety	6	1	Ea.	$98,411.76	/	Ea.	$98,412					$98,412
Remodel staff restroom to make them accessible	7	2	Ea.	$39,915.61	/	Ea.	$79,831				X	$79,831
Add a secondary exit to the library per occupancy load requirements	8	1	Ea.	$3,508.60	/	Ea.	$3,509					$3,509
Replace glazing in the interior windows in the library and main office with tempered glass for safety reasons.	9	96	SF	$58.93	/	SF	$5,657					$5,657
Replace the door into the food safety office with fire rated door frame and hardware	10	1	Ea.	$3,582.22	/	Ea.	$3,582					$3,582
Replace glazing in some doors with tempered glass	11	10	Ea.	$516.57	/	Ea.	$5,166					$5,166
Replace sinks (4 sinks total in 2 locations) outside of the student restrooms with accessible sinks	12	2	Ea.	$17,332.63	/	Ea.	$34,665				X	$34,665
Remodel the center bathrooms to make them accessible	13	900	SF	$292.03	/	SF	$262,827				X	$262,827
Add grab bars to the lowered urinal in the boys' restroom	14	2	Ea.	$154.22	/	Ea.	$308					$308
Total Code Compliance		**28,295**	**SF**	**$40.39**	**/**	**SF**	**$1,142,965**	**$0**	**$0**	**$0**		**$1,142,965**
Security												
Secure entrance and administration office remodel	15	1,665	SF	$266.94	/	SF				$444,455		$444,455
Total Security		**1,665**	**SF**	**$266.94**	**/**	**SF**	**$0**	**$0**	**$0**	**$444,455**		**$444,455**
Addition/Remodel (Educational Adequacy)												
Administration	16	651	SF	$339.20	/	SF				$220,819		$220,819
Art	17		SF	$351.74	/	SF				$0		$0
Athletics	18		SF	$360.52	/	SF				$0		$0
Auditorium	19		SF	$485.35	/	SF				$0		$0
Business Education	20		SF	$376.82	/	SF				$0		$0
Circulation	21	5,078	SF	$376.83	/	SF				$1,913,558		$1,913,558
Classrooms	22	2,596	SF	$376.82	/	SF				$978,222		$978,222
Common Spaces	23		SF	$393.12	/	SF				$0		$0
FACS	24		SF	$393.12	/	SF				$0		$0
Food Service/Cafeteria	25	386	SF	$458.33	/	SF				$176,914		$176,914
Library/Media Center	26		SF	$395.63	/	SF				$0		$0
Mechanical/Electrical	27		SF	$307.85	/	SF				$0		$0
Music	28	730	SF	$401.90	/	SF				$293,386		$293,386
Restrooms	29	46	SF	$464.61	/	SF				$21,372		$21,372
Science	30		SF	$431.99	/	SF				$0		$0

Winship Elementary School
Grand Forks, ND
11/2/2022

CONSTRUCTION ENGINEERS

Facility Assessment Estimate

Description	Item Number	Takeoff Qty		Total Cost/Unit			Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other needs	Total Cost
Special Education	31	971	SF	$340.28	/	SF				$330,408		$330,408
Technical Education	32		SF	$381.83	/	SF				$0		$0
Technology Education	33		SF	$394.37	/	SF				$0		$0
Total Adequacy		**10,458**	**SF**	**$376.24**	**/**	**SF**	**$0**	**$0**	**$0**	**$3,934,680**		**$3,934,680**
Capital Maintenance												
Interior Upgrades												
Replace dated casework in the building is dated (50 lf of base, top, upper)	34	150	LF	$389.57	/	LF			$58,436		X	$58,436
Replace water damaged ACT in the resource room	35	630	SF	$8.65	/	SF	$5,450					$5,450
Repair cracking in the CMU within the gymnasium	36	1	Ea.	$6,269.65	/	Ea.		$6,270				$6,270
Patch and paint gypsum board wall in the gymnasium needs after an attached bench was removed	37	1	Ea.	$6,269.65	/	Ea.	$6,270					$6,270
In Room 147C, patch and paint the CMU that could use some retouching	38	1	Ea.	$6,269.65	/	Ea.	$6,270					$6,270
Replace dated carpet in the classrooms	39	15,000	SF	$10.89	/	SF		$163,350				$163,350
Replace original tile in the bathrooms, offices and support spaces	40	2,350	SF	$28.27	/	SF		$66,435			X	$66,435
Interior Upgrades Subtotal		**28,295**	**SF**	**$11.04**	**/**	**SF**						**$312,479**
Exterior Upgrades												
Mill and overlay the asphalt to improve accessibility	41	13,696	SF	$5.32	/	SF	$72,863					$72,863
Add concrete splash blocks to downspouts to reduce water damage to the site	42	20	Ea.	$47.06	/	Ea.	$941					$941
Add a concrete stoop to Door 4	43	1	Ea.	$18,808.95	/	Ea.	$18,809					$18,809
Connect exit doors to public sidewalks at locations where missing	44	1,000	SF	$17.56	/	SF	$17,560					$17,560
Make an accessible entrance to both playgrounds and remove the sand bases, replace with wood ships for a safer base	45	2	Ea.	$24,145.50	/	Ea.	$48,291					$48,291
Remove and replace damaged pavement near the exterior doors of the mechanical room	46	200	SF	$17.65	/	SF		$3,530				$3,530
Touch up caulking around the windows	47	32	Ea.	$501.57	/	Ea.		$16,050				$16,050
Remove the wood siding and replace with metal panel	48	7,107	SF	$32.25	/	SF		$229,201				$229,201
Repair the plastered wood over the entrance that is showing signs of age	49	1	Ea.	$5,175.45	/	Ea.	$5,175					$5,175
Touch up paint that is flaking off certain portions of the flashing	50	1	Ea.	$2,468.32	/	Ea.		$2,468				$2,468
Repair the damaged gutter adjacent to door 3	51	1	Ea.	$313.48	/	Ea.	$313					$313
Replace the roof when it nears the end of its useable lifetime	52	26,908	SF	$30.99	/	SF		$833,879				$833,879
Replaced windows that are original from 1973 since they are nearing the end of their lifespan	53	32	Ea.	$4,017.06	/	Ea.	$128,546					$128,546
Exterior Upgrades Subtotal		**28,295**	**SF**	**$48.69**	**/**	**SF**						**$1,377,627**
Electrical Upgrades												
Replace switchboard that is very old and past its useful life with a new 400A distribution panel that utilizes breaker-type overcurrent protection	54	28,295	SF	$5.96	/	SF		$168,638				$168,638
Replace branch panels throughout building that are noted to be old that are nearing the end of their useful life	55	28,295	SF	$3.45	/	SF		$97,618				$97,618
Add egress lighting to doors to exterior as is required by Building Code	56	28,295	SF	$3.32	/	SF	$93,939					$93,939

COST ANALYSIS CONTINUED

Winship Elementary School
Grand Forks, ND
11/2/2022

CONSTRUCTION ENGINEERS

Facility Assessment Estimate

Description	Item Number	Takeoff Qty		Total Cost/Unit			Critical	5 yrs Deferred Maint	10 yrs Deferred Maint	Educational Adequacy	Synergistic with other needs	Total Cost
Upgrade of all interior lighting controls throughout to digital lighting management	57	28,295	SF	$2.51	/	SF		$70,971				$70,971
Upgrade of all exterior lighting controls throughout to digital lighting management	58	28,295	SF	$0.25	/	SF		$7,097				$7,097
Update the existing intercom system with a new IP system throughout entire school.	59	28,295	SF	$3.76	/	SF		$106,456				$106,456
Add additional door security all exterior doors with access control and monitoring	60	28,295	SF	$1.21	/	SF	$34,160					$34,160
Upgrade the fire alarm system to a voice-capable system as is currently required by the North Dakota Building Code	61	28,295	SF	$0.69	/	SF	$19,517					$19,517
Electrical Upgrades Subtotal		**28,295**	**SF**	**$21.15**	**/**	**SF**						**$598,396**
Mechanical Upgrades												
Add sprinklers to the building including a new water service line	62	28,295	SF	$13.05	/	SF	$369,308					$369,308
ASSE 1070 thermostatic mixing valves should be added to public lavatories for scald protection in accordance with the uniform plumbing code.	63	28,295	SF	$0.32	/	SF	$9,054					$9,054
The rooftop units did not appear to have controls or systems in place for outdoor air measuring and monitoring. Indoor Air Quality should be addressed throughout the building to meet ASHRAE 62.1 for controllable ventilation rates.	64	28,295	SF	$4.68	/	SF		$132,421				$132,421
Roof mounted exhaust fans are provided for the building with the exhaust fan for the kitchen being an upblast grease exhaust time. The exhaust fans serving the restrooms in the building were not operational at the time of the walkthrough and should be replaced with new.	65	28,295	SF	$1.05	/	SF		$29,710				$29,710
Replace all existing pneumatic controls with a direct digital control system	66	28,295	SF	$12.05	/	SF		$340,955				$340,955
Mechanical Upgrades Subtotal		**28,295**	**SF**	**$31.15**	**/**	**SF**						**$881,447**
Total Capital Maintenance		**77,911**	**SF**	**$40.69**	**/**	**SF**	**$836,466**	**$2,275,047**	**$58,436**	**$0**		**$3,169,949**
Total Construction Cost		**90,034**	**SF**	**$96.54**	**/**	**SF**	**$1,979,431**	**$2,275,047**	**$58,436**	**$4,379,135**		**$8,692,049**
**** All above estimated costs are total construction costs. These include general conditions, CM fees, permits, insurances, bonds, taxes*												
Contingencies & Soft Costs												
Design Contingency	67	5.0%					$98,971.54	$113,752.37	$2,921.80	$218,956.74		$434,602
Construction Contingency	68	5.0%					$98,971.54	$113,752.37	$2,921.80	$218,956.74		$434,602
Escalation	69	0.0%					$0.00	$0.00	$0.00	$0.00		$0
A & E Fees	70	7.0%					$138,560.16	$159,253.32	$4,090.52	$306,539.43		$608,443
FF & E	71	2.0%					$39,588.62	$45,500.95	$1,168.72	$87,582.69		$173,841
Owner Contingency	72	1.5%					$29,691.46	$34,125.71	$876.54	$65,687.02		$130,381
Total Contingencies & Soft Costs							**$405,783**	**$466,385**	**$11,979**	**$897,723**		**$1,781,870**
Total Facility Assessment Cost Estimate		**90,034**	**SF**	**$116.33**	**/**	**SF**	**$2,385,214**	**$2,741,432**	**$70,415**	**$5,276,857**		**$10,473,919**
Total Critical & Educational Adequacy		**90,034**	**SF**	**$85.10**	**/**	**SF**						**$7,662,071**