Michigan Statewide School Facilities Study

District-Level Report

NORTH CENTRAL AREA SCHOOLS

Plante Moran Realpoint
in collaboration with Barton Malow Builders

Sponsored by:
School Finance Research Foundation

January 2025

District-Wide Report:

NORTH CENTRAL AREA SCHOOLS

The on-site facility condition assessments (FCAs) included in this study were completed by:

Integrated Designs, Inc.

Use and Limitations for the Report

1. Intent. As set forth in Section 11y of the State School Aid Act of 1979, this facility condition assessment (FCA) is intended to help determine the most cost-effective way to improve the health, safety, and wellness of the subject facility (the "Facility"). This FCA is not intended to be relied upon by the participating district or any other party for the identification or the implementation of any corrective action of any specific life-safety or code compliance issues.

2. Noninvasive Representative Observations. This FCA is not an exhaustive facility inspection. Rather, the FCA is based on noninvasive, representative observations of a reasonable number of typical building conditions for specified components and information the district provided. Unidentified and unreported conditions may exist that may impact the health, safety, or wellness of a building or its reported repair cost. Although the project team has taken steps to promote uniformity between the professionals conducting the FCAs, determinations of needs as critical, near-term, or long-term are, in part, based on the professional judgment of the team conducting the FCA. Accordingly, opinions may differ regarding the classification of needs. The following building components, among others, were not observed during this FCA: toilet partitions, toilet accessories, casework, lockers, folding walls, markerboard, wall finishes, floor finishes, ceiling finishes, gas lines, ductwork, primary electrical service, general outlets, gym equipment, interior lighting, clock systems, sound systems, scoreboards, appliances, asbestos, paving, playing fields, site storm sewer system, site fuel supply, site electrical supply.

3. Cost Information. The anticipated repair and replacement costs are based on RSMeans data, a proprietary cost database commonly used in the construction industry, historical cost data available to the project team, and other sources. Despite the project team's efforts to provide reasonable cost benchmarks to policymakers, the project team cannot control nor predict present or future market conditions. The actual repair or replacement costs will differ from those reported.

4. Use of Study. This FCA is intended solely for use by School Financial Research Foundation and the Facility Owner. Use of, or reliance on, this FCA by any other party is at their own risk.

5. Specific Point in Time. This FCA is based on information and conditions observed at the time of observation. This FCA does not account for subsequent changes to the conditions or information relied upon, nor do they account for capital programs that are in planning, design, or under construction.

6. District Provided Information. This FCA relies on information provided by the Facility Owner. Inaccuracies or incompleteness of district-provided information may impact the results of this FCA.

7. Real Estate Decisions. While this study provides data regarding costs for repair of the Facility, informed real estate decisions should not be based on one data point. Many factors are important to consider, such as future enrollment needs, design and construction approach, available capital, operations, and community input. Decisions regarding each building need to be made in the context of the larger portfolio as well, accounting for utilization and efficiencies that could be made through realignment and consolidation (e.g., foregoing repairs on multiple buildings to demolish and rebuild one that will be better utilized).

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PROJECT TEAM

Sponsor

The School Finance Research Foundation (SFRF) is a nonprofit organization associated with the School Finance Research Collaborative (SFRC), a nonprofit organization composed of business leaders and education experts. One of SFRC's objectives is to identify the funding needed to provide an equitable educational environment to all Michigan students.

Project Team

Plante Moran Realpoint (PMR) is the leading K-12 owner's representation and real estate consulting firm in Michigan. PMR has extensive K-12 bond planning and project management experience, helping more than 100 Michigan school districts complete billions of dollars in K-12 client capital projects over the past 30+ years.

Barton Malow Builders (BMB) has been at the forefront of the K-12 construction landscape since 1925. Their team has expanded to over 116 school construction management specialists, including planners, builders, and technology design experts, all dedicated to meeting the distinct needs of school districts across the nation.

Participant

Integrated Designs, Inc.

Michigan-based architectural/engineering firm specializing in K-12 construction conducted an on-site facility condition assessment (FCA) for all buildings included in the study.

Executive Summary

Approach

The project team approached the study in three phases: strategic planning, data collection, and analysis.

Strategic planning was primarily focused on establishing the scope of the study in terms of district participation, qualifying buildings, and building components to be observed. Procurement of the architectural/engineering firms that conducted the FCAs was also completed during this phase.

Data related to participating districts' building conditions came from district records (information about building square footage, age, and programming) and the on-site FCAs. The information went through a rigorous verification process and was certified by a Michigan-licensed architect or engineer.

To determine the most cost-effective way to bring a building to health, safety, and wellness standards, the project team first calculated the *cost to repair* over a ten-year period and the *cost to replace* over a three-year period. Cost to repair is informed by the FCA building condition observations. Cost to replace is based on the space needs of the existing student population, and therefore factors in square footage based on current student enrollment. Both cost calculations account for soft costs, regional price differences, and escalation over time.

The project team then performed a cost-effectiveness analysis that would allow a direct comparison between the two figures to determine which option; repair or replacement, was most cost-effective for any individual building. The outcome of this analysis is the aggregation of the most cost-effective method for all buildings.

Phase 1: Strategic Planning

80+ Standard building components identified related to health, safety, & wellness

Phase 2: Data Collection

- District-provided building information such as building size, age, & programming
- Observed building conditions specific to health, safety, & wellness from the facility condition assessments

Phase 3: Analysis

1. Total cost to repair and cost to replace for each building
2. Cost-effectiveness analysis

Executive Summary

Additional Considerations

While this study provides rough order of magnitude repair and new construction cost data, it does not definitively determine a recommended investment. The decision to invest in capital improvements of any kind lies with each school district and a variety of factors should be considered including, but not limited to, additional capital improvement costs, current utilization, pupil enrollment projections, ongoing operating and maintenance costs. These factors are discussed further below.

SCOPE OF THIS STUDY VS. A TYPICAL K-12 CAPITAL IMPROVEMENT PLAN

The facility needs related to health, safety, and wellness included in this study are only a portion of the various improvement items that may be included in a typical capital improvement program, such as a bond program or sinking fund. As such, the cost to repair calculation in this study, as expressed by cost per recommended square foot, will not be comparable to the estimated cost per square foot of more comprehensive capital improvement programs. The building components included in this study typically account for 25% to 75% of the overall program costs for a comprehensive K-12 capital improvement program. K-12 capital improvement programs usually include additional construction-related items like new construction, additions, renovations or remodeling, replacing interior finishes, and athletic field improvements. Also, depending on the type of program, they may include technology infrastructure, instructional technology devices, non-instructional technology, security systems, furniture, loose equipment, buses, maintenance equipment, musical instruments, etc. Capital improvement plans range in duration but typically cover the same ten-year time horizon used in this study, with bond programs usually lasting five to seven years or up to ten years and sinking fund programs usually lasting five to ten years. Projecting construction costs more than ten years into the future is not common practice because the level of accuracy of cost projections decreases as time increases. Collecting additional information regarding the current conditions and costs of the items not included in the scope of this study would provide valuable insight to districts and the state for capital improvement planning purposes.

OPERATING EXPENSES

Ongoing operational and maintenance expenses were not included in this study but are another important factor to consider before investing in repairs or new construction. Operating and maintenance expenses vary by building but typically range from $7 to $10 per square foot annually with newer buildings with more efficient equipment systems usually costing less to operate and maintain than older buildings. These costs would be incurred by districts in addition to those identified in this study. The space needed as well as the costs to maintain and operate it should be taken into consideration, in addition to the costs identified through this study, before investment in repairs and new construction.

Executive Summary

This Study Is:

- A high-level, non-invasive assessment of building conditions focused on health, safety, and wellness based on physical building observation and professional judgment.
- Inclusive of professional service fees associated with construction.
- Inclusive of escalation.

This Study Is Not:

- Inclusive of testing, sampling, or diagnostics of building components.
- A facility condition assessment for use in the Department of Treasury's preliminary qualification (PQ) application process.
- Meant to identify or correct any issues or deficiencies in any district facility regarding space or programming.

TABLE DESCRIPTIONS

The remainder of the report provides three different types of tables that report results in varying detail. Table 1 shows a district-wide summary of repair and replacement costs. Table 2 shows a summary of each FCA completed, with one table per building. Table 3 is a detailed version of Table 2 and shows each individual observation that the facility condition assessment (FCA) firm reported.

To calculate cost to repair and cost to replace, a standard cost-per-unit value was used to calculate direct costs. Additionally, all cost calculations account for indirect costs (30% of direct costs), regional price differences, and inflation (4% annual escalation).

Tables 2 and 3 are provided for each building observed in this study. The Building Category and Sub-Category columns in both Table 2 and Table 3 along with the Component column in Table 3 follow UNIFORMAT II, a classification format for building specifications, cost estimating, and cost analysis published by the U.S. Department of Commerce.

Table 1 - District Summary:

Table 1 provides an overview of all buildings within your district that were observed during this study. The table is organized in to four sections: Repair Costs, Replacement Costs, Net Present Values, and Most Cost-Effective. The following is an explanation of each.

Repair: The Repair section includes four columns outlining costs for Critical, Near-Term, and Long-Term repairs identified during the on-site FCA. These columns categorize repair needs by recommended replacement time frame:

- **Critical:** within 1-3 years
- **Near-Term:** within 4-6 years
- **Long-Term:** within 7-9 years

Replace: The cost to replace represents the "all-in" costs to construct a new building to serve the current student population. The recommended square footage factored into the replacement cost was calculated using standard square-foot space allocations based on the current student population of each building. For ISD buildings and buildings with less than 25 students assigned for the fall of 2023, the square footage of the existing building was used rather than a per-student allocation.

Net Present Value & Most Cost-Effective: After the cost to repair and cost to replace were calculated, the net present value (NPV) of both costs were calculated to determine the most cost-effective option for meeting health, safety, and wellness standards. If the NPV of the repair costs were more than the replacement costs, then the most cost-effective value shown is the replacement cost. If the NPV of the replacement costs were more than the repair costs, then the most cost-effective value shown is the base repair cost.

Table 2 - Building FCA Summary Data:

This table provides a high-level summary of repair costs by building category over time.

Table 3 - Building FCA Observation Detail:

This table provides the in-depth observation data collected during the on-site FCA. The table lists all reported observations for each individual building component and groups them by Building Category and Sub-Category (following UNIFORMAT II). The FCAs were confirmed by the FCA firm and reviewed by the project team's review team. Some assessment observations have recommended replacement time frames of over 10 years, which are deemed Future in the Assessment column since the scope of the study was based on a 10-year horizon. It is expected that if an individual observation has an assessment value of Future, then the Observation Cost column will be blank, as the future costs were not estimated.

Age: The age listed is the year the item was either originally installed or replaced. If there are multiple years listed, this may be due to an addition to the building. The age may also list the approximate age of an item if the exact installation year is unknown.

Unit Definitions:

- **SQFT - Square Foot:** This is a measurement of the surface area of an item. This can be either horizontal (length x width) or vertical surface (length x height).
- **EACH - Each:** This is a count of similar items. It is typically used for counting things such as number of similar doors or number of similar piece of mechanical equipment.
- **LNFT - Lineal Foot:** This is a measurement of the length of an item that has at least one uniform dimension. A common use may be perimeter of an item or length of trim.
- **LPSM - Lump Sum:** This is typically used for a singular system that may be made up of a few components that creates a composite item. This is used for items such as electrical switchgear.
- **ALLO - Allowance:** This is used for items that do not have any other standard unit of measure. These are often unique items with only one in a building, such as items used in a pool or auditorium.

Note: All observation notes in Table 3 are presented as originally provided by the FCA firm that generated the data. As such, they were not edited for grammar or punctuation.

FCA CERTIFICATION DATES

As part of the FCA process, firms certified that each building was assessed through an on-site observation and that the observations were correct to the best of the FCA firm's knowledge. The list below outlines the dates each building within this district was certificated.

NORTH CENTRAL AREA SCHOOLS - Certification Dates

Building Name	Certification Date
NORTH CENTRAL AREA JUNIOR AND SENIOR HIGH SCHOOL	4/2/2024
NORTH CENTRAL ELEMENTARY SCHOOL	3/18/2024

DISTRICT RESULTS – NORTH CENTRAL AREA SCHOOLS

Table 1 – District Summary

Building	Repair Costs				Replacement Costs	*Net Present Values*		
	Critical (1-3 yrs)	Near Term (4-6 yrs)	Long Term (7-9 yrs)	Total	Total	*NPV Repair*	*NPV Replace*	Most Cost-Effective
NORTH CENTRAL AREA JUNIOR AND SENIOR HIGH SCHOOL	$5,692,839	$6,954,961	$3,420,229	$16,068,030	$16,942,785	*$15,279,765*	*$16,168,404*	**$16,068,030**
NORTH CENTRAL ELEMENTARY SCHOOL	$3,637,019	$3,641,966	$3,267,483	$10,546,467	$10,610,828	*$9,967,775*	*$10,125,853*	**$10,546,467**
District Total	**$9,329,858**	**$10,596,928**	**$6,687,712**	**$26,614,497**	**$27,553,613**	***$25,247,540***	***$26,294,257***	**$26,614,497**

Table 2 – Building FCA Summary Data: NORTH CENTRAL AREA JUNIOR AND SENIOR HIGH SCHOOL

Building Category	Sub-Category	Critical (1-3 yrs)	Near Term (4-6 yrs)	Long Term (7-9 yrs)	Total
A-Substructure					
	A10-Foundation	$240,304	$320,882	$524,232	$1,085,418
	A20-Basement	$283,398	$0	$0	$283,398
	Substructure Subtotal	$523,703	$320,882	$524,232	$1,368,816
B-Shell					
	B10-Superstructure	$35,425	$18,875	$1,475,775	$1,530,076
	B20-Exterior Closure	$313,938	$2,748,153	$384,036	$3,446,127
	B30-Roofing	$1,228,755	$221,975	$0	$1,450,730
	Shell Subtotal	$1,578,118	$2,989,003	$1,859,812	$6,426,933
C-Interiors					
	C10-Interior Construction	$59,839	$465,313	$0	$525,153
	C20-Staircases	$14,916	$0	$0	$14,916
	Interiors Subtotal	$74,755	$465,313	$0	$540,068
D-Services					
	D10-Conveying Systems	$124,297	$0	$0	$124,297
	D20-Plumbing	$495,113	$104,863	$40,892	$640,868
	D30-HVAC	$1,733,950	$1,600,158	$558,330	$3,892,438
	D40-Fire Protection	$0	$839	$1,573	$2,412
	D50-Electrical	$754,686	$830,741	$327,657	$1,913,084
	Services Subtotal	$3,108,046	$2,536,602	$928,451	$6,573,099
E-Equipment & Furnishings					
	E10-Equipment	$176,502	$0	$0	$176,502
	E20-Furnishings	$223,735	$0	$68,415	$292,150
	Equipment & Furnishings Subtotal	$400,238	$0	$68,415	$468,653
F-Special Construction & Demo					
	F10-Special Construction	$0	$0	$0	$0
	Special Construction & Demo Subtotal	$0	$0	$0	$0
G-Building Sitework					
	G20-Site Improvements	$7,980	$16,778	$39,319	$64,077
	G30-Site Utilities	$0	$559,271	$0	$559,271
	G40-Site Electrical	$0	$67,113	$0	$67,113
	Building Sitework Subtotal	$7,980	$643,162	$39,319	$690,461
NORTH CENTRAL AREA JUNIOR AND SENIOR HIGH		**$5,692,839**	**$6,954,961**	**$3,420,229**	**$16,068,030**

BUILDING DATA – NORTH CENTRAL AREA SCHOOLS

Table 3 – Building FCA Observation Detail: NORTH CENTRAL AREA JUNIOR AND SENIOR HIGH SCHOOL

Building Category	Sub-Category	Component	Location	Assessment	Quantity	Unit	Age	Observation Cost
A-Substructure								$1,368,816
	A10-Foundation							**$1,085,418**
		A1010 Foundations	NE corner, near kitchen	Near-Term	1,635	LNFT	1948	$228,602
		A1010 Foundations	Voc Ed- SE corner	Near-Term	260	LNFT	1978	$36,353
		A1030 Slab on rade	Room 128, Cafeteria, Corridor at room 191	Long-Term	33,332	SQFT	1948	$524,232
		A1030 Slab on Grade	Gym and locker rooms	Critical	18,233	SQFT	1948	$226,632
		A1030 Slab on Grade	Voc Ed	Near-Term	4,000	SQFT	1978	$55,927
		A1030 Slab on Grade	West View	Future	2,325	SQFT	2016	
		A1030 Slab on Grade	Boiler Room	Critical	1,100	SQFT	1948	$13,673
	A20-Basement							**$283,398**
		Tunnels	Boiler Room	Critical	912	LNFT	1948	$283,398
B-Shell								$6,426,933
	B10-Superstructure							**$1,530,076**
		B1010 Floor Construction	2nd floor Corridor	Long-Term	6,355	SQFT	1948	$249,872
		B1020 Canopies	Voc Ed	Critical	240	SQFT	1978	$14,916
		B1020 Roof Construction	Room 128 and Stage	Long-Term	47,428	SQFT	1948	$1,118,893
		B1020 Roof Construction	Voc Ed	Long-Term	4,536	SQFT	1978	$107,011
		B1020 Roof Construction	Boiler Room	Critical	1,100	SQFT	1948	$20,509
		B1020 Roof Construction	Corridor near main office. Water leaks.	Near-Term	900	SQFT		$18,875
	B20-Exterior Closure							**$3,446,127**
		B2010 Exterior Walls (block)	Voc Ed - NW Corner	Near-Term	3,380	SQFT	1978	$472,584
		B2010 Exterior Walls (block)	Rm 128	Future	141	SQFT	1994	
		B2010 Exterior Walls (block)	Rm 136	Critical	48	SQFT	1994	$5,966
		B2010 Exterior Walls (brick)	Rm 134, Rm 133, Kitchen, Exit 12	Near-Term	20,484	SQFT	1948	$1,575,215
		B2010 Exterior Walls (brick)	Girls locker room exterior	Future	1,269	SQFT		
		B2010 Exterior Walls (brick)	Exit 1	Long-Term	1,116	SQFT	1994	$96,536
		B2010 Exterior Walls (brick)	Gym Lobby	Future	166	SQFT	1948	
		B2010 Exterior Walls (metal, insulated)	High wall of gym	Critical	800	SQFT	1948	$74,578
		B2010 Exterior Walls (plaster/EIFS)	Rm 134, Rm 112	Long-Term	2,312	SQFT	1994	$90,906
		B2016 Exterior Soffits	Rm 134, Rm 106	Critical	3,118	SQFT	1948,1994	$96,890
		B2020 Exterior Windows	Rm 134, Rm 128, Office	Near-Term	2,799	SQFT	1994	$371,782
		B2020 Exterior Windows	Rm 191	Critical	1,012	SQFT	1948	$119,500
		B2020 Exterior Windows	Mens/Womens Restroom	Critical	144	SQFT	1948	$17,004
		B2030 Exterior Doors, FRP/aluminum	Exit 10, Exit 2	Near-Term	20	EACH	1994	$195,745
		B2030 Exterior Doors, hollow metal	Exit 13, Exit 1	Near-Term	7	EACH	1994	$34,255
		B2030 Exterior Doors, hollow metal	Voc Ed	Near-Term	3	EACH	1978	$14,681
		B2030 Exterior Doors, numbered	Exit 8	Future	18	EACH	2023	
		B2034 Overhead Doors	Voc Ed	Near-Term	4	EACH	1978	$83,891
		Knox Box present	Exit 1	Future	1	LPSM	1994	
		single point of visitor entry	Front office	Long-Term	1	ALLO	1994	$196,595
	B30-Roofing							**$1,450,730**
		B3010 Roof Coverings (metal)	Voc Ed	Near-Term	4,536	SQFT	1978	$221,975
		B3010 Roof Coverings (rubber/epdm)	Rm 202, 2nd Flr Corridor	Critical	49,428	SQFT	1994	$1,228,755
C-Interiors								$540,068
	C10-Interior Construction							**$525,153**
		C1010 Interior glazing (impact resistant)		Critical	10,284	SQFT	1948-1994	$6,391
		C1010 Interior Walls	Locker rooms, stairway near entrance	Critical	130	SQFT	1948	$24,238
		C1020 doors (outward opening)	Rm 111	Future	17	EACH	1948	
		C1020 doors (outward opening)	Rm 128	Critical	1	EACH	1948	$12,430
		C1020 doors (wood or metal)	Rm 132, Rm 191, Gym, Corridor at Main Office	Near-Term	104	EACH	1948-1994	$465,313
		C1023 door hardware, anti-intrusion device	Rm 132	Future	18	EACH	1994	
		C1023 door hardware, lock from inside classroom	Rm 132	Critical	18	EACH	1948-1994	$16,780
		C1035 Interior Signage, code compliant	Rm 115	Future	33	EACH		
	C20-Staircases							**$14,916**
		C2010 Handrails (code compliant)	Stairwells	Critical	3	EACH	1948	$14,916
		C2010 Handrails (code compliant)	Corridor at main office	Future	1	EACH		
D-Services								$6,573,099
	D10-Conveying Systems							**$124,297**
		D1010 Elevators & Lifts	Near main entrance	Critical	1	EACH	1948	$124,297
	D20-Plumbing							**$640,868**
		D2010 Faucet		Critical	28	EACH		$43,504
		D2010 Faucet		Near-Term	9	EACH		$15,729
		D2010 Faucet		Long-Term	3	EACH		$5,898
		D2010 Flush Valve		Near-Term	15	EACH		$15,729
		D2010 Flush Valve		Critical	14	EACH		$13,051
		D2010 Flush Valve		Long-Term	8	EACH		$9,437
		D2010 Sink		Critical	24	EACH		$37,289
		D2010 Sink		Near-Term	11	EACH		$19,225
		D2010 Sink		Long-Term	5	EACH		$9,830
		D2010 Toilet or Urinal		Near-Term	15	EACH		$26,216
		D2010 Toilet or Urinal		Critical	14	EACH		$21,752
		D2010 Toilet or Urinal		Long-Term	8	EACH		$15,728
		D2018 Drinking Fountain		Critical	6	EACH		$44,747
		D2018 Drinking Fountain		Future	4	EACH		
		D2020 Domestic Water Distribution		Critical	53,964	SQFT		$100,614
		D2020 hot water heater		Near-Term	2	EACH	2012	$27,964
		D2020 hot water heater		Critical	1	EACH	2013	$12,430
		D2020 hot water heater	vocational building	Future	1	EACH	2021	
		D2023 Backflow Preventor		Critical	1	LPSM		$3,729
		D2030 Sanitary Waste		Critical	53,964	SQFT		$201,228
		D2040 Rain Water Drainage (roof conductors)	stage, locker rooms	Critical	53,964	SQFT		$16,769
	D30-HVAC							**$3,892,438**
		D3020 Heating Generating System (boiler, large)		Long-Term	1	EACH	2016	$314,552
		D3020 Heating Generating System (boiler, large)		Critical	1	EACH	1994	$248,595
		D3022 Hydronic Plumbing		Near-Term	53,964	SQFT		$754,513
		D3030 Cooling Generating System (condensing unit)	office area	Long-Term	1	EACH	2012	$78,638
		D3040 Exhaust fans		Critical	16	EACH		$99,438
		D3040 Exhaust fans		Near-Term	5	EACH		$34,954
		D3040 Exhaust fans		Long-Term	3	EACH		$23,591
		D3040 Exhaust fans		Future	1	EACH		
		D3050 air handling unit (AHU)		Critical	3	EACH	1964	$279,669

D3050 air handling unit (AHU)	office furnace	Long-Term	1	EACH		2012	$117,957
D3050 unit heater		Near-Term	62	EACH			$433,435
D3050 unit heater		Critical	10	EACH			$62,149
D3050 unit heater		Long-Term	3	EACH			$23,591
D3050 unit vents (UV)		Critical	24	EACH			$1,044,099
D3060 Controls & Instrumentation		Near-Term	53,964	SQFT			$377,256
D40-Fire Protection							**$2,412**
D4010 Sprinklers	janitors rooms only	Near-Term	100	SQFT			$839
D4030 Fire Extinguishers	Corridor near Rm 191	Future	14	EACH		N/A	
D4030 Fire Extinguishers	Gym & stage	Long-Term	2	EACH		N/A	$1,573
D50-Electrical							**$1,913,084**
D5010 Electrical panels	Entire MS/HS	Long-Term	12	EACH		1994	$283,097
D5010 Electrical panels	Entire MS/HS	Critical	8	EACH		1948	$149,157
D5010 Electrical panels	Voc Ed Building	Near-Term	1	EACH		1979	$20,973
D5010 Electrical Service & Distribution	Boiler Room	Critical	1	ALLO			$372,892
D5010 Electrical Service & Distribution	Voc Ed Building	Near-Term	1	ALLO		1978	$419,453
D5020 Exit & Emergency Lighting	Entire MS/HS	Critical	52,665	SQFT			$49,096
D5020 Exit & Emergency Lighting	Voc Ed Building	Critical	4,000	SQFT		1994	$3,729
D5020 exterior building lighting	Entire MS/HS & Voc Ed Building	Near-Term	37	EACH		1994	$77,599
D5031 mass notification system	Entire MS/HS	Near-Term	52,665	SQFT		1994	$55,226
D5031 mass notification system	Voc Ed Building	Critical	4,000	SQFT			$3,729
D5037 Fire Alarm System	Entire MS/HS	Near-Term	52,665	SQFT		1994	$239,314
D5037 Fire Alarm System	Voc Ed Building	Near-Term	4,000	SQFT		1994	$18,176
D5038 access control	Main entrances	Future	4	EACH		2015	
D5038 access control	Voc Ed Building	Future	1	EACH		2015	
D5038 intrusion detection system	Entire MS/HS & Voc Ed Building	Critical	56,665	SQFT			$17,608
D5038 security cameras (exterior)	Entire MS/HS & Voc Ed Building	Critical	56,665	SQFT			$17,608
D5038 security cameras (interior)	Entire MS/HS & Voc Ed Building	Long-Term	56,665	SQFT			$44,560
D5039 Local Area Network		Future	56,665	SQFT		2020	
D5090 Emergency generator	N/A	Critical	56,665	SQFT			$140,866
E-Equipment & Furnishings							$468,653
E10-Equipment							**$176,502**
E1020 Gym Backboards	Gym	Critical	6	EACH		1948	$52,205
E1090 Kitchens	Kitchen	Critical	1	ALLO			$124,297
E20-Furnishings							**$292,150**
E2013 Window Treatment	Rm 106, Rm 134	Long-Term	58	EACH		1994	$68,415
E2015 Fixed Seating (gym bleachers)	Gym	Critical	900	EACH			$223,735
F-Special Construction & Demo							$0
G-Building Sitework							$690,461
G20-Site Improvements							**$64,077**
barricade at entry	At front entrance	Near-Term	1	ALLO		1994	$13,982
Frost Slab / Stoop	Exit 3	Future	18	EACH			
G2020 ADA parking space	At front entrance, gym entrance, parking lot	Near-Term	1	EACH		1994	$699
G2030 ADA accessible route	At front entrance	Future	1	ALLO		1994	
G2041 Fencing, around mechanical & electrical equipment	By Kitchen	Critical	30	LNFT		N/A	$2,387
G2041 Fencing, around mechanical & electrical equipment	By boiler room	Future	1	LNFT			
G2044 Signage, directional (staff, student, parent, visitor)	Near entrance drive.	Critical	3	EACH		1994	$5,593
G2044 Signage, directional (staff, student, parent, visitor)	At front entrance.	Near-Term	1	EACH		1994	$2,097
G2050 Landscaping, no obstructions/hiding spots	Front entrance, near Rm 136.	Long-Term	1	ALLO		N/A	$39,319
G30-Site Utilities							**$559,271**
G3010 Water Supply		Near-Term	1	LPSM			$209,727
G3020 Sanitary Sewer		Near-Term	1	LPSM			$349,544
G40-Site Electrical							**$67,113**
G4020 Site Lighting	Parking Lot	Near-Term	6	EACH			$67,113
Total Costs							**$16,068,030**

BUILDING DATA – NORTH CENTRAL AREA SCHOOLS

Table 2 – Building FCA Summary Data: NORTH CENTRAL ELEMENTARY SCHOOL

Building Category	Sub-Category	Critical (1-3 yrs)	Near Term (4-6 yrs)	Long Term (7-9 yrs)	Total
A-Substructure					
	A10-Foundation	$242,119	$0	$98,140	$340,259
	A20-Basement	$0	$0	$0	$0
	Substructure Subtotal	$242,119	$0	$98,140	$340,259
B-Shell					
	B10-Superstructure	$0	$0	$891,731	$891,731
	B20-Exterior Closure	$485,699	$132,177	$973,287	$1,591,162
	B30-Roofing	$950,540	$0	$0	$950,540
	Shell Subtotal	$1,436,239	$132,177	$1,865,018	$3,433,433
C-Interiors					
	C10-Interior Construction	$44,548	$340,037	$0	$384,585
	C20-Staircases	$0	$0	$0	$0
	Interiors Subtotal	$44,548	$340,037	$0	$384,585
D-Services					
	D10-Conveying Systems	$0	$0	$0	$0
	D20-Plumbing	$92,291	$96,054	$354,021	$542,366
	D30-HVAC	$1,528,859	$1,484,844	$220,186	$3,233,889
	D40-Fire Protection	$621	$317,098	$0	$317,720
	D50-Electrical	$110,482	$313,725	$240,281	$664,488
	Services Subtotal	$1,732,253	$2,211,721	$814,489	$4,758,463
E-Equipment & Furnishings					
	E10-Equipment	$124,297	$0	$0	$124,297
	E20-Furnishings	$12,119	$280	$27,130	$39,529
	Equipment & Furnishings Subtotal	$136,416	$280	$27,130	$163,826
F-Special Construction & Demo					
	F10-Special Construction	$0	$0	$0	$0
	Special Construction & Demo Subtotal	$0	$0	$0	$0
G-Building Sitework					
	G20-Site Improvements	$15,612	$748,025	$69,516	$833,153
	G30-Site Utilities	$0	$209,727	$393,190	$602,917
	G40-Site Electrical	$29,831	$0	$0	$29,831
	Building Sitework Subtotal	$45,443	$957,752	$462,706	$1,465,901
NORTH CENTRAL ELEMENTARY SCHOOL TOTAL		**$3,637,019**	**$3,641,966**	**$3,267,483**	**$10,546,467**

BUILDING DATA – NORTH CENTRAL AREA SCHOOLS

Table 3 – Building FCA Observation Detail: NORTH CENTRAL ELEMENTARY SCHOOL

Building Category	Sub-Category	Component	Location	Assessment	Quantity	Unit	Age	Observation Cost
A-Substructure								$340,259
	A10-Foundation							**$340,259**
		A1010 Foundations	NE Corner	Long-Term	624	LNFT	1970	$98,140
		A1010 Foundations	SW Corner	Future	492	LNFT	1994	
		A1030 Slab on Grade	Corridors	Critical	19,479	SQFT	1970	$242,119
		A1030 Slab on Grade	Corridor	Future	16,075	SQFT	1994	
B-Shell								$3,433,433
	B10-Superstructure							**$891,731**
		B1020 Roof Construction	Women's Locker, Gym and 1994 Corridor Wing	Long-Term	37,799	SQFT	1970 & 1994	$891,731
	B20-Exterior Closure							**$1,591,162**
		B2010 Exterior Walls (brick)	At Exit 3, by room 110	Long-Term	9,118	SQFT	1970 & 1994	$788,723
		B2010 Exterior Walls (metal, non-insulated)	At Exit 2	Critical	2,247	SQFT	1970	$139,648
		B2010 Exterior Walls (metal, non-insulated)	By room 137	Long-Term	1,751	SQFT	1994	$137,695
		B2016 Exterior Soffits	At Exit 6	Long-Term	1,192	SQFT	1994	$46,868
		B2016 Exterior Soffits	At Exit 1, by room 110	Near-Term	1,053	SQFT	1970	$36,807
		B2020 Exterior Windows	By room 107	Critical	799	SQFT	1970	$94,348
		B2020 Exterior Windows	By room 128	Near-Term	718	SQFT	1994	$95,370
		B2030 Exterior Doors, FRP/aluminum	At Exit 2	Critical	6	EACH	1970	$52,205
		B2030 Exterior Doors, hollow metal	At Exit 4/5 and Exit 7	Critical	10	EACH	1970 & 1994	$43,504
		B2030 Exterior Doors, numbered		Future	8	EACH	2023	
		Knox Box present	At Exit 1	Critical	1	LPSM	1970	$621
		single point of visitor entry	At Exit 1	Critical	1	ALLO	1970	$155,372
	B30-Roofing							**$950,540**
		B3010 Roof Coverings (rubber/epdm)	By room 121	Critical	37,799	SQFT	1994	$939,664
		B3020 Skylights	1994 Corridor	Critical	175	SQFT	1994	$10,876
C-Interiors								$384,585
	C10-Interior Construction							**$384,585**
		C1010 Interior glazing (impact resistant)		Critical	5,680	SQFT	1970 & 1994	$3,530
		C1010 Interior Walls	At room 109 and room 125	Critical	120	SQFT	1970 & 1994	$22,374
		C1020 doors (outward opening)	At room 107	Future	20	EACH	1970 & 1994	
		C1020 doors (wood or metal)	At room 107	Near-Term	76	EACH	1970 & 1994	$340,037
		C1023 door hardware, anti-intrusion device	At room 107	Future	20	EACH		
		C1023 door hardware, lock from inside classroom	At room 107	Critical	20	EACH	1970 & 1994	$18,645
		C1035 Interior Signage, code compliant	At room 107	Future	34	EACH	1994	
D-Services								$4,758,463
	D20-Plumbing							**$542,366**
		D2010 Faucet		Long-Term	14	EACH		$27,523
		D2010 Faucet		Near-Term	13	EACH		$22,720
		D2010 Faucet		Critical	12	EACH		$18,645
		D2010 Flush Valve		Near-Term	10	EACH		$10,486
		D2010 Flush Valve		Long-Term	10	EACH		$11,796
		D2010 Flush Valve		Future	7	EACH		
		D2010 Flush Valve		Critical	2	EACH		$1,864
		D2010 Sink		Long-Term	14	EACH		$27,523
		D2010 Sink		Critical	13	EACH		$20,198
		D2010 Sink		Critical	12	EACH		$18,645
		D2010 Toilet or Urinal		Near-Term	10	EACH		$17,477
		D2010 Toilet or Urinal		Long-Term	10	EACH		$19,659
		D2010 Toilet or Urinal		Future	7	EACH		
		D2010 Toilet or Urinal		Critical	2	EACH		$3,107
		D2018 Drinking Fountain		Critical	4	EACH		$29,831
		D2018 Drinking Fountain		Future	2	EACH		
		D2020 Domestic Water Distribution		Long-Term	37,799	SQFT		$89,173
		D2020 hot water heater	boiler room	Near-Term	2	EACH		$27,964
		D2023 Backflow Preventor		Near-Term	1	LPSM		$4,195
		D2030 Sanitary Waste		Long-Term	37,799	SQFT		$178,346
		D2040 Rain Water Drainage (roof conductors)		Near-Term	37,799	SQFT		$13,212
	D30-HVAC							**$3,233,889**
		D3020 Heating Generating System (boiler, small)		Critical	2	EACH	2007 boilers, 1980s pumps	$310,744
		D3022 Hydronic Plumbing		Near-Term	37,799	SQFT		$528,497
		D3030 Cooling Generating System (condensing unit)		Long-Term	2	EACH		$157,276
		D3040 Exhaust fans		Near-Term	6	EACH		$41,945
		D3040 Exhaust fans		Critical	5	EACH		$31,074
		D3040 Exhaust fans		Long-Term	4	EACH		$31,455
		D3040 Exhaust fans		Future	1	EACH		
		D3050 air handling unit (AHU)	gym	Critical	2	EACH		$186,446
		D3050 rooftop units (RTU), small	front office area	Near-Term	1	EACH		$69,909
		D3050 unit heater		Near-Term	20	EACH		$139,818
		D3050 unit heater		Long-Term	4	EACH		$31,455
		D3050 unit vents (UV)		Critical	23	EACH		$1,000,595
		D3050 unit vents (UV)		Near-Term	9	EACH		$440,426
		D3060 Controls & Instrumentation		Near-Term	37,799	SQFT		$264,249
	D40-Fire Protection							**$317,720**
		D4010 Sprinklers		Near-Term	37,799	SQFT		$317,098
		D4030 Fire Extinguishers	At corridor	Future	11	EACH	n/a	
		D4030 Fire Extinguishers	At Kitchen	Critical	1	EACH	n/a	$621
	D50-Electrical							**$664,488**
		D5010 Electrical panels	Entire School	Long-Term	9	EACH	1994	$212,323
		D5010 Electrical panels	Storage 119	Near-Term	1	EACH	1970	$20,973
		D5010 Electrical Service & Distribution	Boiler Room 122	Future	1	ALLO	1994	
		D5020 Exit & Emergency Lighting	Original (1970) portion of building	Near-Term	19,479	SQFT	1994	$20,426
		D5020 Exit & Emergency Lighting	Newer (1994) portion of building	Near-Term	16,075	SQFT	1994	$16,857
		D5020 exterior building lighting	Entire perimeter of school	Near-Term	27	EACH		$56,626

D5031 mass notification system	Entire School	Near-Term	35,554	SQFT			$37,283
D5037 Fire Alarm System	Entire School	Near-Term	35,554	SQFT		1994	$161,560
D5038 access control	3 exterior doors	Future	3	EACH		2014	
D5038 intrusion detection system	N/A	Critical	35,554	SQFT			$11,048
D5038 security cameras (exterior)	South side of building	Critical	35,554	SQFT		2020	$11,048
D5038 security cameras (interior)	Entire School	Long-Term	35,554	SQFT		2020	$27,959
D5039 Local Area Network	Entire School	Future	35,554	SQFT		2020	
D5090 Emergency generator	N/A	Critical	35,554	SQFT			$88,385
E-Equipment & Furnishings							**$163,826**
E10-Equipment							**$124,297**
E1020 Gym Backboards	Gym	Future	2	EACH			
E1090 Kitchens	Kitchen	Critical	1	ALLO		1970	$124,297
E20-Furnishings							**$39,529**
E2013 Window Treatment	At room 134	Long-Term	23	EACH		1970 & 1994	$27,130
E2013 Window Treatment	At office, room 107	Critical	13	EACH		1970	$12,119
E2015 Fixed Seating (gym bleachers)	Gym	Near-Term	1	EACH		1970	$280
F-Special Construction & Demo							**$0**
G-Building Sitework							**$1,465,901**
G20-Site Improvements							**$833,153**
barricade at entry	At Exit 1	Near-Term	1	ALLO		1970	$13,982
Frost Slab / Stoop	At Exit 4/5	Future	8	EACH		1970 & 1994	
G2020 ADA parking space	Near Exit 1	Critical	1	EACH		1994	$621
G2030 ADA accessible route	Near Exit 1	Future	1	ALLO		1994	
G2041 Fencing, around mechanical & electrical equipment	South end of building	Critical	40	LNFT		1970 & 1994	$3,182
G2041 Fencing, around playground	SW of school	Long-Term	600	LNFT		1970	$30,197
G2041 Fencing, around playground	SW of school	Critical	250	LNFT		1970	$9,944
G2044 Signage, directional (staff, student, parent, visitor)	At Exit 1	Critical	1	EACH			$1,864
G2045 playground surface	SW of school	Near-Term	17,500	SQFT			$734,043
G2050 Landscaping, no obstructions/hiding spots	NW corner of building.	Long-Term	1	ALLO			$39,319
G30-Site Utilities							**$602,917**
G3010 Water Supply	boiler room	Near-Term	1	LPSM			$209,727
G3020 Sanitary Sewer		Long-Term	1	LPSM			$393,190
G40-Site Electrical							**$29,831**
G4020 Site Lighting	North and South side of school	Critical	3	EACH			$29,831
Total Costs							**$10,546,467**