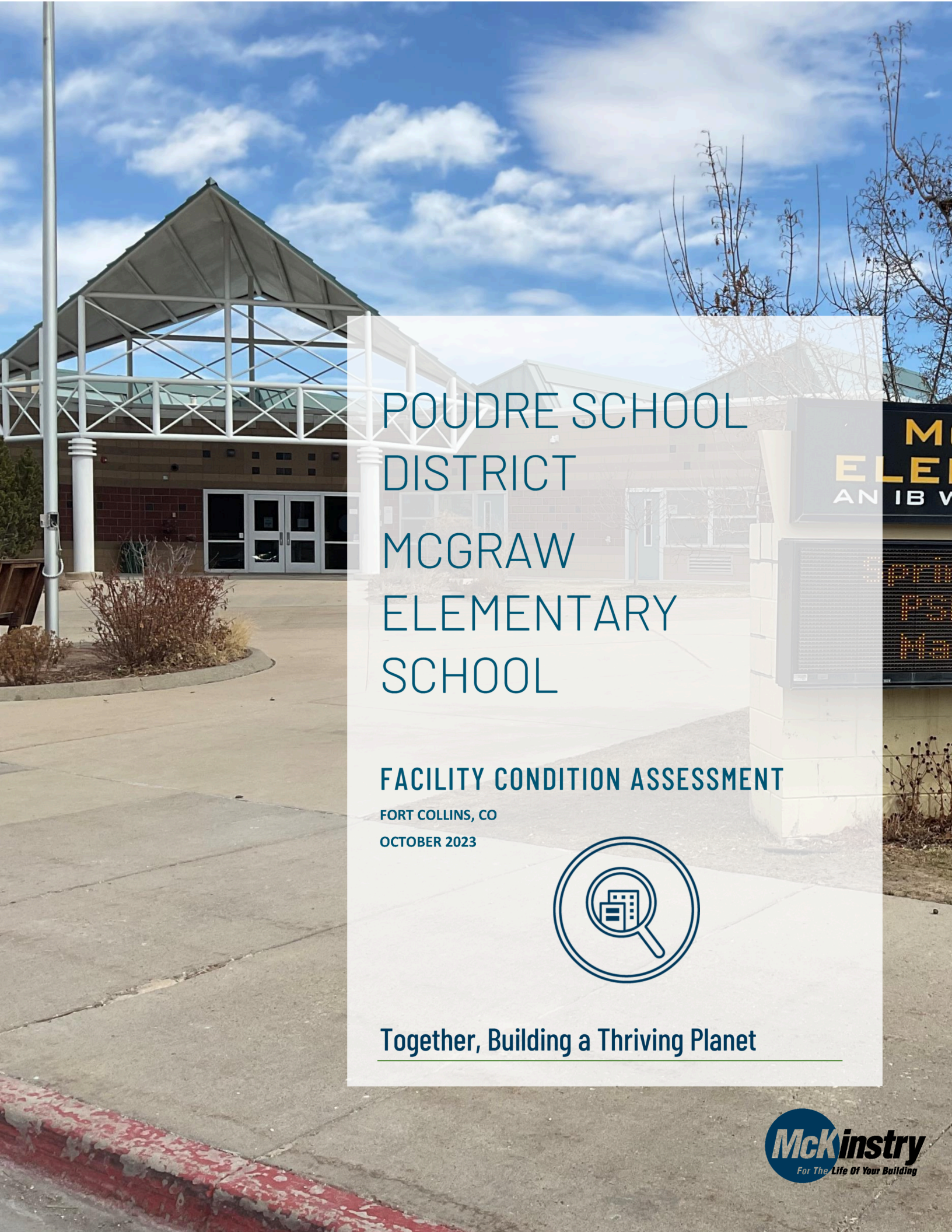

POUDRE SCHOOL DISTRICT

MCGRAW ELEMENTARY SCHOOL

FACILITY CONDITION ASSESSMENT

FORT COLLINS, CO

OCTOBER 2023

Together, Building a Thriving Planet

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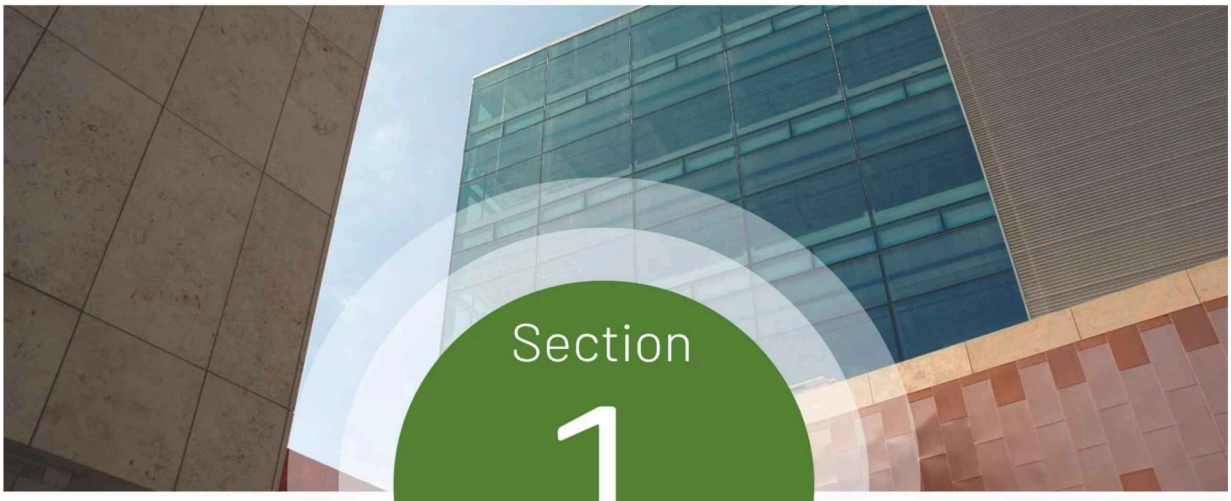

Section

1

Executive Summary

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Executive Summary

Project Goals

The contents of this report present the results of the Facility Condition Assessment (FCA) performed at McGraw, IB World School ES within the Poudre School District (PSD) on July 12, 2023. PSD intends to utilize the findings of this report to inform both capital and operating budgets, prioritize maintenance efforts, and optimize planning processes as replacements and upgrades of assets and facility systems become necessary in the future.

Facility List

The scope of the FCA project included the assessment of the following campus.

FACILITY NAME	AREA (SF)	YEAR(S) BUILT
MCGRAW, IB WORLD SCHOOL ES	51,384	1992
TOTAL	**51,384**	

Facility Summary

McGraw, IB World School ES

McGraw, IB World School ES is located at 4800 Hinsdale Dr., Fort Collins, CO 80526. This 51,384 SF facility consists of one level and was initially constructed in 1992. The equity index for this school is 0.82.

McGraw, IB World School ES

Executive Summary

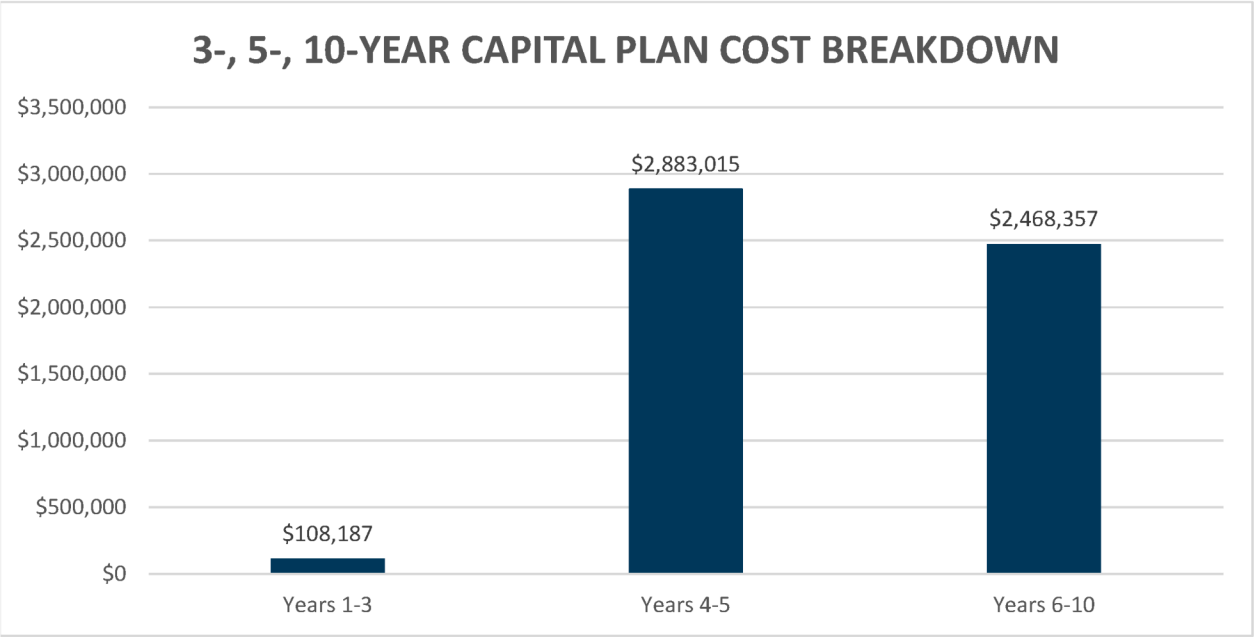
Assessment Summary

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on July 12, 2023. Additional details, findings and recommendations are presented in Section 3 of this report.

Capital Plan Summary

The estimated replacement costs for equipment expected to fail within the next ten years are shown below, divided into three separate plans. These plans are the 3-Year Plan, 5-Year Plan, and the 10-Year Plan. Each plan includes the cost for replacement of equipment expected to fail during these periods, based on the observed condition of the equipment at the time of the assessment.

Replacement costs include 3% inflation year over year.



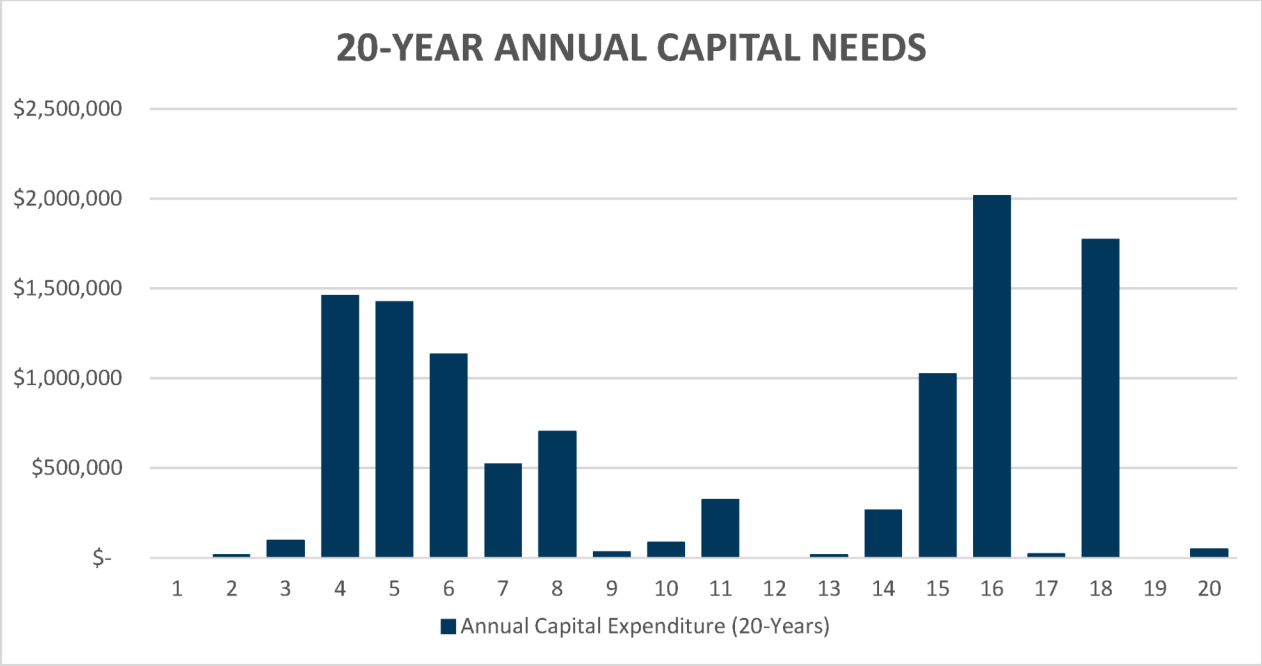
3-, 5-, 10-Year Capital Plan Cost Breakdown

Executive Summary

Annual Capital Expenditure (20 Years)

20-Year Annual Capital Needs and 20-Year Annual Capital Expenditure by Subsystem below indicate the estimated replacement costs for equipment expected to fail within the next twenty years, and are displayed both by year and by subsystem.

Replacement costs include 3% inflation year over year.



Annual Capital Expenditure by Year

Replacement costs associated with the Annual Capital Expenditure graph and table include values that are adjusted for inflation.

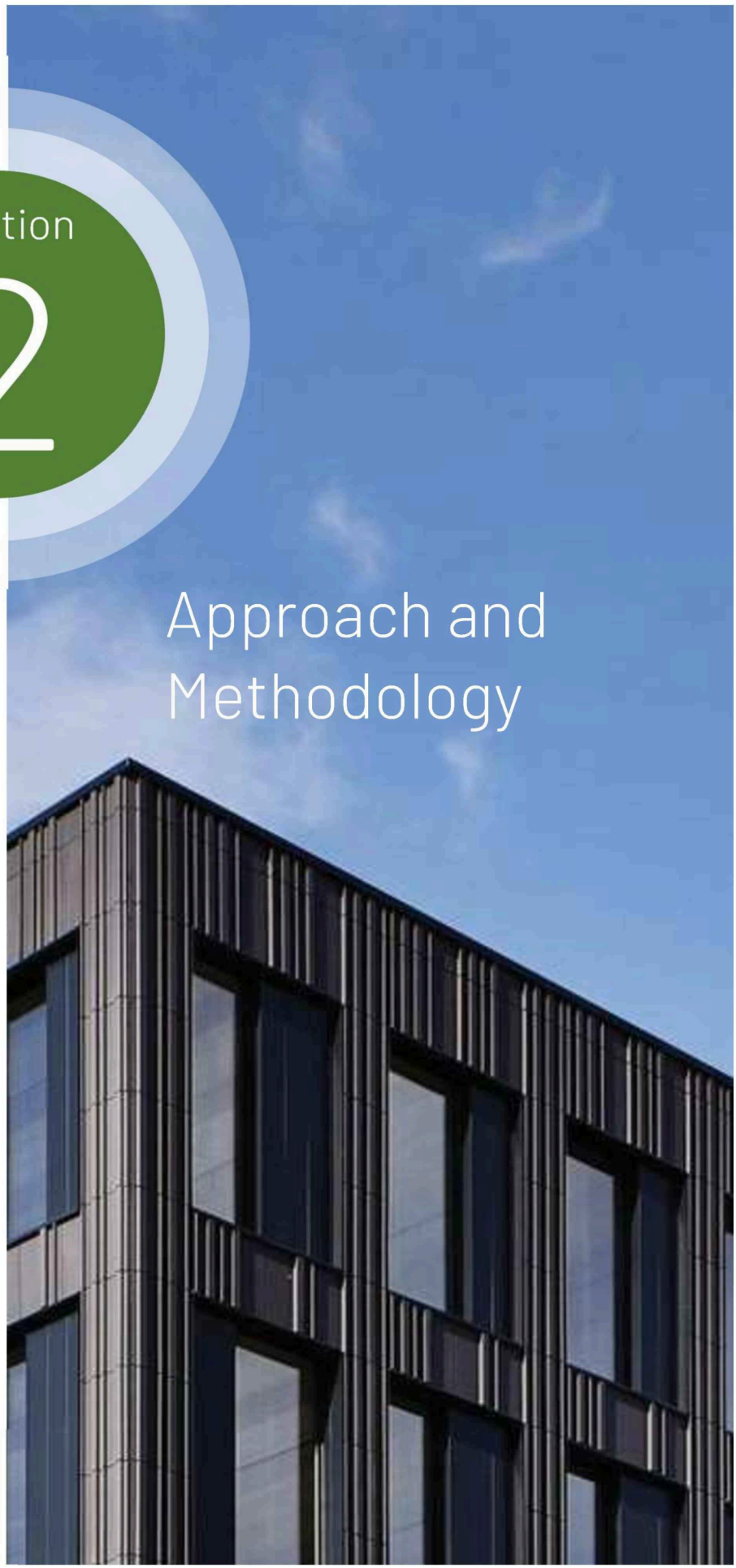
20-Year Annual Capital Expenditure by Subsystem

Subsystem	Years 1-5	Years 6-10	Years 11-15	Years 15-20
B20 - Enclosure	$0	$173,511	$0	$14,975
B30 - Roofing	$0	$431,710	$0	$0
C10 - Int. Construction	$0	$64,730	$0	$1,556,156
C20 - Stairs	$0	$0	$0	$0
C30 - Interior Finishes	$1,082,328	$48,969	$648,886	$175,101
D10 - Conveying	$0	$0	$0	$0
D20 - Plumbing	$41,233	$23,391	$63,389	$31,435
D30 - HVAC	$552,253	$130,206	$564,348	$2,015,278
D40 - Fire Suppression	$0	$1,032,913	$0	$0
D50 - Electrical	$1,290,492	$562,927	$343,621	$53,503
E10 - Equipment	$24,896	$0	$0	$0
Total:	**$1,908,875**	**$1,749,438**	**$971,358**	**$2,100,216**

Section

2

Approach and Methodology



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Scope and Approach

SCOPE OF WORK

The scope of this facility condition assessment includes all major mechanical, electrical, and plumbing equipment, and commercial refrigeration equipment. In addition, the building enclosure, roofing, interior construction and finishes, and fire suppression systems are included within the assessment. Turf, site assets, kitchen assets besides walk-in freezers, exhaust fans and kitchen make up air units are not included in scope.

The following table lists the general asset types included within the scope of this assessment. Also shown is the corresponding Uniformat code, which has been used to catalog equipment based on type and intended use.

UniFormat Classification of Building Systems

UNIFORMAT CODE	CATEGORY DESCRIPTION
B20	Exterior Enclosure (i.e. windows, walls, doors)
B30	Roofing (i.e. roofing covering, skylights, etc.)
C10	Interior Construction (i.e. doors, walls)
C20	Interior Stairs (i.e. stair construction)
C30	Interior Finishes (i.e. flooring, ceiling finishes, etc.)
D10	Conveying (i.e., elevators)
D20	Plumbing (i.e., water heating, pumps, compressors)
D30	Heating, Ventilation, and Air Conditioning
D40	Fire Suppression Systems
D50	Electrical (panelboards, transformers, switchgear)
E10	Equipment, Kitchen Hoods, Walk-in Units, etc.

Scope and Approach

RATINGS, METHODS AND SCORING

To allow Poudre School District more flexibility in prioritizing capital planning efforts, McKinstry has developed the following metrics which assign various scores to each asset.

Asset Condition

Condition ratings are presented for each asset as a score of 1 – 5. Scores are based upon a visual inspection during the building evaluation period. A score of 1 signifies that the asset is in great, "like new" condition. A score of 2 indicates that the asset is in good condition. A score of 3 signifies that the asset is in expected "average" condition based on function and the age of the asset. A score of 4 signifies that the asset is in poor condition, in need of repair, and will require replacement in the near future. A score of 5 signifies that the asset is in very poor or failed condition and in need of imminent replacement.

SCORE	CONDITION ASSESSMENT
1	Asset is in great condition, no action required.
2	Asset is in good condition, regular maintenance expected.
3	Asset is in expected condition, regular replacement/maintenance expected.
4	Asset is in poor condition, maintenance/replacement recommended soon.
5	Asset is in very poor condition, urgent replacement needed.

Student/Teacher Impact

Student/Teacher Impact scores are presented for each asset on a scale of 1 – 5 (low to high impact). This metric considers educational (student and/or teacher) impact caused if the equipment were to fail. Assets serving classrooms and other educational spaces are assigned scores of 2-5 depending on the impact the failure of an asset would have and if backups are available. A student/teacher impact score of 1 indicates that there is little to no impact to educational activities.

SCORE	STUDENT/TEACHER IMPACT
1	Failure poses no significant educational impact.
2	Failure poses low educational impact.
3	Failure poses moderate impact. Asset serves teaching area, but has backup.
4	Failure poses high educational impact.
5	Failure poses severe impact. Asset serves teaching area and has no backup.

Energy Cost Impact

The Energy Impact score is presented for each asset on a scale of 1-5 (low to high impact). Each of the asset types within the scope of this assessment were evaluated based on their impact to energy cost and consumption (including electrical, natural gas, and liquid fuels). Assets with a higher Energy Cost Impact score indicate that the asset has a large contribution to the overall energy costs of the facility. A sample of Energy impact scores is shown below:

Scope and Approach

ASSET TYPE	ASSET SIZE	ENERGY COST IMPACT (1-5)
Air Handling Unit	less than 10,000 CFM	3
	between 10,000 CFM – 50,000 CFM	4
	greater than 50,000 CFM	5
Chiller	less than 200 tons	3
	between 200 – 500 tons	4
	greater than 500 tons	5
Computer Room AC Condensing Unit Heat Pump	less than 10 tons	2
	greater than 10 tons	3
Cooling Tower	less than 200 tons of rejection	2
	greater than 200 tons of rejection	3
Dust Collector	less than 5 HP	2
	between 5 HP and 25 HP	3
	greater than 25 HP	4
Exhaust Fan	less than 5000 CFM	2
	greater than 5000 CFM	3
Fan Coil Unit	greater than 3000 CFM	2
Fuel Fired Boiler	less than 200 MBH	2
	between 200 – 1000 MBH	3
	between 1000 – 2000 MBH	4
	greater than 2000 MBH	5
Furnace	less than 100 MBH	2
	between 100 and 500 MBH	3
	greater than 500 MBH	4
Generator	less than 500 KW	2
	greater than 500 KW	3
Lighting, Exterior	LED	2
	Fluorescent	3
	HID/Incandescent	4
Lighting, Interior	LED	2
	Fluorescent	4
	HID/Incandescent	5
Make-Up Air Unit	less than 5,000 CFM	3
	between 5,000 and 25,000 CFM	4
	greater than 25,000 CFM	5
Pumps	less than 25 HP	2
	between 25 -150 HP*	3
	greater than 150 HP*	4
Return Fan Supply Fan	less than 20 HP	2
	greater than 20 HP*	3

ASSET TYPE	ASSET SIZE	ENERGY COST IMPACT (1-5)
Rooftop Unit	less than 5 ton	2
	between 5 and 20 tons	3
	between 20 and 50 tons	4
	greater than 50 tons	5
Transformer	greater than 200 kVA	2
VFD	greater than 50 HP	2
Air Compressor	All sizes	2
Air Curtain		
Air Dryer		
Cabinet Unit Heater		
Dehumidifier		
Electric Duct Heater		
Humidifier		
Unit Heater		
Unit Ventilator		
Walk-In Condenser		
Walk-In Unit		
All Other	All sizes	1

*Add 1 for direct drive motors

Operational Impact

Operational Impact scores are presented for each asset on a scale of 1 – 5 (low to high impact). This metric considers the operational impact caused if the equipment were to fail. Assets serving critical administrative and district operational spaces are assigned scores of 2-5 depending on the impact the failure of an asset would have and if backups are available. An operational impact score of 1 indicates that there is little to no impact to administrative or operational activities.

SCORE	OPERATIONAL COST IMPACT SCORE
1	Asset has little to no operational impact.
2	Asset has a low level of operational impact.
3	Asset has a moderate operational impact.
4	Asset has a high level of operational impact.
5	Asset has severe operational impact.

Industry Life Expectancy

The designed life expectancy for a given asset is determined using a combination of widely accepted industry standards including ASHRAE and BOMA, as well as a manufacturers' database of equipment life expectancies. This value is expressed in number of years.

Scope and Approach

Observed Remaining Life

The Observed Remaining Life is also expressed in number of years and takes into consideration the function and operating environment of the asset, as well as a determination based upon a visual inspection of the asset. The Observed Remaining Life value may vary from the Design Life value. For example, a secondary heat exchanger that has been well maintained may have an Observed Remaining Life that is greater than the expected Design Life. Likewise, a primary chilled water pump that has not been well maintained, and shows visual signs of premature wear and tear, may have an Observed Remaining Life that is less than the expected Design Life.

Cost Estimating

Based on the constraints of the scope outlined in the contract we have based our asset pricing upon industry standards, RSMeans, and pricing data sourced through McKinstry's construction division. This information is intended to assist in the prioritization and resource allocation associated with maintenance and capital replacement projects. Cost estimates are determined using specific characteristics of each asset (tonnage, motor size, capacity, etc.) along with one of several cost information data sets. Standard equipment warranties are included.

To clarify, all Estimated Replacement Costs include averages of the material cost of the asset, the demolition and installation of that asset type and are expressed in 2023 dollars. Additionally, site specific construction and equipment invoices have been utilized as available.

Costs associated with project design, contractor competence, commissioning, test and balance services and are excluded from the estimate and are the responsibility of the Client. McKinstry assumed a 3% inflation, applied year over year. All work is during normal business hours. For mechanical equipment any duct work, piping, existing appurtenances are to be reused; costs to repair or replace any lines going to or coming from the units is excluded. Existing isolation valves to be used; repair or replacement of isolation valves is excluded.

Costs typically associated with project-specific parameters are excluded and should be added at the discretion of the Client. Such exclusions include risks or contingencies such as asbestos abatement, other hazardous waste abatement, scope changes, design changes, taxes, special wage requirements such as Prevailing Wage rates, warranty management and unknown site conditions. Overtime and after-hours work is excluded. Any necessary structural or electrical upgrades to replace equipment is excluded. Incidental code violations resulting from project scope or execution are excluded. Correction of any existing code violations are excluded. Temporary heating, cooling, ventilation, and power during construction and the warranty period are excluded. Moving of heavy equipment or furniture to complete the work is excluded. Running and terminating new IP drops for equipment is excluded. Any changes to fire and life safety systems for mechanical equipment upgrades is excluded.

Data-Driven Maintenance Approach

Included with the submission of this report is the FCA Data Collection Workbook, which includes all data collected for each asset. The Workbook can be used to quickly sort through equipment and prioritize maintenance and replacement efforts. Additional observations and equipment details are provided within the workbook for each asset.

Scope and Approach

Each asset is classified according to building system, size, capacity, and other standards, as well as ratings of current condition and impact of failure. Such organization and classification facilitate searching and sorting the data for maintenance and replacement priorities. As mentioned, the impact ratings help to compare one asset to another. Based on observed condition and impact scores, the future maintenance priorities for each building are described further in later sections.

As each of the components identified in the workbook is repaired or replaced, the information can be revised to reflect the new conditions. Remaining useful life values can also be manually iterated one year from the assessment date to reflect fewer remaining years of life. Assets no longer in service can be removed from the list. Similarly, assets that have been newly installed can be added to the list. Following the impact guidelines, relative priority can be calculated for these assets.

Equity Index

As an additional metric to the six existing areas of the Facilities Condition Assessment, Poudre School District has created an Equity Index to assist in prioritizing facilities improvement projects. This number takes into account student poverty, students qualifying for ELA services, students qualifying for Special Education services, and students who are homeless. The calculated score for each school is based on these factors and where it falls in relation to the district average. The formula would be:

$$\frac{\textit{School Percentage in these areas added together as decimals}}{\textit{District Percentages in these areas added together as decimals}}$$

In this formula, a school with student needs equal to the district average would have an equity index of 1.0. Schools with student needs higher than the district average would have an Equity Index greater than 1.0. Schools with student needs less than the district average would have an Equity Index less than 1.0.

Category	Equity Index
Low	0.29
High	3.20
Average	1.11
Median	0.95

The equity index for McGraw, IB World School ES is 0.82.

Sample Calculation:

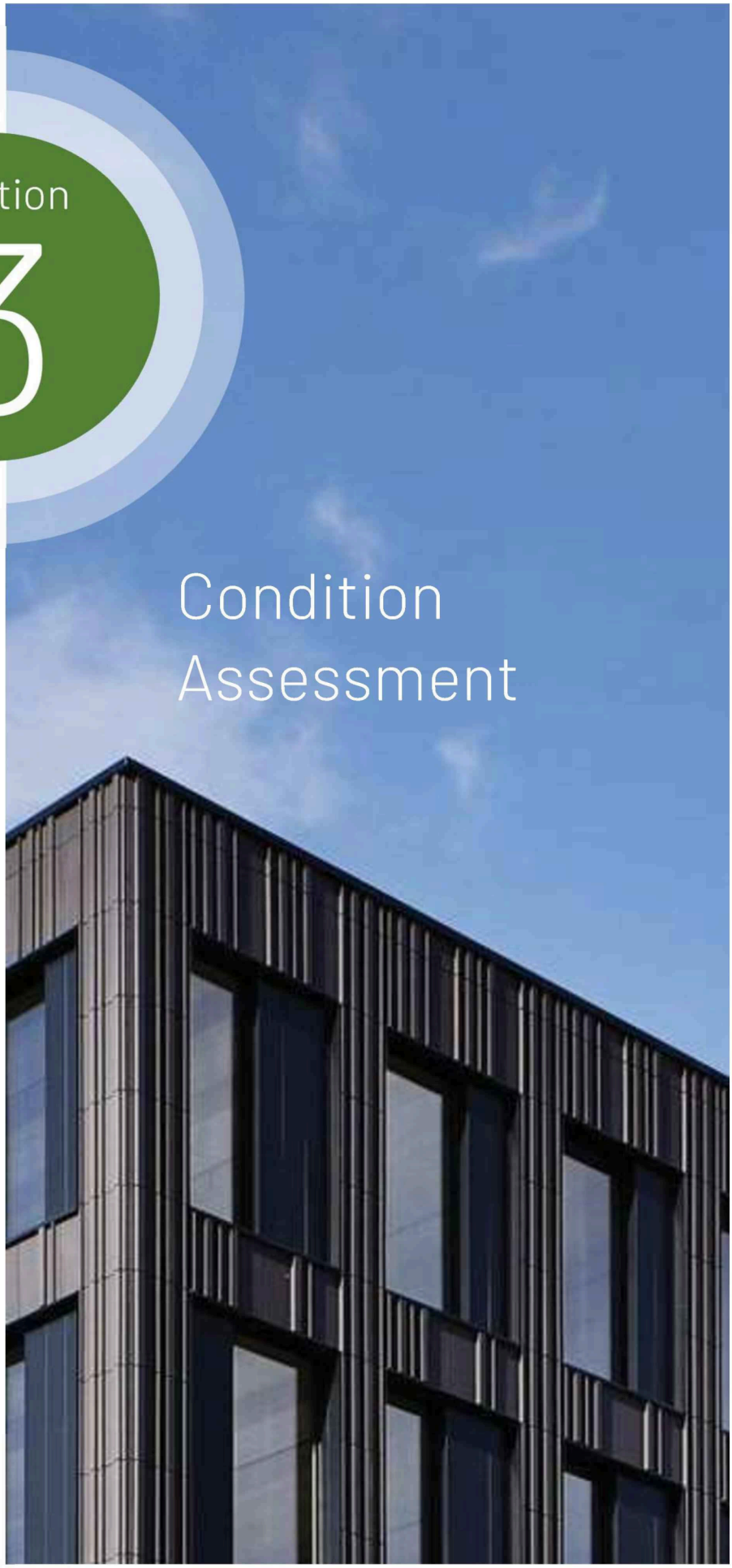
School Name	School Population K-12 Total	F/R	ELL	SPED	McKinney-Vento	Total of Previous Columns	Equity Index Number = school average / district average
Sample	381	15.20%	0.00%	8.40%	0.00%	0.24	0.24/0.48 = 0.49
Grand PSD Total - Oct 2022 Count	**26,163**	**29.5%**	**5.8%**	**9.5%**	**3.4%**	**0.48**	

F/R - Free or Reduced-Price Lunch; ELL- English Language Learners; SPED - Special Ed.; McKinnney-Vento - Homeless Assistance

Section

3

Condition Assessment



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Condition Assessment

SYSTEMS DESCRIPTION

This section summarizes the building systems at McGraw, IB World School ES and describes the general condition observed based on the assessment. Specific findings and recommendations are detailed later in this report.

Exterior Enclosure

The building's exterior walls consist primarily of concrete masonry unit (CMU), and are original to the building's initial construction in 1991. Exterior doors include both single and double metal doors, as well as aluminum/glass storefront doors for the main entrance. The majority of the exterior doors are original, with the exception of the storefront doors where were installed circa 2014. Exterior windows consists of metal and vinyl construction. No major deficiencies were noted with the building's exterior enclosure.

Roofing

The building's roofing consists of a combination of flat rolled asphalt, and standing seam accents above skylights and roof edges. The standing seam metal portions of the roof were replaced in 2023. There are multiple south facing skylights on the rooftop, which appear original. Overall, the roofing is in good condition.

Interior Construction and Finishes

The interior walls are comprised of a combination of concrete masonry unit (CMU) and drywall, [redacted]. Interior doors consist of single and double units, of both hollow metal and wood construction. No major deficiencies were identified with interior construction assets.
Flooring finishes include rolled carpeting, vinyl floor tiles, and athletic flooring in the gymnasium. Ceilings are finished with both drywall and acoustic tiling. [redacted].

Conveyance

There are no conveyance systems in use at this school.

Electrical and Lighting

The building's electric distribution equipment includes 120/208V panels, transformers, and switchgear. These assets were generally installed in 1991 when the building was constructed, [redacted]. Backup power is provided by one (1) 20 kW generator installed in 2003. The building's interior lighting includes both fluorescent (T8) and light emitting diode (LED) lighting. LED lighting is utilized in the FLEX room, and was installed in 2021. Exterior lighting includes LED wall-mounted fixtures, which are in good condition.

HVAC Systems

The building's heating, ventilation, and air conditioning (HVAC) system consists of a combination of unit ventilators serving the classrooms, and air handlers serving the FLEX gymnasium space. The unit ventilators units were installed in 2014, and are equipped with both heating and cooling coils. The air handlers serving the FLEX space date back to the building's initial construction in 1991, but have been updated with new controls. Heating water is provided by two (2) fuel fired boilers installed in 1991. These boilers are a high priority for replacement according to PSD. Cooling is provided by one (1) cooling tower installed in 2014. Additional HVAC equipment includes packaged (DX) rooftop units, rooftop exhaust fans, fan coil units, and heating and cooling water distribution equipment. Overall, the HVAC system is in fair condition; however, the FLEX room AHUs will likely require attention.

Plumbing

Domestic hot water is provided by four (4) natural gas fired water heaters. These assets range in age, having been installed between 2002 and 2018. The older of these water heaters (WH-2) will likely require replacement within 3 years. Additional plumbing equipment includes five (5) backflow preventers.

Fire Suppression

[redacted].

Equipment

There are two (2) walk-in coolers in use at this school, these units are equipped with rooftop condensers. These units appear in fair condition; however, the interior of the coolers could not be accessed.

PRIORITIES

SPECIFIC PRIORITIES

The top capital measures (up to five max) have been detailed in the following tables. Each measure receives a priority level of 1, 2, or 3. A priority level of 1 indicates that the measure is considered an immediate concern or a potential hazard and should be addressed as soon as possible. A priority level of 2 indicates that the measure is considered urgent, but not a potential hazard or there is a less severe impact to occupants. A priority level of 3 indicates that the assets associated with the measure are nearing end of life, but have not yet failed or have a mild to moderate impact on occupant safety and comfort.

McGraw, IB World School ES

1. Prepare for Boiler Replacements

The building utilizes two natural gas fired hydronic boilers which were installed in 1991. These boilers are expected to reach the end of their lifespan within 3-5 years, and will likely require some level of refurbishment or a full replacement. Plan to address these assets within this period to ensure that the building's heating system is running efficiently, and as reliably as possible.

The following assets are included within this measure:

- Boiler 1 (FCAID-370092)
- Boiler 2 (FCAID-370093)

Priority Level:	2
Estimated Cost:	$157,260
Remaining Life:	5 years

Condition Assessment

2. Update Outdated Ventilation Assets

[redacted]Many of these assets are original to the building's 1991 construction and are due for replacement. [redacted].

The following assets are included within this measure:

- AHU-1 (FCAID-370040)
- AHU-2 (FCAID-370041)
- CUH-3 (FCAID-370047)
- CUH-4 (FCAID-370048)
- CUH-5 (FCAID-370049)
- CUH-6 (FCAID-370050)
- CUH-7 (FCAID-370051)
- (23) Exhaust Fans (FCAIDs vary)

Priority Level: 2
Estimated Cost: $329,980
Remaining Life: 5 years

3. Replace the Backup Generator

The building's backup generator was installed in 2003 and has a capacity of 20 kW. [redacted]

The following assets are included within this measure:

- Backup Generator (FCAID-370136)
- ATS (FCAID-370135)

Priority Level: 2
Estimated Cost: $29,050
Remaining Life: 4-5 years

Condition Assessment

4. Replace the Cafeteria (FLEX) VCT Tiling

The VCT tiling in the cafeteria was found [redacted], with areas of cracking and peeling tiles identified. Plan to replace this surface in the next 3-5 years to reduce the risk of tripping hazards developing.

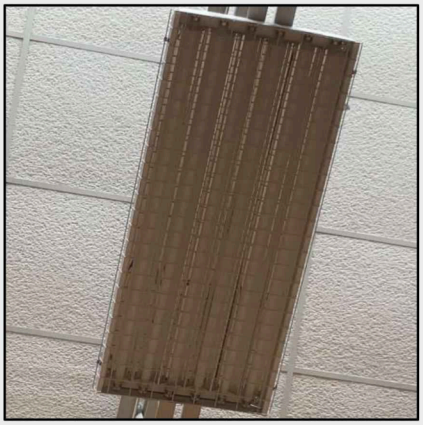
The following assets are included within this measure:

- Flooring - VCT (FCAID-370026)

Priority Level: 3
Estimated Cost: $78,260
Remaining Life: 3-5 years

5. Replace Fluorescent Lighting

A portion of the building's interior lighting utilizes fluorescent (T8) technology. This includes the classroom spaces, corridors, and administrative areas. Consider replacing these fixtures with light emitting diode (LED) fixtures to reduce the building's energy costs and maintenance needs.



The following assets are included within this measure:

- Interior Lighting, Fluorescent (FCAID-370140)

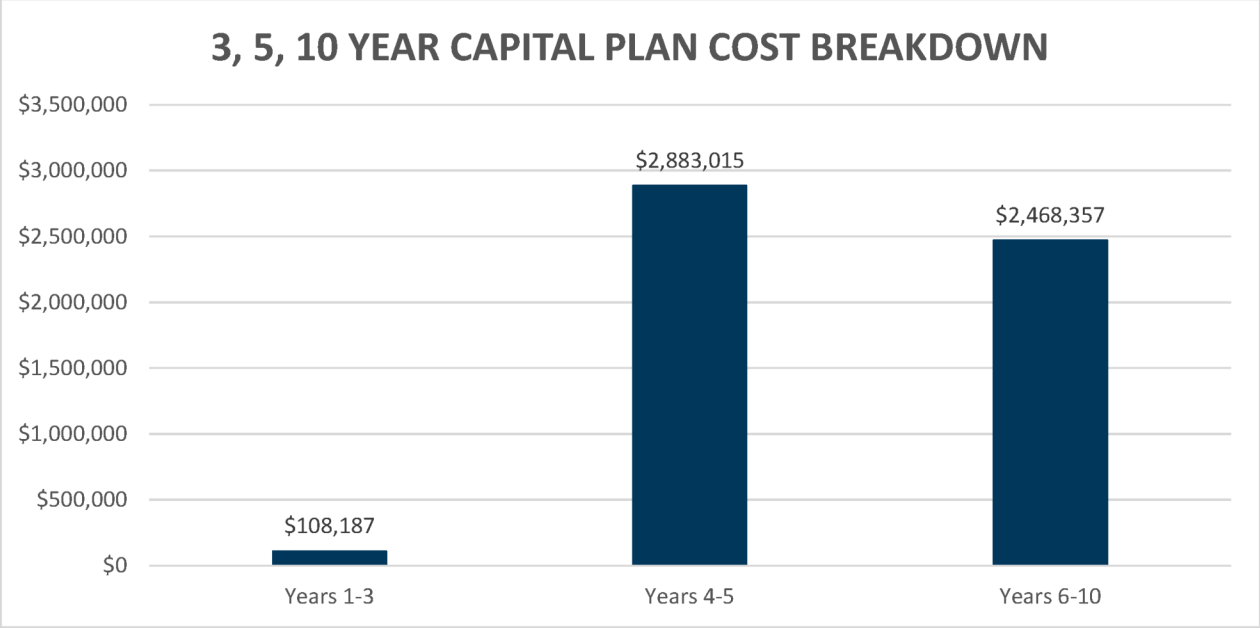
Priority Level: 3
Estimated Cost: $754,320
Remaining Life: 4 years

Condition Assessment

3-, 5-, 10-YEAR PLANS

The following sections present the expected equipment replacement costs over the next ten years, broken into three separate plans. These plans are the 3-Year Plan, 5-Year Plan, and the 10-Year Plan. Each plan includes the equipment expected to fail during these periods, based on the observed condition of the equipment at the time of the assessment. Note, the 3-Year Plan includes assets failing within the next three years, the 5-Year Plan includes assets failing between four and five years, and the 10-Year Plan includes assets failing between in the next six to ten years from the assessment date.

The chart below presents the total expected replacement costs for each plan. Note that these figures include 3% inflation YOY.



Future Capital Plan

The table below displays replacement costs for the campus, and the number of associated assets expected to fail within the next ten years. Assets requiring replacement or extensive maintenance in this plan are presented in Appendices A, B, and C.

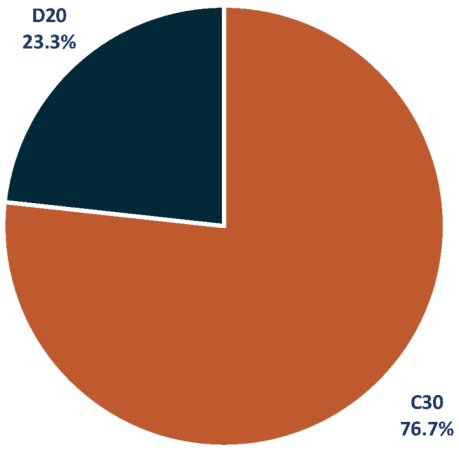
REPLACEMENT PERIOD	ASSET QUANTITY	CUMULATIVE REPLACEMENT COST
3-Year Plan	4	$108,187
5-Year Plan	48	$2,883,015
10-Year Plan	29	$2,468,357
Total	**81**	**$5,459,560**

Condition Assessment

3-YEAR PLAN BREAKDOWN

The three-year plan includes the estimated capital expenditure needed to replace assets reaching end of life in years 1-3, or between 2024 and 2026. The sum of the anticipated capital needs is $108,187. The specific assets that will reach end of life in this period are listed in Appendix A.

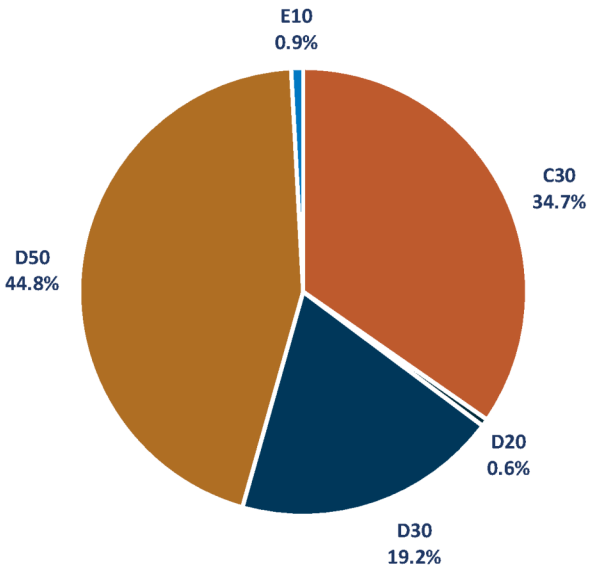
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	$0	0%
B10 - Superstructure	$0	0%
B20 - Exterior Enclosure	$0	0%
B30 - Roofing	$0	0%
C10 - Int. Construction	$0	0%
C20 - Stairs	$0	0%
C30 - Interior Finishes	$83,026	77%
D10 - Conveying	$0	0%
D20 - Plumbing	$25,161	23%
D30 - HVAC	$0	0%
D40 - Fire Protection	$0	0%
D50 - Electrical	$0	0%
E10 - Equipment	$0	0%
G20 - Site Improvements	$0	0%
G40 - Site Electrical	$0	0%



5-YEAR PLAN BREAKDOWN

The five-year plan includes the estimated capital expenditure needed to replace assets reaching end of life in years 4-5, or between 2027 and 2028. The sum of the anticipated capital needs is $2,883,015. The specific assets that will reach end of life in this period are listed in Appendix A.

SUBSYSTEM	Years 4-5	Percent
A10 - Foundations	$0	0%
B10 - Superstructure	$0	0%
B20 - Exterior Enclosure	$0	0%
B30 - Roofing	$0	0%
C10 - Int. Construction	$0	0%
C20 - Stairs	$0	0%
C30 - Interior Finishes	$999,302	35%
D10 - Conveying	$0	0%
D20 - Plumbing	$16,072	1%
D30 - HVAC	$552,253	19%
D40 - Fire Protection	$0	0%
D50 - Electrical	$1,290,492	45%
E10 - Equipment	$24,896	1%
G20 - Site Improvements	$0	0%
G40 - Site Electrical	$0	0%

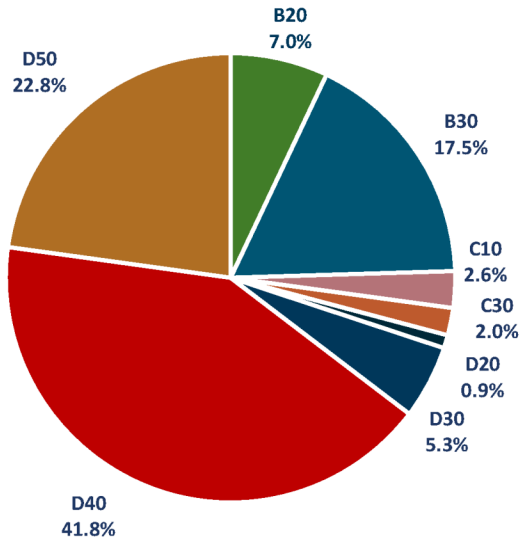


Condition Assessment

10-YEAR PLAN BREAKDOWN

The ten-year plan includes the estimated capital expenditure needed to replace assets reaching end of life in years 6-10, or between 2029 and 2033. The sum of the anticipated capital needs is $2,468,357. The specific assets that will reach end of life in this period are listed in Appendix A.

SUBSYSTEM	Years 6-10	Percent
A10 - Foundations	$0	0%
B10 - Superstructure	$0	0%
B20 - Exterior Enclosure	$173,511	7%
B30 - Roofing	$431,710	17%
C10 - Int. Construction	$64,730	3%
C20 - Stairs	$0	0%
C30 - Interior Finishes	$48,969	2%
D10 - Conveying	$0	0%
D20 - Plumbing	$23,391	1%
D30 - HVAC	$130,206	5%
D40 - Fire Protection	$1,032,913	42%
D50 - Electrical	$562,927	23%
E10 - Equipment	$0	0%
G20 - Site Improvements	$0	0%
G40 - Site Electrical	$0	0%



Condition Assessment

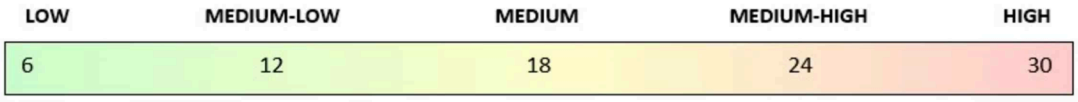
PRIORITY SUMMARY

The summary below assigns a composite Overall Priority Score to the campus as of the assessment date. Priority Scores range from 6 (low priority) to 30 (high priority), and are based on asset condition, operating impact, student impact, energy impact, estimated replacement cost, and observed remaining life.

In addition to the Overall Priority Score, each Subsystem category within the site is assigned a Priority Score. This score can differentiate systems that may need more attention than others, due to condition or impact on occupants or operations. Each Subsystem category includes a general narrative section under the Description column.

Future Capital Plan

The Subsystem scores are color coded to reflect the level of priority: ≤12 = Green, 12.1-23.9 = Yellow, ≥24 = Red. Higher priority scores indicate that a system should be considered for maintenance or capital improvements before other systems with lower scores. The rating scale for Priority Score is visualized below.



Condition Assessment

PRIORITY SCORE SUMMARY - MCGRAW, IB WORLD SCHOOL ES

MCGRAW, IB WORLD SCHOOL ES

BUILDING TYPE:	Elementary School
YEAR BUILT:	1992
GROSS AREA (SF):	51,384
DATE ASSESSED:	July 12, 2023
PRIORITY SCORE:	**16.1**

SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	The building's exterior walls consist primarily of concrete masonry unit (CMU), and are original to the building's initial construction in 1991. Exterior doors include both single and double metal doors, as well as aluminum/glass storefront doors for the main entrance. The majority of the exterior doors are original, with the exception of the storefront doors where were installed circa 2014. Exterior windows consists of metal and vinyl construction. No major deficiencies were noted with the building's exterior enclosure.	**12.7**
B30 - Roofing	The building's roofing consists of a combination of flat rolled asphalt, and standing seam accents above skylights and roof edges. The standing seam metal portions of the roof were replaced in 2023. There are multiple south facing skylights on the rooftop, which appear original. Overall, the roofing is in good condition.	**13.6**
C10 - Int. Construction	The interior walls are comprised of a combination of concrete masonry unit (CMU) and drywall, [redacted]. Interior doors consist of single and double units, of both hollow metal and wood construction. No major deficiencies were identified with interior construction assets.	**14.2**
C30 - Interior Finishes	Flooring finishes include rolled carpeting, vinyl floor tiles, and athletic flooring in the gymnasium. Ceilings are finished with both drywall and acoustic tiling. [redacted].	**15.4**
D20 - Plumbing	Domestic hot water is provided by four (4) natural gas fired water heaters. These assets range in age, having been installed between 2002 and 2018. The older of these water heaters (WH-2) will likely require replacement within 3 years. Additional plumbing equipment includes five (5) backflow preventers.	**12.7**
D30 - HVAC	The building's heating, ventilation, and air conditioning (HVAC) system consists of a combination of unit ventilators serving the classrooms, and air handlers serving the FLEX gymnasium space. The unit ventilators units were installed in 2014, and are equipped with both heating and cooling coils. The air handlers serving the FLEX space date back to the building's initial construction in 1991, but have been updated with new controls. Heating water is provided by two (2) fuel fired boilers installed in 1991. These boilers are a high priority for replacement according to PSD. Cooling is provided by one (1) cooling tower installed in 2014. Additional HVAC equipment includes packaged (DX) rooftop units, rooftop exhaust fans, fan coil units, and heating and cooling water distribution equipment. [redacted].	**14.7**
D40 - Fire Suppression	[redacted].	**22.0**
D50 - Electrical	The building's electric distribution equipment includes 120/208V panels, transformers, and switchgear. These assets were generally installed in 1991 when the building was constructed, [redacted]. Backup power is provided by one (1) 20 kW generator installed in 2003. The building's interior lighting includes both fluorescent (T8) and light emitting diode (LED) lighting. LED lighting is utilized in the FLEX room, and was installed in 2021. Exterior lighting includes LED wall-mounted fixtures, which are in good condition.	**22.2**
E10 - Equipment	There are two (2) walk-in coolers in use at this school, these units are equipped with rooftop condensers. These units appear in fair condition; however, the interior of the coolers could not be accessed.	**15.0**

System priority scored from 6 (lowest priority) to 30 (highest priority) based on condition, operating impact, student/teacher impact, energy impact, estimated replacement cost, and observed remaining life. [≤12 = green, 12-24 = yellow, ≥24 = red]

Appendices

Appendix A

APPENDIX A: 3-YEAR PLAN ASSETS LIST

The individual assets associated with the 3-Year Plan are shown below, sorted from highest to lowest priority score. The priority score key is shown below for convenience.

Note that these values represent current replacement costs expressed in 2023 dollar amounts and are not adjusted for inflation.

LOW	MEDIUM-LOW	MEDIUM	MEDIUM-HIGH	HIGH
6	12	18	24	30

The asset ID listed for each entry has been assigned during this assessment and reflects the corresponding asset in the FCA workbook.

MCGRAW, IB WORLD SCHOOL ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT COST	PRIORITY SCORE
FCAID-370034	Irrigation Pump	D20 - Plumbing	2	$11,900	16
FCAID-370038	WH-2	D20 - Plumbing	3	$10,610	15
FCAID-370026	Flooring - VCT	C30 - Int. Finishes	3	$78,260	14
FCAID-370030	DCW Backflow Preventer	D20 - Plumbing	2	$1,600	14

Appendix B

APPENDIX B: 5-YEAR PLAN ASSETS LIST

The individual assets associated with the 5-Year Plan are shown below, sorted from highest to lowest priority score. The priority score key is shown below for convenience.

Note that these values represent current replacement costs expressed in 2023 dollar amounts and are not adjusted for inflation.

LOW	MEDIUM-LOW	MEDIUM	MEDIUM-HIGH	HIGH
6	12	18	24	30

The asset ID listed for each entry has been assigned during this assessment and reflects the corresponding asset in the FCA workbook.

MCGRAW, IB WORLD SCHOOL ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-370140	Interior Lighting, Fluorescent	D50 - Electrical	4	$754,320	25
FCAID-370139	Emergency Exit Lighting	D50 - Electrical	4	$195,770	22
FCAID-370093	Boiler 2	D30 - HVAC	5	$78,630	20
FCAID-370040	AHU-1	D30 - HVAC	5	$106,650	20
FCAID-370092	Boiler 1	D30 - HVAC	5	$78,630	20
FCAID-370150	Security System	D50 - Electrical	5	$195,770	19
FCAID-370041	AHU-2	D30 - HVAC	5	$86,390	19
FCAID-370020	Ceiling - Acoustic Tile	C30 - Int. Finishes	4	$363,020	17
FCAID-370136	Backup Generator	D50 - Electrical	4	$22,400	17
FCAID-370022	Carpet	C30 - Int. Finishes	5	$428,990	16
FCAID-370157	Walk-in Condenser, Right	E10 - Equipment	5	$5,030	15
FCAID-370156	Walk-in Condenser, Left	E10 - Equipment	5	$5,030	15
FCAID-370158	Walk-in Cooler 1	E10 - Equipment	5	$6,030	15
FCAID-370159	Walk-in Cooler 2	E10 - Equipment	5	$6,030	15
FCAID-370071	EF-4	D30 - HVAC	5	$5,550	13
FCAID-370048	CUH-4	D30 - HVAC	5	$6,610	13
FCAID-370075	EF-8	D30 - HVAC	5	$5,550	13
FCAID-370057	EF-12	D30 - HVAC	5	$1,260	13
FCAID-370054	EF-1	D30 - HVAC	5	$5,550	13
FCAID-370058	EF-13	D30 - HVAC	5	$5,550	13
FCAID-370073	EF-6	D30 - HVAC	5	$1,260	13
FCAID-370059	EF-14	D30 - HVAC	5	$5,550	13
FCAID-370033	DHWP-8	D20 - Plumbing	5	$4,630	13
FCAID-370060	EF-15	D30 - HVAC	5	$5,550	13
FCAID-370050	CUH-6	D30 - HVAC	5	$6,610	13

FCAID-370061	EF-16	D30 - HVAC	5	$5,550	13
FCAID-370056	EF-11	D30 - HVAC	5	$5,550	13
FCAID-370062	EF-17	D30 - HVAC	5	$1,260	13
FCAID-370072	EF-5	D30 - HVAC	5	$5,550	13
FCAID-370037	WH-1	D20 - Plumbing	5	$9,650	13
FCAID-370074	EF-7	D30 - HVAC	5	$5,550	13
FCAID-370024	Flooring - Ceramic Tile	C30 - Int. Finishes	5	$80,340	13
FCAID-370076	EF-9	D30 - HVAC	5	$1,260	13
FCAID-370065	EF-2	D30 - HVAC	5	$5,550	13
FCAID-370047	CUH-3	D30 - HVAC	5	$6,610	13
FCAID-370066	EF-20	D30 - HVAC	5	$6,210	13
FCAID-370049	CUH-5	D30 - HVAC	5	$6,610	13
FCAID-370067	EF-21	D30 - HVAC	5	$6,210	13
FCAID-370051	CUH-7	D30 - HVAC	5	$6,610	13
FCAID-370068	EF-22	D30 - HVAC	5	$5,550	13
FCAID-370055	EF-10	D30 - HVAC	5	$1,260	13
FCAID-370069	EF-23	D30 - HVAC	5	$1,260	13
FCAID-370070	EF-3	D30 - HVAC	5	$5,550	13
FCAID-370063	EF-18	D30 - HVAC	5	$5,550	13
FCAID-370064	EF-19	D30 - HVAC	5	$6,210	13
FCAID-370135	ATS	D50 - Electrical	5	$6,650	12
FCAID-370025	Flooring - Resilient (Kitchen)	C30 - Int. Finishes	5	$26,090	12
FCAID-370094	Gas Meter	D30 - HVAC	5	$3,430	10

Appendix C

APPENDIX C: 10-YEAR PLAN ASSETS LIST

The individual assets associated with the 10-Year Plan are shown below, sorted from highest to lowest priority score. The priority score key is shown below for convenience.

Note that these values represent current replacement costs expressed in 2023 dollar amounts and are not adjusted for inflation.

LOW	MEDIUM-LOW	MEDIUM	MEDIUM-HIGH	HIGH
6	12	18	24	30

The asset ID listed for each entry has been assigned during this assessment and reflects the corresponding asset in the FCA workbook.

MCGRAW, IB WORLD SCHOOL ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-370138	Fire Alarm System	D50 - Electrical	7	$400,280	22
FCAID-370134	Wet Sprinkler System	D40 - Fire Prot.	6	$891,000	22
FCAID-370106	RTU-2	D30 - HVAC	6	$35,380	17
FCAID-370105	RTU-1	D30 - HVAC	6	$24,290	17
FCAID-370151	Distribution Switchboard	D50 - Electrical	8	$32,270	16
FCAID-370009	Skylights	B30 - Roofing	8	$351,020	16
FCAID-370103	Kitchen Hood, Right	D30 - HVAC	7	$8,190	14
FCAID-370102	Kitchen Hood, Left	D30 - HVAC	7	$8,190	14
FCAID-370101	Dishwasher Hood	D30 - HVAC	7	$8,190	14
FCAID-370008	Exterior Windows, Vinyl	B20 - Ext. Enclosure	8	$141,080	13
FCAID-370144	Panel EM	D50 - Electrical	8	$3,000	12
FCAID-370142	Panel DB	D50 - Electrical	8	$3,000	12
FCAID-370146	Panel LA-RT	D50 - Electrical	8	$3,270	12
FCAID-370099	Pump P-3	D30 - HVAC	9	$6,690	12
FCAID-370143	Panel DC	D50 - Electrical	8	$3,000	12
FCAID-370147	Panel LB	D50 - Electrical	8	$3,000	12
FCAID-370145	Panel LA-LT	D50 - Electrical	8	$3,270	12
FCAID-370148	Panel LC	D50 - Electrical	8	$3,270	12
FCAID-370100	Pump P-4	D30 - HVAC	9	$6,690	12
FCAID-370141	Panel DA	D50 - Electrical	8	$3,000	12
FCAID-370149	Panel M	D50 - Electrical	8	$3,270	12
FCAID-370036	Water Heater	D20 - Plumbing	7	$9,650	12
FCAID-370152	Pad Transformer	D50 - Electrical	8	$8,740	12
FCAID-370035	Water Heater	D20 - Plumbing	8	$9,650	11
FCAID-370027	Flooring- Resilient Flooring	C30 - Int. Finishes	6	$26,090	11

FCAID-370023	Exposed Concrete	C30 - Int. Finishes	10	$14,350	10
FCAID-370016	Pocket Doors	C10 - Int. Construct.	10	$49,610	10
FCAID-370095	Glycol Feeder	D30 - HVAC	9	$1,780	8
FCAID-370042	HW Air Separator	D30 - HVAC	9	$9,860	8