POUDRE SCHOOL DISTRICT

RICE ELEMENTARY SCHOOL

FACILITY CONDITION ASSESSMENT

WELLINGTON, CO

OCTOBER 2023

Together, Building a Thriving Planet

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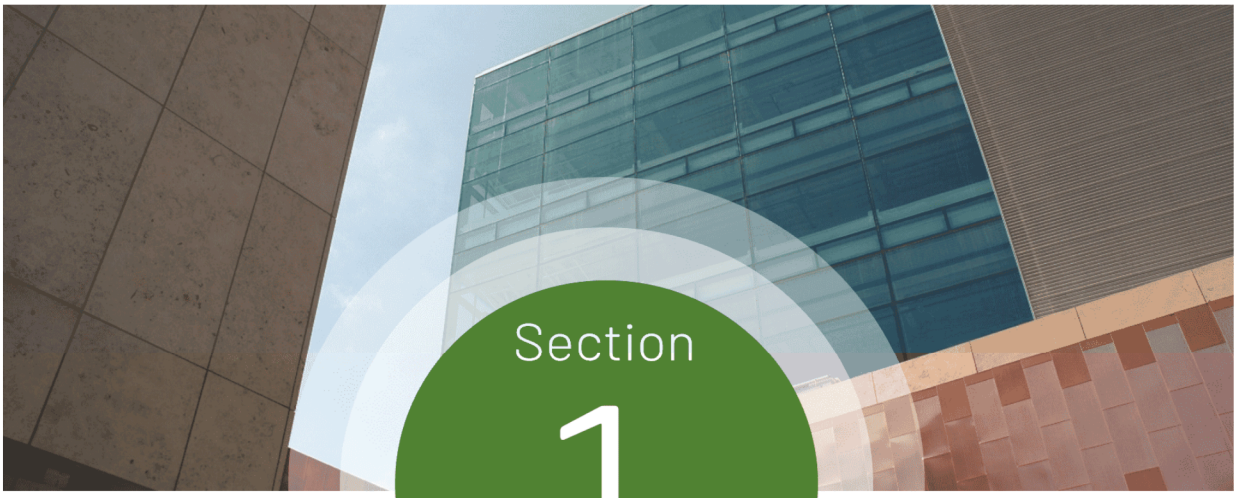

Section

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 Rice ES within the Poudre School District (PSD) on July 26, 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
RICE ES	65,849	2007
TOTAL	**65,849**	

Facility Summary

Rice ES

Rice ES is located at 7000 Third St., Wellington, CO 80549. This 65,849 SF facility consists of two levels and was initially constructed in 2007. The equity index for this school is 0.95.

Rice ES

Executive Summary

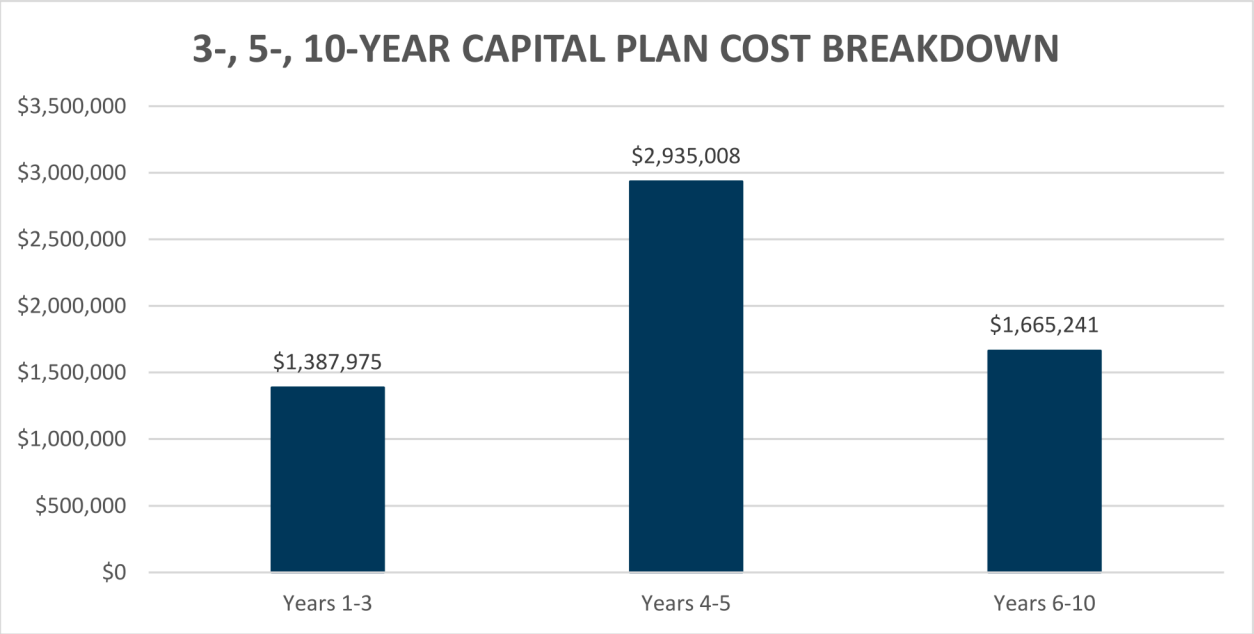
Assessment Summary

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on July 26, 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.



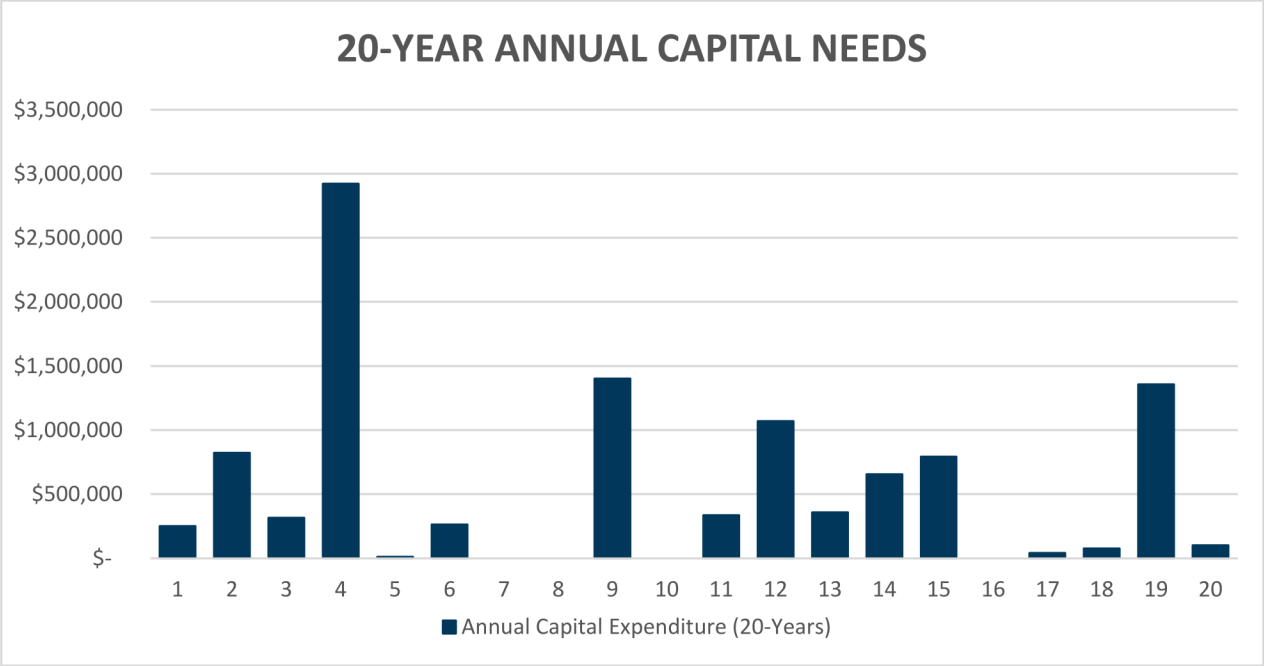
3-, 5-, 10-Year Capital Plan Cost Breakdown

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	$0	$583,316	$0
B30 - Roofing	$0	$386,492	$0	$0
C10 - Int. Construction	$0	$26,704	$0	$0
C20 - Stairs	$0	$0	$0	$0
C30 - Interior Finishes	$1,340,593	$200,998	$1,118,278	$0
D10 - Conveying	$0	$0	$0	$136,927
D20 - Plumbing	$47,783	$12,731	$39,751	$0
D30 - HVAC	$1,291,328	$1,030,931	$0	$1,336,151
D40 - Fire Suppression	$0	$0	$0	$0
D50 - Electrical	$1,616,923	$5,447	$1,470,755	$101,668
E10 - Equipment	$26,357	$0	$0	$0
Total:	**$2,982,390**	**$1,049,109**	**$1,510,505**	**$1,574,746**

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 Rice ES is 0.95.

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 Rice ES and describes the general condition observed based on the assessment. Specific findings and recommendations are detailed later in this report.

Exterior Enclosure

The original two-story building was constructed in 2007. Exterior walls are primarily of brick, metal clapboard panel, and CMU. Windows are of the aluminum framed type, but include some metal clad operable wood windows. Exterior doors consist of hollow metal and storefront types. Two modular buildings were constructed on-site in 2022. Exterior Enclosure assets are generally in [redacted] as expected for age condition.

Roofing

Original 2007 rolled asphalt roofing is present on the majority of the building. A small section of original metal standing seam roofing is also present. The rolled asphalt roofing is [redacted] expected to have 9 years of remaining useful life.

Interior Construction and Finishes

Almost all interior construction and finish assets date to the 2007 original construction. [redacted]. Acoustical tile ceilings are expected to require replacement in 4 years, as is the carpeting in 2 years. The concrete flooring was repaired in 2018. [redacted]

Conveyance

One passenger elevator is provided to serve the two floors of the building. Replace elevator in approximately 19 years.

Electrical and Lighting

The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and the main switchboard date to 2007. The back-up generator is original, needing replacement within 4 years. Emergency back-up lighting dates to 2007, as does the majority of the building's interior fluorescent and incandescent lighting fixtures. Recommend replacement of the remaining fluorescent and incandescent lighting fixtures with LED lighting fixtures within 4 years. The Gym interior lighting was updated to LED fixtures in 2023. The fire alarm system was replaced in 2023, [redacted].

HVAC Systems

HVAC assets include an original cooling tower, one ACCU-1 unit, (8) RTUs, exhaust fans, cabinet unit heaters, and (43) VAVs with Reheat Coils. The heating water system features two original gas-fired boilers with an estimated 14 years of remaining life. The two heating water pumps are original and have approximately 19 years of remaining life. All eight of the RTUs are expected to require replacement within 4 years, as well as (19) exhaust fans, four pumps, the two air separators, and the two expansion tanks. ACCU-1 is expected to require replacement within two years. The (43) VAVs are approaching expected life in two years and recommended replacement is within 6 years. The BAS is original to 2007 construction. Due to the 2007 construction of the school, there are numerous HVAC assets that will require replacement between 2025 and 2029.

Plumbing

Plumbing assets two one gas-fired water heaters that were replaced 2017-2018. Plumbing assets also include (5) backflow preventers, one circulation pump, a water softener, and a water treatment system. Of the total 11 Plumbing assets, 10 are expected to require replacement between 2027 and 2028.

Fire Suppression

The fire alarm system dates to 2023 and will need to be replaced in approximately 15 years. The wet fire sprinkler system is believed to have also been updated in 2023, and has 35 years of remaining life. The Fire Protection System appears to be well maintained and updated per fire code requirements. No deficiencies were noted with this system.

Equipment

The Kitchen area is provided one walk-in cooler and one walk-in freezer with a single associated condensing unit. The walk-in units are original to the 2007 construction and are expected to require replacement in approximately 4 years. The Walk-in Equipment Condensing Unit is one year past expected life but was observed to have approximately 3 years of actual remaining life.

Condition Assessment

PRIORITIES

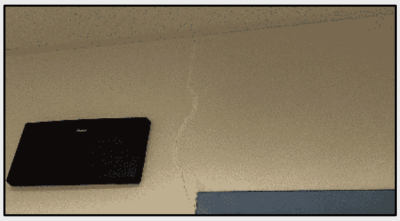
SPECIFIC PRIORITIES

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.

Rice ES

Repair Interior Drywall Cracking

[redacted]



The following assets are included within this measure:

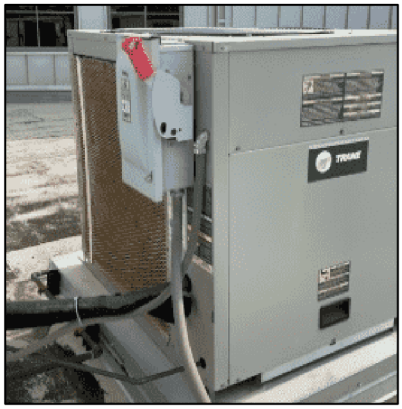
N/A

Priority Level:	1
Estimated Cost:	TBD
Remaining Life:	N/A

Condition Assessment

Replace ACCU-1

ACCU-1 is past expected life [redacted]. Recommend replacement within two years.



The following assets are included within this measure:

FCAID-490054

Priority Level: 2
Estimated Cost: $25,130
Remaining Life: 2 Years

Update Security System

[redacted]

Recommend replacement within the next year. [redacted]

The following assets are included within this measure:

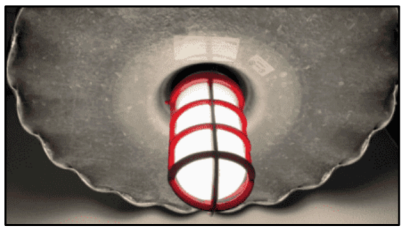
FCAID-490166

Priority Level: 1
Estimated Cost: $250,880
Remaining Life: 1 year

Condition Assessment

Replace Interior Incandescent & Fluorescent Lighting

Recommend replacement of the remaining fluorescent and incandescent lighting fixtures with LED lighting fixtures within 4 years.



The following assets are included within this measure:

FCAID-490143, FCAID-490142

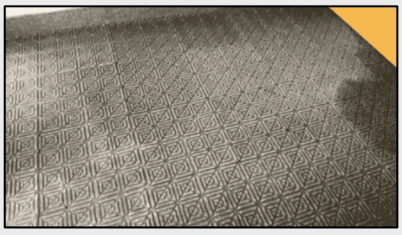
Priority Level: 2
Estimated Cost: $950,170
Remaining Life: 4 Years

Replace Carpeting

Carpeting is 6 years past expected life. [redacted] Replace within 2 years.

The following assets are included within this measure:

FCAID-490023



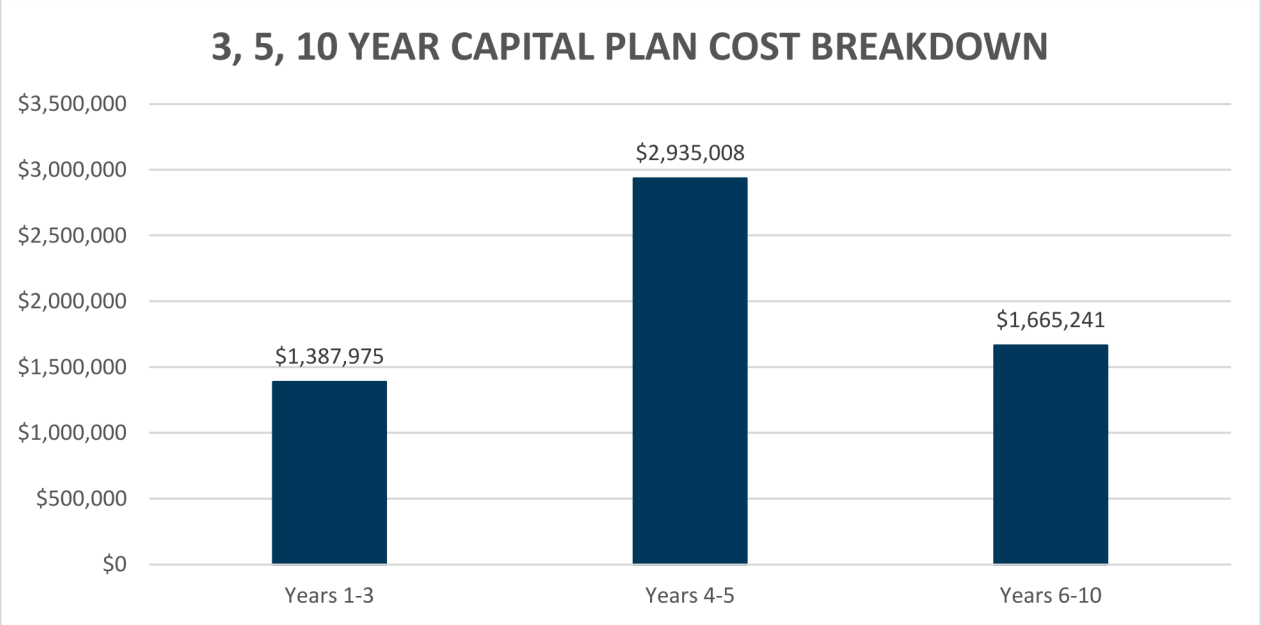
Priority Level: 2
Estimated Cost: $773,070
Remaining Life: 2 Years

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.

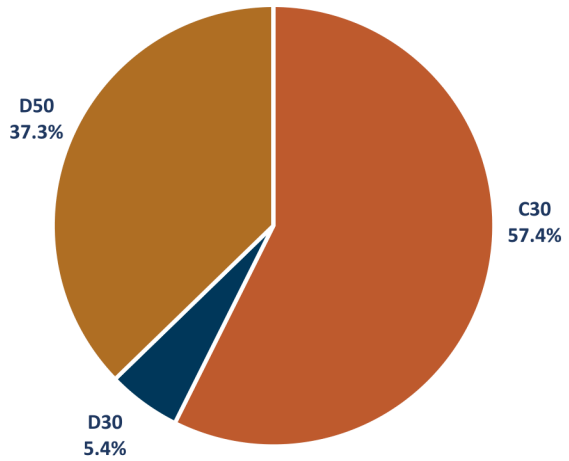
REPLACEMENT PERIOD	ASSET QUANTITY	CUMULATIVE REPLACEMENT COST
3-Year Plan	9	$1,387,975
5-Year Plan	65	$2,935,008
10-Year Plan	53	$1,665,241
Total	**127**	**$5,988,225**

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 $1,387,975. The specific assets that will reach end of life in this period are listed in Appendix A.

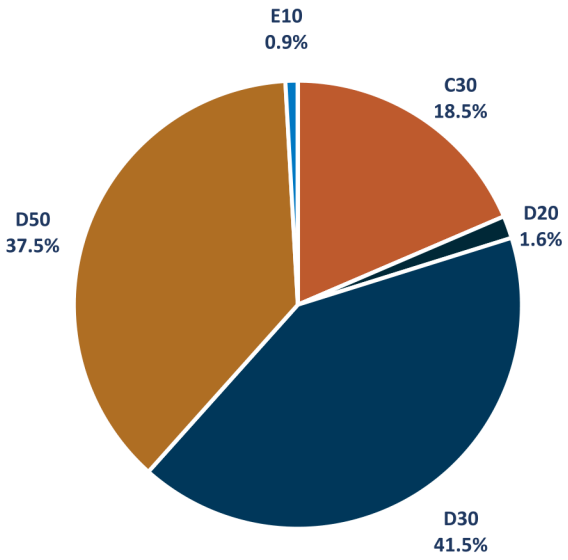
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	$0	0%
B10 - Superstructure	$0	0%
B20 - Exterior Enclosure	$0	0%
B30 - Roofing	$0	0%
C10 - Int. Construction	$0	0%
C20 - Stairs	$0	0%
C30 - Interior Finishes	$796,262	57%
D10 - Conveying	$0	0%
D20 - Plumbing	$0	0%
D30 - HVAC	$74,675	5%
D40 - Fire Protection	$0	0%
D50 - Electrical	$517,039	37%
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 $2,935,008. 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	$544,331	19%
D10 - Conveying	$0	0%
D20 - Plumbing	$47,783	2%
D30 - HVAC	$1,216,653	41%
D40 - Fire Protection	$0	0%
D50 - Electrical	$1,099,884	37%
E10 - Equipment	$26,357	1%
G20 - Site Improvements	$0	0%
G40 - Site Electrical	$0	0%

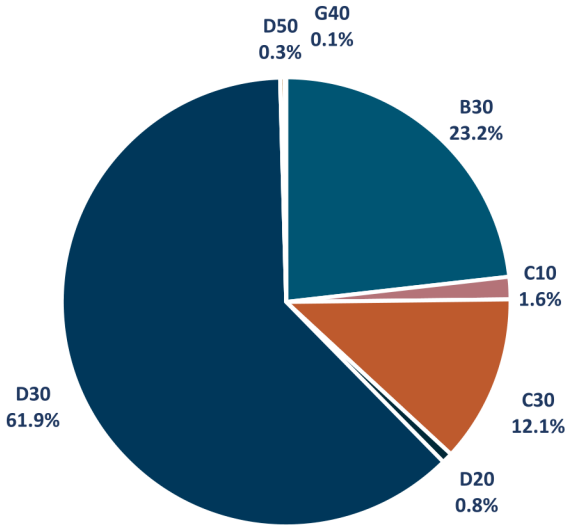


Condition Assessment

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 $1,665,241. 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	$0	0%
B30 - Roofing	$386,492	23%
C10 - Int. Construction	$26,704	2%
C20 - Stairs	$0	0%
C30 - Interior Finishes	$200,998	12%
D10 - Conveying	$0	0%
D20 - Plumbing	$12,731	1%
D30 - HVAC	$1,030,931	62%
D40 - Fire Protection	$0	0%
D50 - Electrical	$5,447	<1%
E10 - Equipment	$0	0%
G20 - Site Improvements	$0	0%
G40 - Site Electrical	$1,938	<1%



Condition Assessment

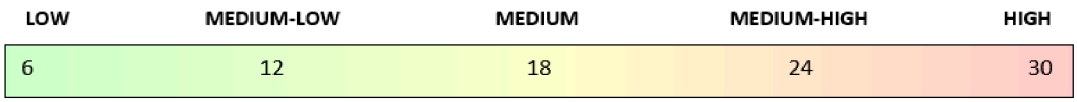
PRIORITY SUMMARY

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 - RICE ES

RICE ES

BUILDING TYPE:	Elementary School
YEAR BUILT:	2007
GROSS AREA (SF):	65,849
DATE ASSESSED:	July 16, 2023
PRIORITY SCORE:	**16.6**

SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	The original two-story building was constructed in 2007. Exterior walls are primarily of brick, metal clapboard panel, and CMU. Windows are of the aluminum framed type, but include some metal clad operable wood windows. Exterior doors consist of hollow metal and storefront types. Two modular buildings were constructed on-site in 2022. Exterior Enclosure assets are generally [redacted]/as expected for age condition.	**12.6**
B30 - Roofing	Original 2007 rolled asphalt roofing is present on the majority of the building. A small section of original metal standing seam roofing is also present. The rolled asphalt roofing is in average condition and is expected to have 9 years of remaining useful life.	**15.3**
C10 - Int. Construction	Almost all interior construction and finish assets date to the 2007 original construction. [redacted] Acoustical tile ceilings are expected to require replacement in 4 years, as is the carpeting in 2 years. The concrete flooring was repaired in 2018. Numerous cracks were observed in the drywall walls throughout the building. [redacted]	**13.8**
C30 - Interior Finishes		**16.4**
D20 - Plumbing	Plumbing assets two one gas-fired water heaters that were replaced 2017-2018. Plumbing assets also include (5) backflow preventers, one circulation pump, a water softener, and a water treatment system. Of the total 11 Plumbing assets, 10 are expected to require replacement between 2027 and 2028.	**12.3**
D30 - HVAC	HVAC assets include an original cooling tower, one ACCU-1 unit, (8) RTUs, exhaust fans, cabinet unit heaters, and (43) VAVs with Reheat Coils. The heating water system features two original gas-fired boilers with an estimated 14 years of remaining life. The two heating water pumps are original and have approximately 19 years of remaining life. All eight of the RTUs are expected to require replacement within 4 years, as well as (19) exhaust fans, four pumps, the two air separators, and the two expansion tanks. ACCU-1 is expected to require replacement within two years. The (43) VAVs are approaching expected life in two years and recommended replacement is within 6 years. The BAS is original to 2007 construction. Due to the 2007 construction of the school, there are numerous HVAC assets that will require replacement between 2025 and 2029.	**16.5**
D40 - Fire Suppression	The fire alarm system dates to 2023 and will need to be replaced in approximately 15 years. The wet fire sprinkler system is believed to have also been updated in 2023, and has 35 years of remaining life. The Fire Protection System appears to be well maintained and updated per fire code requirements. No deficiencies were noted with this system.	**20.0**
D50 - Electrical	The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and the main switchboard date to 2007. The back-up generator is original, needing replacement within 4 years. Emergency back-up lighting dates to 2007, as does the majority of the building's interior fluorescent and incandescent lighting fixtures. Recommend replacement of the remaining fluorescent and incandescent lighting fixtures with LED lighting fixtures within 4 years. The Gym interior lighting was updated to LED fixtures in 2023. [redacted]	**21.8**
E10 - Equipment	The Kitchen area is provided one walk-in cooler and one walk-in freezer with a single associated condensing unit. The walk-in units are original to the 2007 construction and are expected to require replacement in approximately 4 years. The Walk-in Equipment Condensing Unit is one year past expected life but was observed to have approximately 3 years of actual remaining life.	**16.0**

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.

RICE ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT COST	PRIORITY SCORE
FCAID-490184	Emergency Backup Lighting	D50 - Electrical	3	$250,880	24
FCAID-490166	Security System	D50 - Electrical	1	$250,880	23
FCAID-490023	Flooring - Carpet	C30 - Int. Finishes	2	$773,070	19
FCAID-490054	ACCU-1	D30 - HVAC	2	$25,130	19
FCAID-490055	Walk-in Equipment Condensing Unit	D30 - HVAC	3	$25,130	17
FCAID-490092	GFUH-1	D30 - HVAC	3	$4,520	13
FCAID-490093	UH-2	D30 - HVAC	3	$3,520	13
FCAID-490041	Air Separator-2	D30 - HVAC	3	$5,290	11
FCAID-490040	Air Separator-1	D30 - HVAC	3	$7,530	11

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.

RICE ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-490142	Lighting - Interior, Fluorescent	D50 - Electrical	4	$940,220	25
FCAID-490143	Lighting - Interior, Incandescent	D50 - Electrical	4	$9,950	22
FCAID-490086	RTU-1	D30 - HVAC	4	$133,900	21
FCAID-490089	RTU-4	D30 - HVAC	4	$133,900	21
FCAID-490090	RTU-5	D30 - HVAC	4	$133,900	21
FCAID-490088	RTU-3	D30 - HVAC	4	$60,120	19
FCAID-490091	RTU-7	D30 - HVAC	4	$45,410	19
FCAID-490087	RTU-2	D30 - HVAC	4	$60,120	19
FCAID-490085	CR-RTU-1	D30 - HVAC	4	$31,160	18
FCAID-490084	CLRTU-2	D30 - HVAC	4	$31,160	18
FCAID-490139	Emergency Generator	D50 - Electrical	4	$22,400	17
FCAID-490073	RF-201	D30 - HVAC	4	$8,660	17
FCAID-490068	RF-102	D30 - HVAC	4	$16,270	17
FCAID-490069	RF-103	D30 - HVAC	4	$19,500	17
FCAID-490074	RF-202	D30 - HVAC	4	$8,660	17
FCAID-490070	RF-104	D30 - HVAC	4	$16,270	17
FCAID-490067	RF-101	D30 - HVAC	4	$16,270	17
FCAID-490071	RF-105	D30 - HVAC	4	$16,270	17
FCAID-490072	RF-106	D30 - HVAC	4	$16,270	17
FCAID-490075	RF-203	D30 - HVAC	4	$8,660	17
FCAID-490181	Walk in Cooler	E10 - Equipment	4	$12,060	16
FCAID-490021	Ceiling- Acoustic Tile	C30 - Int. Finishes	4	$498,140	16
FCAID-490182	Walk in Freezer	E10 - Equipment	4	$12,060	16
FCAID-490083	P-2	D30 - HVAC	4	$11,900	15
FCAID-490056	CT-1	D30 - HVAC	4	$149,250	15

FCAID-490082	P-1	D30 - HVAC	4	$11,900	15
FCAID-490053	P-4	D30 - HVAC	4	$16,110	15
FCAID-490052	P-3	D30 - HVAC	4	$16,110	15
FCAID-490066	SF-1	D30 - HVAC	4	$9,590	15
FCAID-490060	EF-4	D30 - HVAC	4	$6,710	14
FCAID-490051	Cabinet Unit Heater	D30 - HVAC	4	$6,610	14
FCAID-490049	Cabinet Unit Heater	D30 - HVAC	4	$6,610	14
FCAID-490064	EF-8	D30 - HVAC	4	$11,230	14
FCAID-490058	EF-2	D30 - HVAC	4	$5,550	14
FCAID-490065	EF-9	D30 - HVAC	4	$9,590	14
FCAID-490062	EF-6	D30 - HVAC	4	$6,710	14
FCAID-490035	CP-1	D20 - Plumbing	4	$4,630	14
FCAID-490050	Cabinet Unit Heater	D30 - HVAC	4	$6,610	14
FCAID-490037	WH-2	D20 - Plumbing	4	$10,610	14
FCAID-490057	EF-1	D30 - HVAC	4	$6,210	14
FCAID-490045	Cabinet Unit Heater	D30 - HVAC	4	$6,610	14
FCAID-490059	EF-3	D30 - HVAC	4	$5,550	14
FCAID-490046	Cabinet Unit Heater	D30 - HVAC	4	$6,610	14
FCAID-490061	EF-5	D30 - HVAC	4	$16,270	14
FCAID-490047	Cabinet Unit Heater	D30 - HVAC	4	$6,610	14
FCAID-490063	EF-7	D30 - HVAC	4	$12,000	14
FCAID-490048	Cabinet Unit Heater	D30 - HVAC	4	$6,610	14
FCAID-490036	WH-1	D20 - Plumbing	5	$10,610	13
FCAID-490176	CT-1 VFD	D50 - Electrical	4	$5,630	13
FCAID-490039	Water Treatment System	D20 - Plumbing	4	$5,530	13
FCAID-490031	BFP-3	D20 - Plumbing	4	$400	12
FCAID-490178	P-2 VFD	D50 - Electrical	4	$5,480	12
FCAID-490177	P-1 VFD	D50 - Electrical	4	$5,480	12
FCAID-490180	RTU-7 VFD	D50 - Electrical	4	$5,480	12
FCAID-490179	P-3 VFD	D50 - Electrical	4	$5,840	12
FCAID-490029	BFP-1	D20 - Plumbing	4	$400	12
FCAID-490030	BFP-2	D20 - Plumbing	4	$400	12
FCAID-490033	BFP-Fire	D20 - Plumbing	4	$800	12
FCAID-490032	BFP-4	D20 - Plumbing	4	$400	12
FCAID-490140	Exterior Lighting	D50 - Electrical	4	$6,070	12
FCAID-490034	ET-3	D20 - Plumbing	4	$9,630	11
FCAID-490044	Bypass Feeder (HWS)	D30 - HVAC	4	$750	11
FCAID-490076	ET-1	D30 - HVAC	4	$7,230	11
FCAID-490077	ET-2	D30 - HVAC	4	$7,230	11
FCAID-490043	Bypass Feeder (CHWS)	D30 - HVAC	4	$750	11

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.

RICE ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-490042	Building Automation System	D30 - HVAC	9	$564,330	16
FCAID-490012	Roofing - Rolled Asphalt	B30 - Roofing	9	$305,100	16
FCAID-490124	TB-127	D30 - HVAC	6	$7,270	12
FCAID-490116	TB-119	D30 - HVAC	6	$5,640	12
FCAID-490132	TB-208	D30 - HVAC	6	$5,640	12
FCAID-490094	TB-101	D30 - HVAC	6	$7,270	12
FCAID-490120	TB-123	D30 - HVAC	6	$5,640	12
FCAID-490095	TB-102A	D30 - HVAC	6	$2,680	12
FCAID-490128	TB-204	D30 - HVAC	6	$5,640	12
FCAID-490096	TB-102B	D30 - HVAC	6	$3,300	12
FCAID-490114	TB-117B	D30 - HVAC	6	$4,700	12
FCAID-490097	TB-103	D30 - HVAC	6	$5,640	12
FCAID-490118	TB-121	D30 - HVAC	6	$5,640	12
FCAID-490098	TB-104	D30 - HVAC	6	$7,270	12
FCAID-490122	TB-125	D30 - HVAC	6	$7,270	12
FCAID-490099	TB-105	D30 - HVAC	6	$4,700	12
FCAID-490126	TB-202	D30 - HVAC	6	$4,700	12
FCAID-490100	TB-106A	D30 - HVAC	6	$3,300	12
FCAID-490130	TB-206	D30 - HVAC	6	$5,640	12
FCAID-490101	TB-106B	D30 - HVAC	6	$5,640	12
FCAID-490134	TB-210	D30 - HVAC	6	$2,680	12
FCAID-490102	TB-106C	D30 - HVAC	6	$3,300	12
FCAID-490115	TB-118	D30 - HVAC	6	$7,270	12
FCAID-490103	TB-106D	D30 - HVAC	6	$2,680	12
FCAID-490117	TB-120	D30 - HVAC	6	$5,640	12

FCAID-490104	TB-107	D30 - HVAC	6	$5,640	12
FCAID-490119	TB-122	D30 - HVAC	6	$4,700	12
FCAID-490105	TB-108	D30 - HVAC	6	$4,700	12
FCAID-490121	TB-124	D30 - HVAC	6	$3,300	12
FCAID-490106	TB-109	D30 - HVAC	6	$5,640	12
FCAID-490123	TB-126	D30 - HVAC	6	$7,270	12
FCAID-490107	TB-110	D30 - HVAC	6	$5,640	12
FCAID-490125	TB-201	D30 - HVAC	6	$5,640	12
FCAID-490108	TB-111	D30 - HVAC	6	$3,300	12
FCAID-490127	TB-203	D30 - HVAC	6	$5,640	12
FCAID-490109	TB-112	D30 - HVAC	6	$4,700	12
FCAID-490129	TB-205	D30 - HVAC	6	$4,700	12
FCAID-490110	TB-113	D30 - HVAC	6	$5,640	12
FCAID-490131	TB-207	D30 - HVAC	6	$5,640	12
FCAID-490111	TB-114	D30 - HVAC	6	$5,640	12
FCAID-490133	TB-209	D30 - HVAC	6	$5,640	12
FCAID-490135	TB-211	D30 - HVAC	6	$5,640	12
FCAID-490026	Flooring - Ceramic Tile	C30 - Int. Finishes	9	$93,780	12
FCAID-490136	TB-212	D30 - HVAC	6	$5,640	12
FCAID-490113	TB-117A	D30 - HVAC	6	$7,270	12
FCAID-490112	TB-115	D30 - HVAC	6	$5,640	12
FCAID-490025	Walls - Ceramic Tile	C30 - Int. Finishes	9	$64,890	11
FCAID-490019	Ceiling - Wood Panels	C10 - Int. Construct.	9	$21,080	11
FCAID-490138	ATS	D50 - Electrical	9	$4,300	11
FCAID-490081	PFHX-1	D30 - HVAC	9	$38,540	10
FCAID-490038	Water Softener	D20 - Plumbing	9	$10,050	10
FCAID-490183	Electric Meter	G40 - Site Electric	9	$1,530	9
FCAID-490080	Gas Meter	D30 - HVAC	9	$3,430	9