



POUDRE SCHOOL
DISTRICT
TAVELLI
ELEMENTARY
SCHOOL

FACILITY CONDITION ASSESSMENT

FORT COLLINS, CO

OCTOBER 2023



Together, Building a Thriving Planet



Table of Contents

KEY CONTACT INFORMATION.....	2
EXECUTIVE SUMMARY.....	3
SCOPE AND APPROACH.....	7
Scope of work.....	8
Ratings, Methods and Scoring.....	9
Cost Estimating.....	12
CONDITION ASSESSMENT.....	14
Systems Description - Tavelli ES.....	15
Priorities.....	16
3-, 5-, 10-Year Plans.....	19
APPENDICES	24
Appendix A: 3-Year Plan Assets List.....	A
Appendix B: 5-Year Plan Assets List.....	B
Appendix C: 10-Year Plan Assets List.....	C

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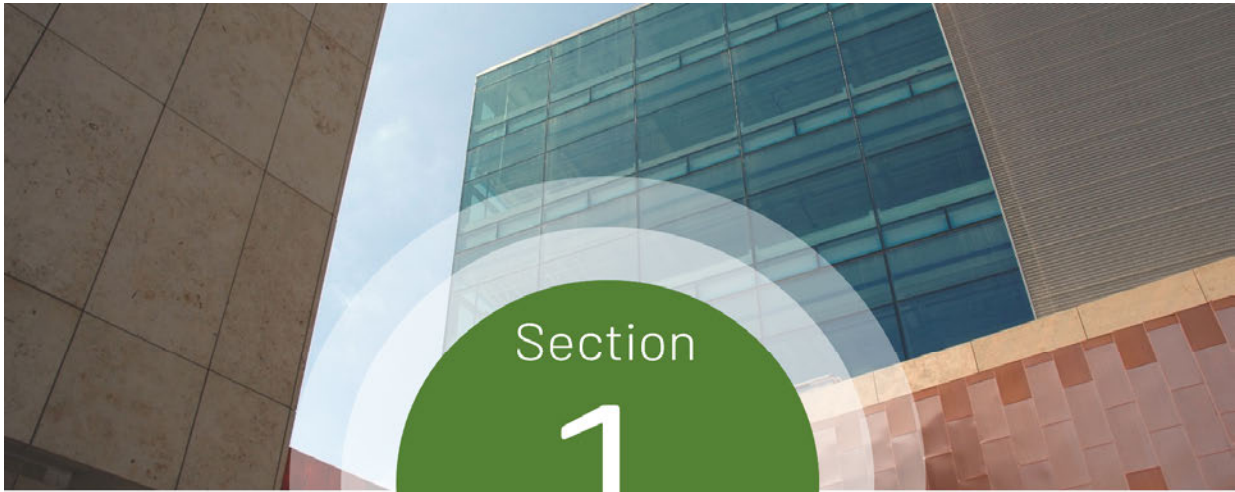
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Section

1

Executive Summary

Executive Summary

Project Goals

The contents of this report present the results of the Facility Condition Assessment (FCA) performed at Tavelli ES within the Poudre School District (PSD) on July 5, 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
TAVELLI ES	62,537	1968
TOTAL	62,537	

Facility Summary

Tavelli ES

Tavelli ES is located at 1118 Miramont Dr., Fort Collins, CO 80525. This 62,537 SF facility consists of one level and was initially constructed in 1968. The equity index for this school is 0.97.



Tavelli ES

Executive Summary

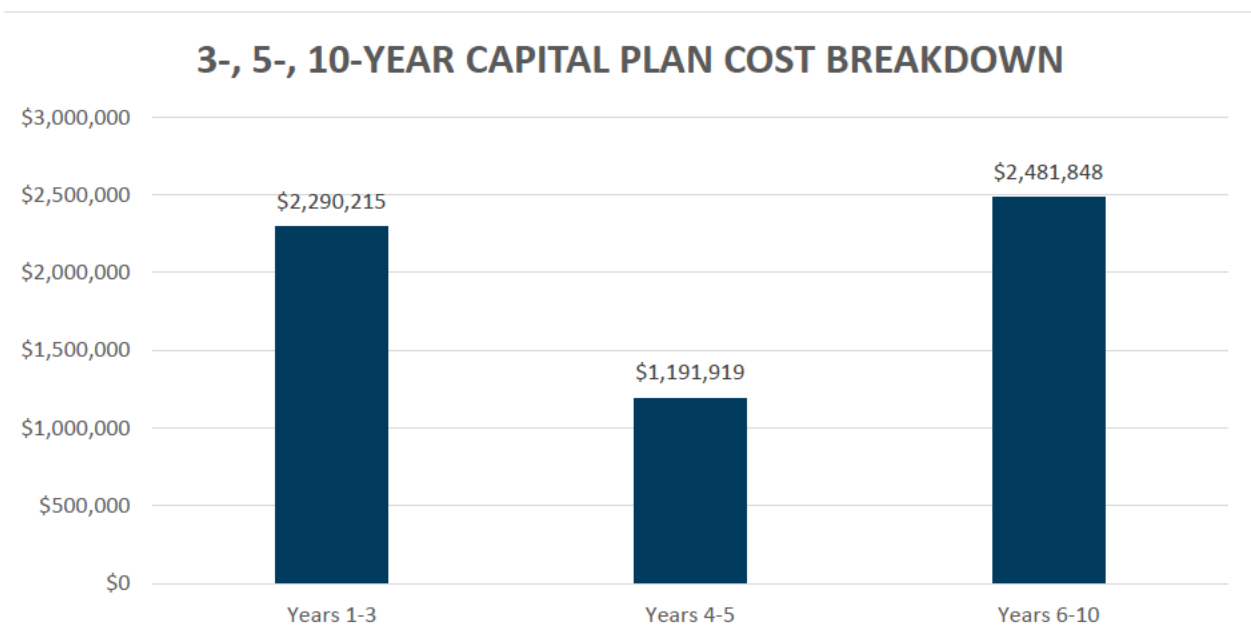
Assessment Summary

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on July 5, 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.



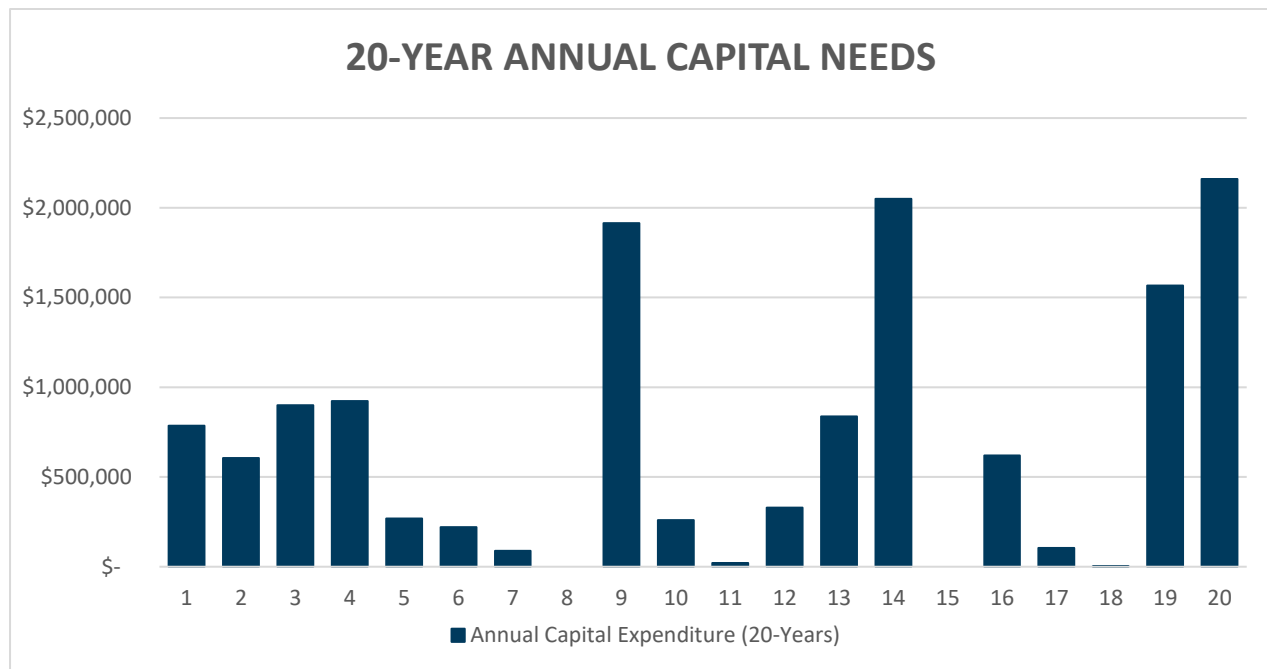
3-, 5-, 10-Year Capital Plan Cost Breakdown

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	\$299,340	\$0	\$0	\$1,449,460
B30 - Roofing	\$9,125	\$20,648	\$662,338	\$21,706
C10 - Int. Construction	\$398,168	\$0	\$0	\$1,000,912
C20 - Stairs	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$1,024,564	\$559,684	\$837,421	\$369,137
D10 - Conveying	\$0	\$0	\$0	\$0
D20 - Plumbing	\$14,704	\$15,467	\$29,180	\$18,063
D30 - HVAC	\$513,546	\$385,922	\$1,378,198	\$358,066
D40 - Fire Suppression	\$0	\$0	\$0	\$0
D50 - Electrical	\$1,209,114	\$1,484,849	\$329,821	\$1,234,996
E10 - Equipment	\$13,574	\$15,277	\$0	\$0
Total:	\$3,482,134	\$2,481,848	\$3,236,958	\$4,452,340

Section

2

Approach and Methodology

Scope and Approach

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

Scope and Approach

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:

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

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 Tavelli ES is 0.97.

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.; McKinney-Vento - Homeless Assistance

Section

3

Condition Assessment

Condition Assessment

SYSTEMS DESCRIPTION

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

Exterior Enclosure

This facility has a primarily masonry façade. While the building has several additions the exterior brick matches in color, size, and texture. Standing Seam metal mansard roofing is present at most entry conditions (main building and classrooms) as well as wraps the elevated gym exterior. Exterior glazing is primarily 1968-built metal framed windows and 1968-built metal doors. One modular building was constructed in 2012.

Roofing

The roofing for this facility is 2012-built rolled asphalt with approximately 14 years of life remaining. [REDACTED]

Interior Construction and Finishes

This facility's interior partitions are Brick, CMU and Drywall of varying ages. Note that there are several additions and also varying ages of finishes. Overall flooring and ceiling finishes have been updated since the original construction, with the noticeable exception of the gym area which has original ceiling tiles. Flooring is typically carpet with tile, VCT, Hardwood, and concrete in various areas. There remain 1968 sections of VCT flooring and ceramic tile flooring.

Conveyance

As the building is comprised of a single story an elevator is not provided.

Electrical and Lighting

The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and VFDs have mostly been upgraded from 2010-2012. Both VFDs were replaced in 2010. [REDACTED] The associated ATS-1 was replaced in 2020. Emergency back-up lighting appears to have been updated in 1993. The interior fluorescent light, fire alarm system, and the security system date to 2012. Recommend replacement of the fluorescent lighting fixtures with LED lighting fixtures in approximately 9 years. [REDACTED]

HVAC Systems

The HVAC assets include (7) rooftop units, [REDACTED] Fan Coil Units, cabinet unit heaters, BBRs, duct heating coils, and exhaust fans are also present. The heating water system features two gas-fired 1994-built boilers with associated circulation pumps. Boiler have 6 years of remaining life, and HWP's have an estimated remaining life of 7 years. The BAS was upgraded in 2012.

Plumbing

Plumbing assets include two newer gas-fired water heaters and two newer circulation pumps. Three backflow preventers and one thermostatic mixing valve were replaced in 2012-2017. Most plumbing assets were replaced between 2012 and 2022. Though the thermostatic mixing valve was replaced in 2017 [REDACTED] and needs to be replaced within the year.

Fire Suppression

The fire alarm system was updated in 2012. 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 (built 1993) and one walk-in freezer (built 2012). The two associated condensing units were both replaced in 2012. Observed remaining life of the walk-in cooler is 5 years.

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.

Tavelli ES

Replace Back-Up Generator

The Generator dates to 1993 and is 10 years past expected life. Run Hours = 519.1 . Recommend replacement within two years. [REDACTED]

The following assets are included within this measure:

FCAID-550055



Priority Level:	1
Estimated Cost:	\$51,270
Remaining Life:	1-2 Years

Condition Assessment

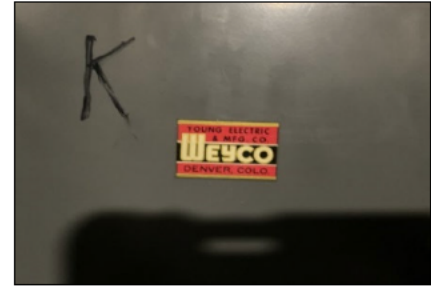
Replace (4) 1968 Panelboards

Panels K, PA, PB, and PD date to 1968 and are 15 years past expected life. [REDACTED]

[REDACTED] Replace within the year.

The following assets are included within this measure:

FCAID-550151, FCAID-550154 through FCAID-550156



Priority Level: 2
Estimated Cost: \$31,280
Remaining Life: one year

Replace RTUs 4,5,6,7

RTU-5 and RTU-6 date to 1993 [REDACTED]. RTU-4 and RTU-7 date to 1995 [REDACTED]. These RTUs are 13-15 years past expected life. Replace in 1-2 years.

The following assets are included within this measure:

FCAID-550135 through FCAID-550138



Priority Level: 2
Estimated Cost: \$195,880
Remaining Life: 1-2 Years

Condition Assessment

Replace Thermostatic Mixing Valve

Though the thermostatic mixing valve was replaced in 2017 [REDACTED] and needs to be replaced within the year.



The following assets are included within this measure:

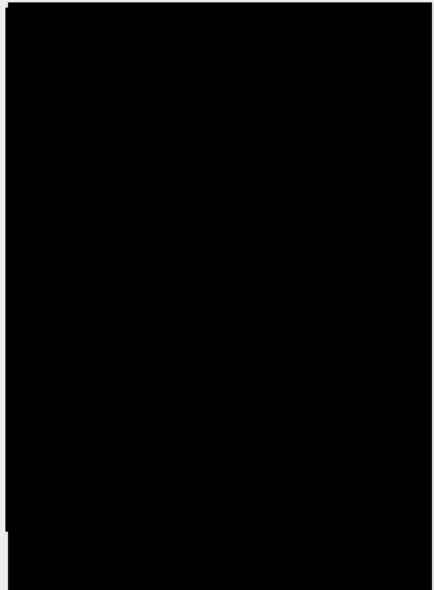
FCAID-550049

Priority Level: 2
Estimated Cost: \$3,110
Remaining Life: one year

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

The following assets are included within this measure:

FCAID-550003 through FCAID-550005



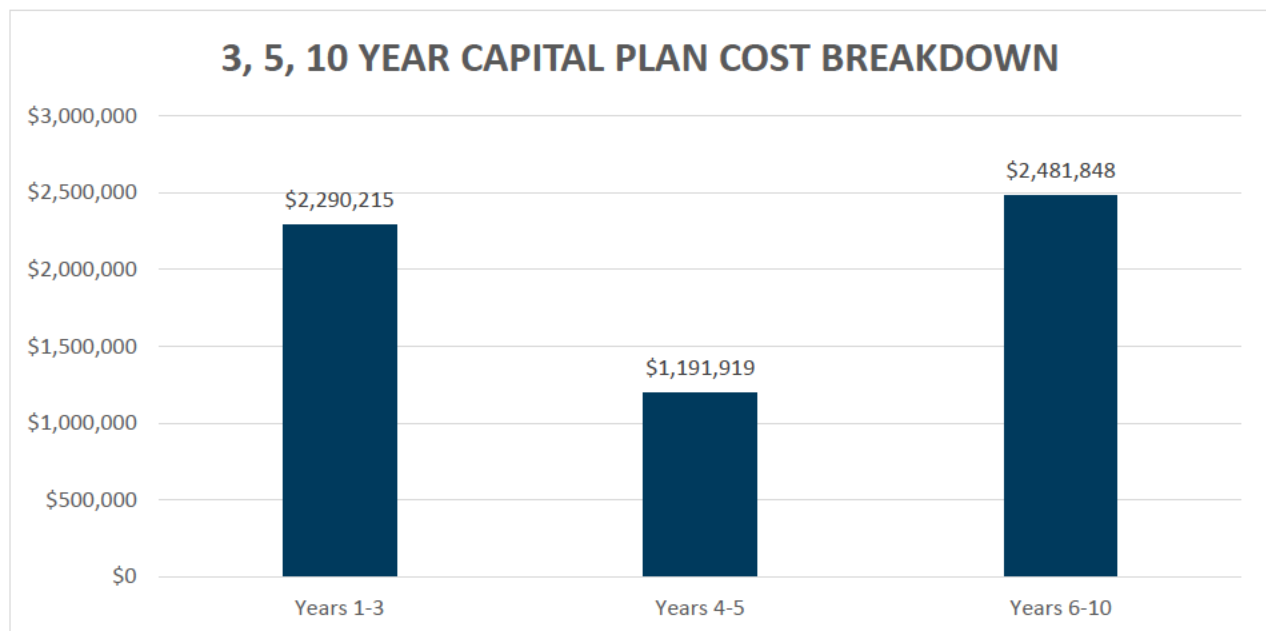
Priority Level: 2
Estimated Cost: \$299,340
Remaining Life: one year

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.

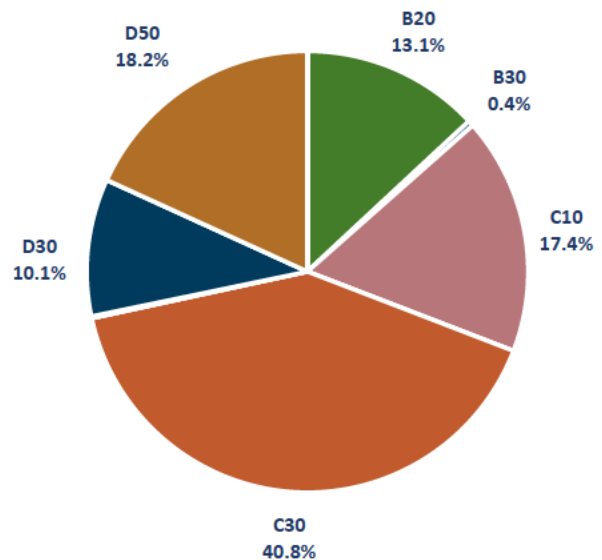
REPLACEMENT PERIOD	ASSET QUANTITY	CUMULATIVE REPLACEMENT COST
3-Year Plan	39	\$2,290,215
5-Year Plan	48	\$1,191,919
10-Year Plan	42	\$2,481,848
Total	129	\$5,963,982

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 \$2,290,215. The specific assets that will reach end of life in this period are listed in Appendix A.

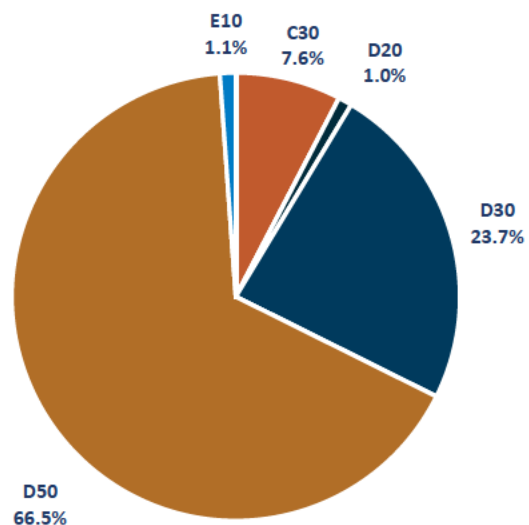
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$299,340	13%
B30 - Roofing	\$9,125	<1%
C10 - Int. Construction	\$398,168	17%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$933,573	41%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$3,110	<1%
D30 - HVAC	\$230,483	10%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$416,417	18%
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 \$1,191,919. 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	\$90,991	8%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$11,594	1%
D30 - HVAC	\$283,063	24%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$792,697	67%
E10 - Equipment	\$13,574	1%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%

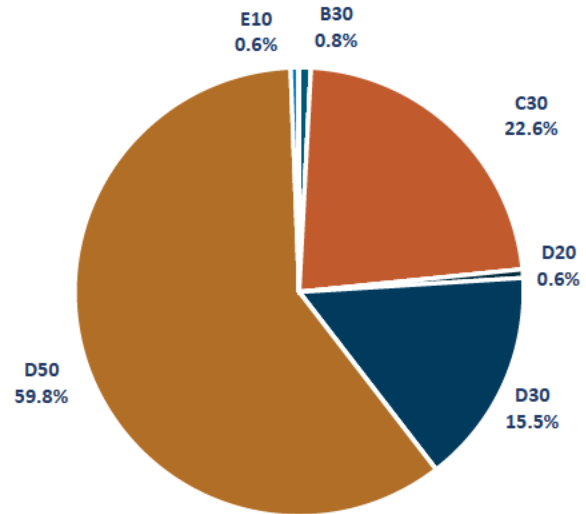


Condition Assessment

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 \$2,481,848. 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	\$20,648	1%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$559,684	23%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$15,467	1%
D30 - HVAC	\$385,922	16%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$1,484,849	60%
E10 - Equipment	\$15,277	1%
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.

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

Condition Assessment

PRIORITY SCORE SUMMARY - TAVELLI ES

		TAVELLI ES BUILDING TYPE: Elementary School YEAR BUILT: 1968 GROSS AREA (SF): 62,537 DATE ASSESSED: July 7, 2023 PRIORITY SCORE: 16.4
SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	This facility has a primarily masonry façade. While the building has several additions the exterior brick matches in color, size, and texture. Standing Seam metal mansard roofing is present at most entry conditions (main building and classrooms) as well as wraps the elevated gym exterior. Exterior glazing is primarily 1968-built metal framed windows and 1968-built metal doors. One modular building was constructed in 2012.	13.8
B30 - Roofing	The roofing for this facility is 2012-built rolled asphalt with approximately 14 years of life remaining. [REDACTED]	14.7
C10 - Int. Construction	This facility's interior partitions are Brick, CMU and Drywall of varying ages. Note that there are several additions and also varying ages of finishes. Overall flooring and ceiling finishes have been updated since the original construction, with the noticeable exception of the gym area which has original ceiling tiles. Flooring is typically carpet with tile, VCT, Hardwood, and concrete in various areas. There remain 1968 sections of VCT flooring and ceramic tile flooring.	12.8
C30 - Interior Finishes		15.7
D20 - Plumbing	Plumbing assets include two newer gas-fired water heaters and two newer circulation pumps. Three backflow preventers and one thermostatic mixing valve were replaced in 2012-2017. Most plumbing assets were replaced between 2012 and 2022. Though the thermostatic mixing valve was replaced in 2017 [REDACTED] needs to be replaced within the year.	12.1
D30 - HVAC	The HVAC assets include (7) rooftop units, [REDACTED] Fan Coil Units, cabinet unit heaters, BBRs, duct heating coils, and exhaust fans are also present. The heating water system features two gas-fired 1994-built boilers with associated circulation pumps. Boiler have 6 years of remaining life, and HWP's have an estimated remaining life of 7 years. The BAS was upgraded in 2012.	15.8
D40 - Fire Suppression	The fire alarm system was updated in 2012. The Fire Protection System appears to be well maintained and updated per fire code requirements. No deficiencies were noted with this system.	N/A
D50 - Electrical	The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, and VFDs have mostly been upgraded from 2010-2012. Both VFDs were replaced in 2010. The back-up generator dates to 1993 [REDACTED] The associated ATS-1 was replaced in 2020. Emergency back-up lighting appears to have been updated in 1993. The interior fluorescent light, fire alarm system, and the security system date to 2012. Recommend replacement of the fluorescent lighting fixtures with LED lighting fixtures in approximately 9 years. Four (4) panels are original 1968 and need to be replaced within the year.	22.1
E10 - Equipment	The Kitchen area is provided one walk-in cooler (built 1993) and one walk-in freezer (built 2012). The two associated condensing units were both replaced in 2012. Observed remaining life of the walk-in cooler is 5 years.	14.5

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

A. 3-YEAR PLAN ASSETS LIST

B. 5-YEAR PLAN ASSETS LIST

C.10-YEAR PLAN ASSETS LIST

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.

TAVELLI ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT COST	PRIORITY SCORE
FCAID-550144	Emergency Back-Up Lighting	D50 - Electrical	2	\$238,270	27
FCAID-550136	RTU-5	D30 - HVAC	1	\$78,460	22
FCAID-550137	RTU-6	D30 - HVAC	1	\$51,940	22
FCAID-550164	Main Switchboard Section 2 of 2	D50 - Electrical	1	\$40,180	21
FCAID-550163	Main Switchboard Section 1 of 2	D50 - Electrical	1	\$40,180	21
FCAID-550138	RTU-7	D30 - HVAC	2	\$32,740	20
FCAID-550135	RTU-4	D30 - HVAC	2	\$32,740	20
FCAID-550055	Back-Up Generator	D50 - Electrical	2	\$51,270	19
FCAID-550019	Interior Doors: Metal, Single	C10 - Int. Construct.	2	\$34,720	18
FCAID-550018	Interior Doors: Metal, Double	C10 - Int. Construct.	2	\$29,760	18
FCAID-550004	Exterior Doors: Metal, Single	B20 - Ext. Enclosure	1	\$133,930	18
FCAID-550005	Exterior Windows: Metal Framed	B20 - Ext. Enclosure	1	\$86,050	18
FCAID-550041	Interior Flooring: VCT	C30 - Int. Finishes	1	\$133,290	17
FCAID-550154	Panel PA	D50 - Electrical	1	\$3,270	17
FCAID-550151	Panel K	D50 - Electrical	1	\$3,270	17
FCAID-550156	Panel PD	D50 - Electrical	1	\$12,370	17
FCAID-550155	Panel PB	D50 - Electrical	1	\$12,370	17
FCAID-550039	Interior Flooring: Ceramic Tile	C30 - Int. Finishes	1	\$27,700	17
FCAID-550034	Interior Flooring: Carpet	C30 - Int. Finishes	3	\$587,350	17
FCAID-550003	Exterior Doors: Metal, Double	B20 - Ext. Enclosure	1	\$79,360	17
FCAID-550032	Interior Ceiling Finish: ACT	C30 - Int. Finishes	1	\$49,090	16
FCAID-550069	EF-13	D30 - HVAC	2	\$6,710	16
FCAID-550152	Panel L	D50 - Electrical	2	\$3,270	16
FCAID-550013	Roofing: Roof Ladders	B30 - Roofing	2	\$5,830	16
FCAID-550036	Interior Flooring: Concrete	C30 - Int. Finishes	2	\$70,770	16
FCAID-550038	Interior Ceiling Finish: Tile	C30 - Int. Finishes	1	\$27,480	16

FCAID-550061	DHC-06-03	D30 - HVAC	3	\$1,200	15
FCAID-550063	DHC-06-05	D30 - HVAC	3	\$1,200	15
FCAID-550035	Interior Ceiling Finish: Drywall	C10 - Int. Construct.	2	\$81,740	15
FCAID-550062	DHC-06-04	D30 - HVAC	3	\$1,200	15
FCAID-550060	DHC-06-02	D30 - HVAC	3	\$1,200	15
FCAID-550059	DHC-06-01	D30 - HVAC	3	\$1,200	15
FCAID-550149	Panel EM	D50 - Electrical	3	\$3,000	14
FCAID-550028	Interior Windows: 68 Metal Framed	C10 - Int. Construct.	3	\$103,130	14
FCAID-550007	Roofing: Roof Hatch	B30 - Roofing	1	\$3,120	14
FCAID-550049	Thermostatic Mixing Valve-1	D20 - Plumbing	1	\$3,110	14
FCAID-550014	Interior Wall Construction: 68 Drywall	C10 - Int. Construct.	3	\$65,110	13
FCAID-550015	Interior Wall Construction: 70 Drywall	C10 - Int. Construct.	3	\$65,110	13
FCAID-550080	ET-1	D30 - HVAC	3	\$18,250	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.

TAVELLI ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-550143	Fire Alarm System	D50 - Electrical	4	\$487,160	23
FCAID-550158	Security System	D50 - Electrical	4	\$238,270	21
FCAID-550058	CU-2-Walk-In Freezer	D30 - HVAC	4	\$15,080	16
FCAID-550057	CU-1-Walk-In Cooler	D30 - HVAC	4	\$10,050	16
FCAID-550168	Walk-In Cooler	E10 - Equipment	5	\$12,060	15
FCAID-550052	GWH-1	D20 - Plumbing	4	\$10,610	14
FCAID-550042	Interior Flooring: Hardwood	C30 - Int. Finishes	4	\$57,890	14
FCAID-550126	BBR-35	D30 - HVAC	5	\$5,720	13
FCAID-550118	BBR-27	D30 - HVAC	5	\$5,720	13
FCAID-550114	BBR-23	D30 - HVAC	5	\$5,720	13
FCAID-550096	BBR-05	D30 - HVAC	5	\$5,720	13
FCAID-550122	BBR-31	D30 - HVAC	5	\$5,720	13
FCAID-550097	BBR-06	D30 - HVAC	5	\$5,720	13
FCAID-550094	BBR-03	D30 - HVAC	5	\$5,720	13
FCAID-550098	BBR-07	D30 - HVAC	5	\$5,720	13
FCAID-550116	BBR-25	D30 - HVAC	5	\$5,720	13
FCAID-550099	BBR-08	D30 - HVAC	5	\$5,720	13
FCAID-550120	BBR-29	D30 - HVAC	5	\$5,720	13
FCAID-550100	BBR-09	D30 - HVAC	5	\$5,720	13
FCAID-550124	BBR-33	D30 - HVAC	5	\$5,720	13
FCAID-550101	BBR-10	D30 - HVAC	5	\$5,720	13
FCAID-550128	BBR-37	D30 - HVAC	5	\$5,720	13
FCAID-550102	BBR-11	D30 - HVAC	5	\$5,720	13
FCAID-550113	BBR-22	D30 - HVAC	5	\$5,720	13
FCAID-550103	BBR-12	D30 - HVAC	5	\$5,720	13

FCAID-550115	BBR-24	D30 - HVAC	5	\$5,720	13
FCAID-550104	BBR-13	D30 - HVAC	5	\$5,720	13
FCAID-550117	BBR-26	D30 - HVAC	5	\$5,720	13
FCAID-550105	BBR-14	D30 - HVAC	5	\$5,720	13
FCAID-550119	BBR-28	D30 - HVAC	5	\$5,720	13
FCAID-550106	BBR-15	D30 - HVAC	5	\$5,720	13
FCAID-550121	BBR-30	D30 - HVAC	5	\$5,720	13
FCAID-550107	BBR-16	D30 - HVAC	5	\$5,720	13
FCAID-550123	BBR-32	D30 - HVAC	5	\$5,720	13
FCAID-550108	BBR-17	D30 - HVAC	5	\$5,720	13
FCAID-550125	BBR-34	D30 - HVAC	5	\$5,720	13
FCAID-550109	BBR-18	D30 - HVAC	5	\$5,720	13
FCAID-550127	BBR-36	D30 - HVAC	5	\$5,720	13
FCAID-550129	BBR-38	D30 - HVAC	5	\$5,720	13
FCAID-550095	BBR-04	D30 - HVAC	5	\$5,720	13
FCAID-550130	BBR-39	D30 - HVAC	5	\$5,720	13
FCAID-550131	BBR-40	D30 - HVAC	5	\$5,720	13
FCAID-550040	Interior Flooring: Sheet Vinyl	C30 - Int. Finishes	4	\$25,380	13
FCAID-550093	BBR-01-02	D30 - HVAC	5	\$5,720	13
FCAID-550112	BBR-21	D30 - HVAC	5	\$5,720	13
FCAID-550110	BBR-19	D30 - HVAC	5	\$5,720	13
FCAID-550111	BBR-20	D30 - HVAC	5	\$5,720	13
FCAID-550139	GUH-1	D30 - HVAC	5	\$4,020	12

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.

TAVELLI ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-550145	Interior Lighting: Fluorescent	D50 - Electrical	9	\$957,440	23
FCAID-550089	Boiler-2	D30 - HVAC	6	\$93,980	19
FCAID-550088	Boiler-1	D30 - HVAC	6	\$93,980	19
FCAID-550161	Exterior Switchboard Section 3 of 4	D50 - Electrical	10	\$42,190	15
FCAID-550159	Exterior Switchboard Section 1 of 4	D50 - Electrical	10	\$32,370	15
FCAID-550160	Exterior Switchboard Section 2 of 4	D50 - Electrical	10	\$42,190	15
FCAID-550162	Exterior Switchboard Section 4 of 4	D50 - Electrical	10	\$56,450	15
FCAID-550169	Walk-In Freezer	E10 - Equipment	9	\$12,060	14
FCAID-550033	Interior Ceiling Finish: ACT New	C30 - Int. Finishes	9	\$441,820	14
FCAID-550091	HWP-1	D30 - HVAC	7	\$11,900	14
FCAID-550092	HWP-2	D30 - HVAC	7	\$11,900	14
FCAID-550073	EF-5	D30 - HVAC	7	\$6,710	13
FCAID-550066	EF-10	D30 - HVAC	7	\$6,710	13
FCAID-550072	EF-3	D30 - HVAC	7	\$6,710	13
FCAID-550074	EF-6	D30 - HVAC	7	\$6,710	13
FCAID-550067	EF-11	D30 - HVAC	7	\$6,710	13
FCAID-550079	KEF-7	D30 - HVAC	9	\$6,710	12
FCAID-550068	EF-12	D30 - HVAC	9	\$6,710	12
FCAID-550056	CUH-1	D30 - HVAC	9	\$8,750	12
FCAID-550064	EF- 4	D30 - HVAC	9	\$6,710	12
FCAID-550077	EF-9	D30 - HVAC	9	\$6,710	12
FCAID-550070	EF-14	D30 - HVAC	9	\$8,190	12
FCAID-550078	KEF-1	D30 - HVAC	9	\$12,980	12
FCAID-550075	EF-7	D30 - HVAC	9	\$6,710	12
FCAID-550010	Solar Tunnels	B30 - Roofing	9	\$16,300	12

FCAID-550076	EF-8	D30 - HVAC	9	\$6,710	12
FCAID-550166	VFD-HWP-1	D50 - Electrical	7	\$5,480	11
FCAID-550157	Panel PE	D50 - Electrical	10	\$4,740	11
FCAID-550150	Panel EMA	D50 - Electrical	10	\$3,000	11
FCAID-550146	Panel AA Section 1	D50 - Electrical	10	\$4,740	11
FCAID-550053	GWH-2	D20 - Plumbing	9	\$10,610	11
FCAID-550147	Panel AA Section 2	D50 - Electrical	10	\$4,740	11
FCAID-550167	VFD-HWP-2	D50 - Electrical	7	\$5,480	11
FCAID-550148	Panel DD	D50 - Electrical	10	\$4,740	11
FCAID-550153	Panel MM	D50 - Electrical	10	\$3,270	11
FCAID-550043	BFP-Boiler Make-Up	D20 - Plumbing	9	\$400	10
FCAID-550054	AS-1	D30 - HVAC	7	\$6,390	10
FCAID-550044	BFP-RTU-1-Evap	D20 - Plumbing	9	\$400	10
FCAID-550048	Glycol Feeder-1	D30 - HVAC	6	\$1,780	10
FCAID-550046	BFP-RTU-3-Evap	D20 - Plumbing	9	\$400	10
FCAID-550045	BFP-RTU-2-Evap	D20 - Plumbing	9	\$400	10
FCAID-550047	Bypass Feeder-HWS	D30 - HVAC	9	\$750	9