

POUDRE SCHOOL
DISTRICT
BENNETT
ELEMENTARY
SCHOOL

FACILITY CONDITION ASSESSMENT

FORT COLLINS, CO

OCTOBER 2023



Together, Building a Thriving Planet



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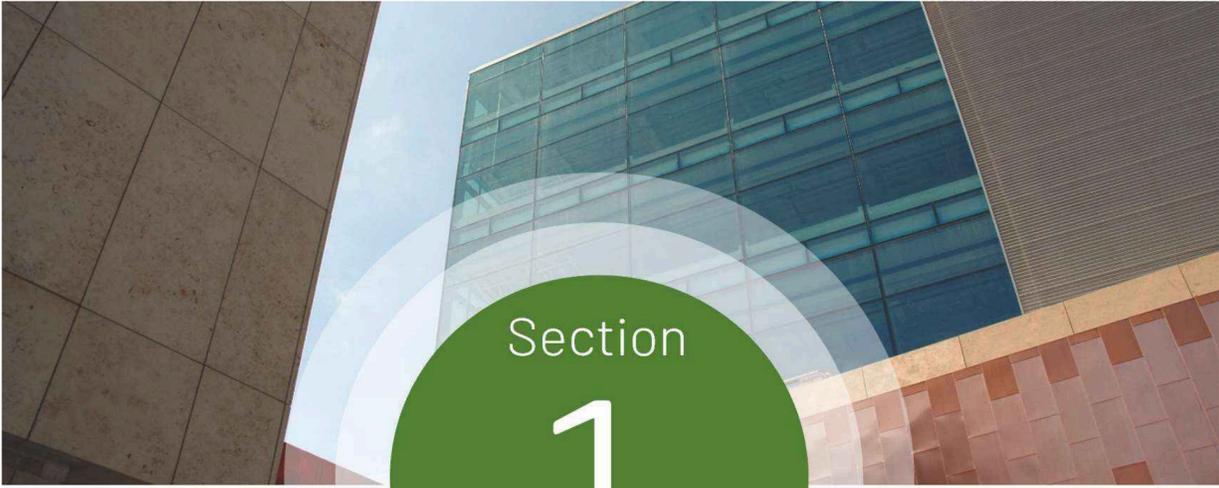
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Executive Summary

Executive Summary

Project Goals

The contents of this report present the results of the Facility Condition Assessment (FCA) performed at Bennett ES within the Poudre School District (PSD) on March 31, 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
BENNETT ES	50,492	1963
TOTAL	50,492	

Facility Summary

Bennett ES

Bennett ES is located at 1125 Bennett Rd., Fort Collins, CO 80521. This 50,492 SF facility consists of one level and was initially constructed in 1963. The equity index for this school is 1.23.



Bennett ES

Executive Summary

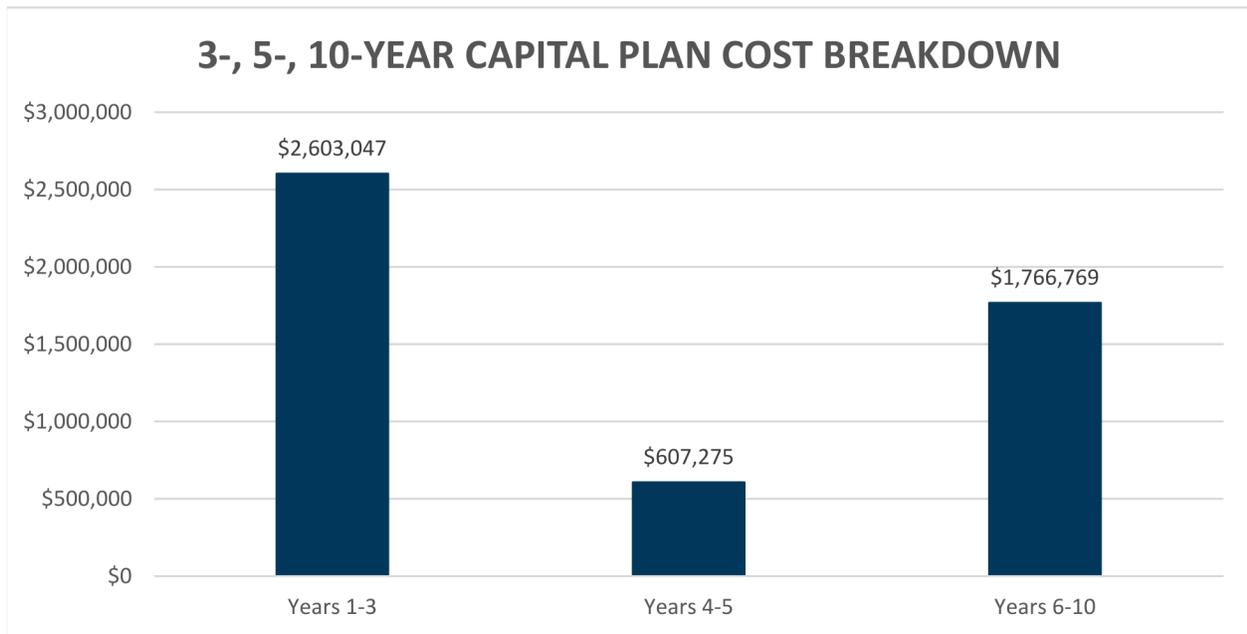
Assessment Summary

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on March 31, 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.



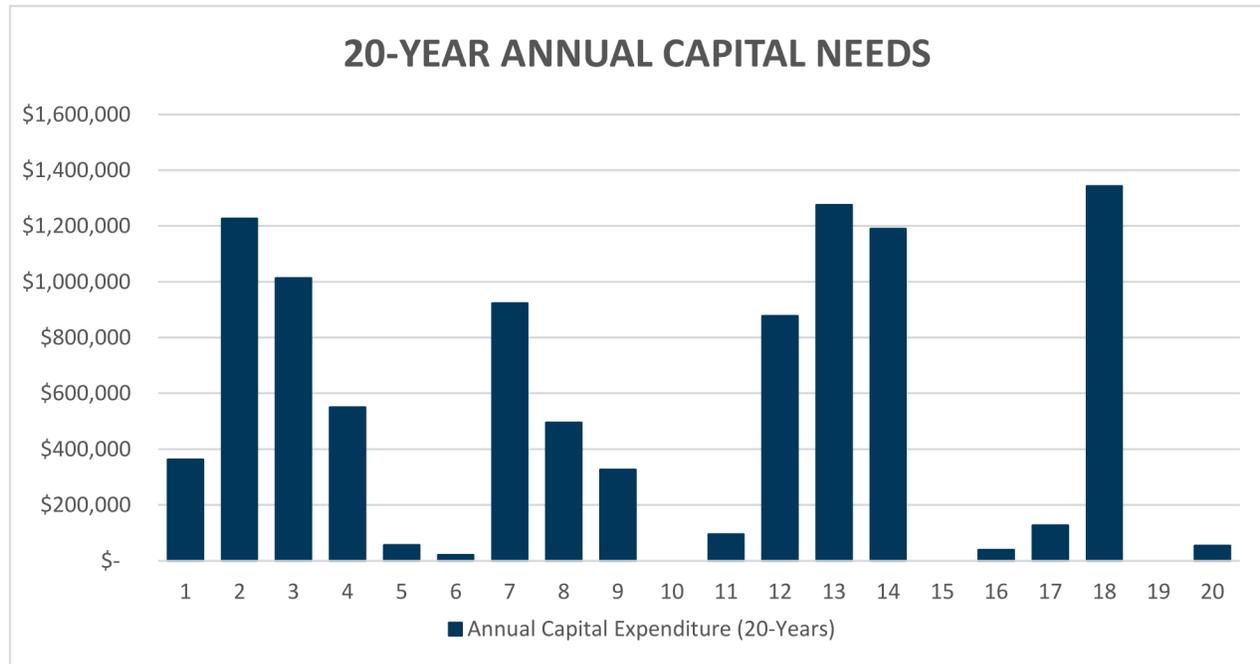
3-, 5-, 10-Year Capital Plan Cost Breakdown

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	\$305,025	\$288,735	\$289,712	\$144,922
B30 - Roofing	\$471,750	\$0	\$46,195	\$0
C10 - Int. Construction	\$20,435	\$0	\$671,766	\$72,461
C20 - Stairs	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$829,406	\$0	\$1,421,845	\$78,256
D10 - Conveying	\$0	\$0	\$0	\$0
D20 - Plumbing	\$11,256	\$0	\$35,102	\$13,388
D30 - HVAC	\$1,129,402	\$49,792	\$163,923	\$1,254,605
D40 - Fire Suppression	\$0	\$0	\$0	\$0
D50 - Electrical	\$441,471	\$1,428,243	\$774,472	\$0
E10 - Equipment	\$0	\$0	\$35,421	\$0
Total:	\$1,582,129	\$1,478,034	\$1,008,918	\$1,267,993

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 Unifomat 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		

*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, RSMMeans, 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 Bennett ES is 1.23.

Sample Calculation:

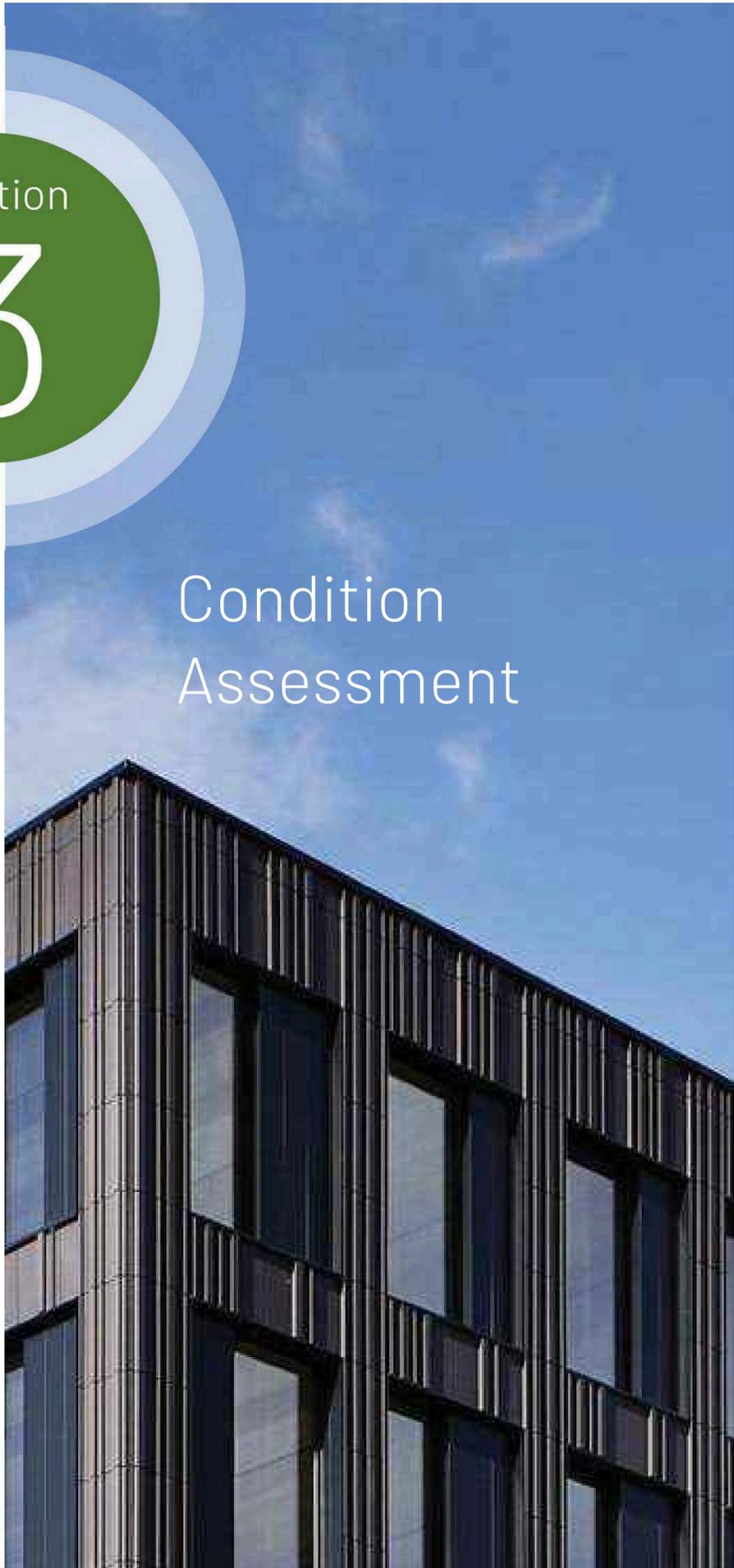
School Name	School Population K-12 Total	F/R	ELL	SPED	McKinney-Vento	Total of Previous Columns	Equity Index Number = school average / district average
Sample	381	15.20%	0.00%	8.40%	0.00%	0.24	0.24/0.48 = 0.49
Grand PSD Total - Oct 2022 Count	26,163	29.5%	5.8%	9.5%	3.4%	0.48	

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 Bennett 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 consists of a combination of brick masonry, concrete masonry unit (CMU), stucco, and metal panels. The walls are of varying ages of construction as are the exterior doors consisting of metal single and double doors, as well as glass storefront doors. The building's exterior windows are metal and also of varying ages of construction. [REDACTED]

Roofing

The roofing is comprised entirely of rolled asphalt installed in 2001. Roofing has approximately 3 years of remaining life a [REDACTED] Skylights [REDACTED] need to be replaced in 3 years. Metal roof flashing was updated in 2016.

Interior Construction and Finishes

Interior walls consist of a combination of CMU, drywall, and masonry brickwork. Interior doors are of wood and hollow metal type construction. T [REDACTED] The majority of the building's flooring is comprised of rolled carpeting; however, portions of the building utilize ceramic and vinyl tiling. The 1966 acoustic tiles [REDACTED] should be replaced within the year. T [REDACTED]

Conveyance

There are no conveyance systems in use at this school.

Electrical and Lighting

The building's electrical distribution equipment includes 120/208 and 120/240V panels, transformers, and switchboards. The building's main switchboard has a total ampacity of 4,800 amps and requires replacement within 14 years. Emergency backup power is provided by one generator with an estimated capacity of 12.5 kW. [REDACTED] The building's interior lighting consists entirely of fluorescent (T8) fixtures installed in 2010. The building's exterior lighting includes 16 fluorescent fixtures. Both the fire alarm and security systems were updated in 2016.

HVAC Systems

The building's heating, ventilation, and air conditioning (HVAC) system consists of an original 1963-built AHU, (18) 1994-built duct heating units, (29) 1994-built exhaust fans, (7) 1963-built baseboard heaters, (5) RTUs ([REDACTED]), (16) newer VUVs, and (10) newer VAVs. [REDACTED] Heating water is provided by two (2) natural gas fired hydronic boilers, which were installed in 2012. C [REDACTED]

Plumbing

Domestic hot water is provided by a combination of one water heaters, two pumps, one thermostatic mixing valve, one backflow preventer, and one storage tank. All plumbing assets were replaced in 2016.

Fire Suppression

The fire alarm system was replaced in 2016. [REDACTED]

Equipment

The Kitchen is provided one walk-in cooler and one walk-in freezer. Both units were replaced in 2017 along with their associated condensing units.

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.

Bennett ES

1. Replace Back-Up Generator & ATS-1

The back-up generator dates to 1994 [REDACTED]
Total Generator Run Hours = 506.5 . [REDACTED] The
associated ATS-1 (not located) is estimated to be 50A and built in 1994. [REDACTED]
[REDACTED]



The following assets are included within this measure:

FCAID-060153, FCAID-060184

Priority Level:	1
Estimated Cost:	\$22,630
Remaining Life:	1-2 Years

Condition Assessment

2. Replace 1960's Doors & Windows

There are (12) 1963-1966 exterior doors, and sections of 1963-1966 exterior metal framed windows remaining. [REDACTED]
Recommend replacement within the year.

The following assets are included within this measure:

FCAID-060008, FCAID-060009, FCAID-060012, FCAID-060013, FCAID-060016, FCAID-060019, FCAID-060020



Priority Level: 2
Estimated Cost: \$203,370
Remaining Life: one year

3. Replace AHU-1, RTU-3, RTU-4

AHU-1 is an original 1963-built unit serving the Gym. [REDACTED]
RTU-3 and RTU-4 are dated 1994 and 2002 respectively, but that may only indicate when they were updated. These two RTUs may be original 1963-built unit as well. [REDACTED]

The following assets are included within this measure:

FCAID-060049, FCAID-060121, FCAID-060122



Priority Level: 2
Estimated Cost: \$270,210
Remaining Life: 1-2 Years

Condition Assessment

4. Replace BBRs, DHCs, Exhaust Fans, UVs

There are (18) 1994-built duct heating units, (29) 1994-built exhaust fans, and (7) 1963-built baseboard heaters remaining in this school. BBRs are 35 years past expected life, DHCs are 11 years past life, and Exhaust Fans are 9 years past life, and UVs 1 & 2 are 7 years past due.

The following assets are included within this measure:

FCAID-060125, FCAID-060126, FCAID-060112 through FCAID-060118, FCAID-060076 through FCAID-060104, FCAID-060058 through FCAID-060075



Priority Level: 2
Estimated Cost: \$266,520
Remaining Life: 1-2 Years

5. Replace carpet, acoustic tile, VCT

The building includes section of 1994 and 2002 carpeting, 1994 VCT flooring, and 1996 acoustical tile ceiling in the Gym (37 years past expected life). Recommend replacement of these dated interior finish assets in 1-2 years.

The following assets are included within this measure:

FCAID-060037, FCAID-060038, FCAID-060041, FCAID-060034



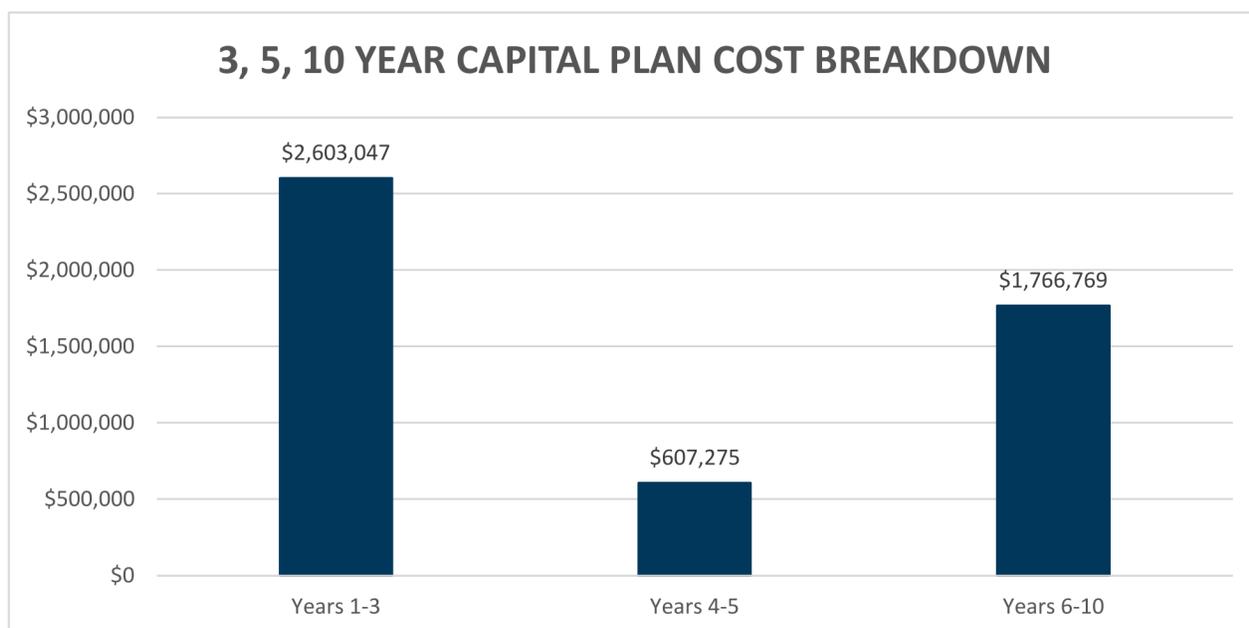
Priority Level: 2
Estimated Cost: \$712,580
Remaining Life: 1-2 Years

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.

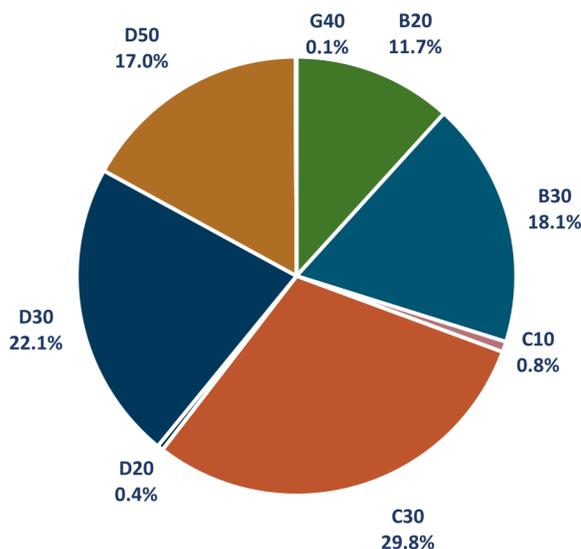
REPLACEMENT PERIOD	ASSET QUANTITY	CUMULATIVE REPLACEMENT COST
3-Year Plan	87	\$2,603,047
5-Year Plan	4	\$607,275
10-Year Plan	16	\$1,766,769
Total	107	\$4,977,091

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 \$2,603,047. The specific assets that will reach end of life in this period are listed in Appendix A.

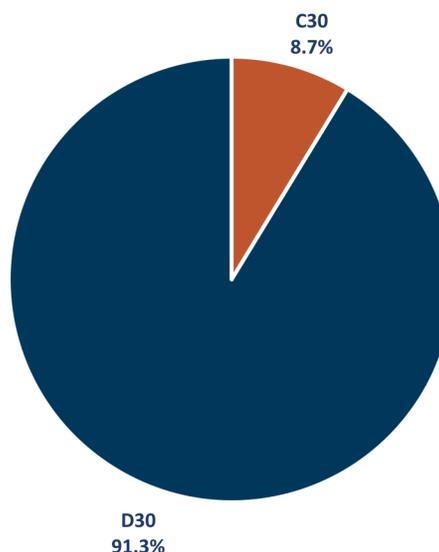
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$305,025	12%
B30 - Roofing	\$471,750	18%
C10 - Int. Construction	\$20,435	1%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$776,631	30%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$11,256	<1%
D30 - HVAC	\$574,903	22%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$441,471	17%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$1,576	<1%



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 \$607,275. 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	\$52,775	9%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$0	0%
D30 - HVAC	\$554,500	91%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$0	0%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%

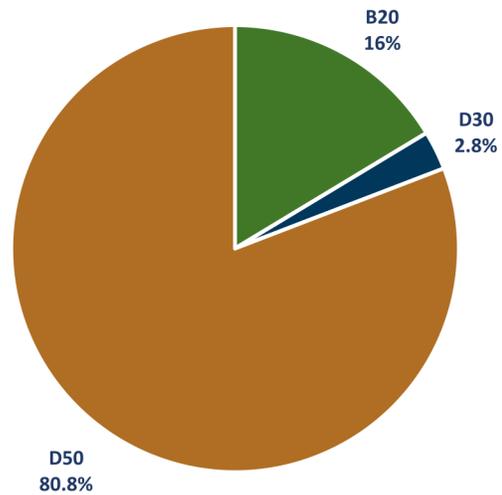


Condition Assessment

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 \$1,766,769. 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	\$288,735	16%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$0	0%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$0	0%
D30 - HVAC	\$49,792	3%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$1,428,243	81%
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 - BENNETT ES

	BENNETT ES	
	BUILDING TYPE:	Elementary School
	YEAR BUILT:	1963
	GROSS AREA (SF):	50,492
	DATE ASSESSED:	March 31, 2023
PRIORITY SCORE:	16.8	

SUBSYSTEM:	DESCRIPTION	PRIORITY SCORE
B20 - Ext. Enclosure	The building's exterior walls consists of a combination of brick masonry, concrete masonry unit (CMU), stucco, and metal panels. The walls are of varying ages of construction as are the exterior doors consisting of metal single and double doors, as well as glass storefront doors. The building's exterior windows are metal and also of varying ages of construction. [REDACTED]	13.1
B30 - Roofing	The roofing is comprised entirely of rolled asphalt installed in 2001. Roofing has approximately 3 years of remaining life [REDACTED]. Skylight [REDACTED] need to be replaced in 3 years. Metal roof flashing was updated in 2016.	18.3
C10 - Int. Construction	Interior walls consist of a combination of CMU, drywall, and masonry brickwork. Interior doors are of wood and hollow metal type construction. [REDACTED]	13.3
C30 - Interior Finishes	The majority of the building's flooring is comprised of rolled carpeting; however, portions of the building utilize ceramic and vinyl tiling. The 1966 acoustic tiles are in very poor condition and should be replaced within the year. The building's interior finish and construction assets are in fair condition, with the exception of carpeting, ceiling tiles and VCT flooring which are in poor condition.	16.4
D10 - Conveying	There are no conveyance systems in use at this school.	N/A
D20 - Plumbing	Domestic hot water is provided by a combination of one water heaters, two pumps, one thermostatic mixing valve, one backflow preventer, and one storage tank. All plumbing assets were replaced in 2016.	11.1
D30 - HVAC	The building's heating, ventilation, and air conditioning (HVAC) system consists of an original 1963-built AHU, (18) 1994-built duct heating units, (29) 1994-built exhaust fans, (7) 1963-built baseboard heaters, (5) RTUs [REDACTED] (16) newer VUVs, and (10) newer VAVs. [REDACTED] Heating water is provided by two (2) natural gas fired hydronic boilers, which were installed in 2012. [REDACTED]	17.2
D40 - Fire Suppression	The fire alarm system was replaced in 2016. [REDACTED]	N/A
D50 - Electrical	The building's electrical distribution equipment includes 120/208 and 120/240V panels, transformers, and switchboards. The building's main switchboard has a total ampacity of 4,800 amps and requires replacement within 14 years. Emergency backup power is provided by one generator with an estimated capacity of 12.5 kW. [REDACTED] The building's interior lighting consists entirely of fluorescent (T8) fixtures installed in 2010. The building's exterior lighting includes 16 fluorescent fixtures. Both the fire alarm and security systems were updated in 2016.	20.4
E10 - Equipment	The Kitchen is provided one walk-in cooler and one walk-in freezer. Both units were replaced in 2017 along with their associated condensing units.	13.0

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

- 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.

BENNETT ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING	REPLACEMENT COST	PRIORITY SCORE
FCAID-060121	RTU-3	D30 - HVAC	2	\$152,150	23
FCAID-060049	AHU-1	D30 - HVAC	1	\$85,320	23
FCAID-060171	Security System	D50 - Electrical	3	\$192,370	20
FCAID-060122	RTU-4	D30 - HVAC	2	\$32,740	20
FCAID-060054	CU-1	D30 - HVAC	1	\$25,130	20
FCAID-060037	Interior Flooring: Carpet	C30 - Int. Finishes	2	\$626,220	19
FCAID-060023	Roof: Rolled Asphalt	B30 - Roofing	3	\$433,900	19
FCAID-060125	UV-1	D30 - HVAC	2	\$30,370	19
FCAID-060126	UV-2	D30 - HVAC	2	\$30,370	19
FCAID-060020	Exterior Windows: Metal Framed (1966)	B20 - Ext. Enclosure	1	\$38,830	18
FCAID-060016	Exterior Windows: Aluminum Framed (1966)	B20 - Ext. Enclosure	1	\$66,010	18
FCAID-060153	Back-Up Generator	D50 - Electrical	2	\$18,330	18
FCAID-060071	Duct Heating Coil HWC-4-2	D30 - HVAC	2	\$2,000	17
FCAID-060118	Radiant Heater BBR-9	D30 - HVAC	1	\$2,380	17
FCAID-060075	Duct Heating Coil HWC-5-3	D30 - HVAC	2	\$2,000	17
FCAID-060019	Exterior Windows: Metal Framed (1962)	B20 - Ext. Enclosure	1	\$15,530	17
FCAID-060114	Radiant Heater BBR-4	D30 - HVAC	1	\$2,380	17
FCAID-060058	Duct Heating Coil HWC-3-1	D30 - HVAC	2	\$1,500	17
FCAID-060073	Duct Heating Coil HWC-5-1	D30 - HVAC	2	\$2,000	17
FCAID-060059	Duct Heating Coil HWC-3-10	D30 - HVAC	2	\$1,500	17
FCAID-060154	Emergency Back-Up Lighting	D50 - Electrical	3	\$192,370	17
FCAID-060060	Duct Heating Coil HWC-3-11	D30 - HVAC	2	\$1,500	17
FCAID-060112	Radiant Heater BBR-14	D30 - HVAC	1	\$2,380	17
FCAID-060061	Duct Heating Coil HWC-3-12	D30 - HVAC	2	\$750	17
FCAID-060070	Duct Heating Coil HWC-4-1	D30 - HVAC	2	\$2,000	17
FCAID-060062	Duct Heating Coil HWC-3-2	D30 - HVAC	2	\$1,500	17

FCAID-060072	Duct Heating Coil HWC-4-3	D30 - HVAC	2	\$1,000	17
FCAID-060063	Duct Heating Coil HWC-3-3	D30 - HVAC	2	\$1,750	17
FCAID-060074	Duct Heating Coil HWC-5-2	D30 - HVAC	2	\$2,000	17
FCAID-060064	Duct Heating Coil HWC-3-4	D30 - HVAC	2	\$750	17
FCAID-060009	Exterior Doors: Hollow Metal, Double (196	B20 - Ext. Enclosure	1	\$39,680	17
FCAID-060065	Duct Heating Coil HWC-3-5	D30 - HVAC	2	\$1,200	17
FCAID-060116	Radiant Heater BBR-7	D30 - HVAC	1	\$2,380	17
FCAID-060066	Duct Heating Coil HWC-3-6	D30 - HVAC	2	\$1,200	17
FCAID-060013	Exterior Doors: Hollow Metal, Single (1966	B20 - Ext. Enclosure	1	\$28,630	17
FCAID-060067	Duct Heating Coil HWC-3-7	D30 - HVAC	2	\$2,500	17
FCAID-060113	Radiant Heater BBR-3	D30 - HVAC	1	\$2,380	17
FCAID-060068	Duct Heating Coil HWC-3-8	D30 - HVAC	2	\$1,500	17
FCAID-060115	Radiant Heater BBR-5	D30 - HVAC	1	\$2,380	17
FCAID-060069	Duct Heating Coil HWC-3-9	D30 - HVAC	2	\$750	17
FCAID-060117	Radiant Heater BBR-8	D30 - HVAC	1	\$2,380	17
FCAID-060101	EF-6	D30 - HVAC	2	\$1,260	16
FCAID-060097	EF-29	D30 - HVAC	2	\$6,710	16
FCAID-060078	EF-11	D30 - HVAC	2	\$6,210	16
FCAID-060087	EF-2	D30 - HVAC	2	\$1,260	16
FCAID-060099	EF-4	D30 - HVAC	2	\$6,210	16
FCAID-060088	EF-20	D30 - HVAC	2	\$6,710	16
FCAID-060104	EF-9	D30 - HVAC	2	\$6,210	16
FCAID-060089	EF-21	D30 - HVAC	2	\$6,710	16
FCAID-060008	Exterior Doors: Hollow Metal, Double (196	B20 - Ext. Enclosure	1	\$9,920	16
FCAID-060090	EF-22	D30 - HVAC	2	\$5,430	16
FCAID-060098	EF-3	D30 - HVAC	2	\$1,260	16
FCAID-060091	EF-23	D30 - HVAC	2	\$5,430	16
FCAID-060100	EF-5	D30 - HVAC	2	\$6,210	16
FCAID-060092	EF-24	D30 - HVAC	2	\$5,430	16
FCAID-060103	EF-8	D30 - HVAC	2	\$1,260	16
FCAID-060093	EF-25	D30 - HVAC	2	\$5,430	16
FCAID-060076	EF-1	D30 - HVAC	2	\$5,550	16
FCAID-060094	EF-26	D30 - HVAC	2	\$6,710	16
FCAID-060012	Exterior Doors: Hollow Metal, Single (1962	B20 - Ext. Enclosure	1	\$4,770	16
FCAID-060095	EF-27	D30 - HVAC	2	\$6,710	16
FCAID-060086	EF-19	D30 - HVAC	2	\$6,710	16
FCAID-060096	EF-28	D30 - HVAC	2	\$6,710	16
FCAID-060082	EF-15	D30 - HVAC	2	\$5,550	16
FCAID-060034	Interior Ceiling: Acoustical Tile	C30 - Int. Finishes	1	\$32,410	16
FCAID-060083	EF-16	D30 - HVAC	2	\$9,590	16
FCAID-060039	Interior Flooring: Sealed Concrete	C30 - Int. Finishes	2	\$22,640	16
FCAID-060084	EF-17	D30 - HVAC	2	\$9,590	16
FCAID-060085	EF-18	D30 - HVAC	2	\$6,710	16
FCAID-060079	EF-12	D30 - HVAC	2	\$5,550	16
FCAID-060155	Exterior Lighting: Wall Pack, Fluorescent	D50 - Electrical	2	\$9,700	16
FCAID-060080	EF-13	D30 - HVAC	2	\$8,190	16
FCAID-060081	EF-14	D30 - HVAC	2	\$6,210	16

FCAID-060077	EF-10	D30 - HVAC	2	\$6,210	16
FCAID-060184	Automatic Transfer Switch	D50 - Electrical	2	\$4,300	15
FCAID-060017	Exterior Windows: Aluminum Framed (199	B20 - Ext. Enclosure	3	\$46,600	15
FCAID-060038	Interior Flooring: Carpet	C30 - Int. Finishes	2	\$7,460	15
FCAID-060024	Roof: Skylights	B30 - Roofing	3	\$10,770	15
FCAID-060041	Interior Flooring: VCT	C30 - Int. Finishes	2	\$46,490	15
FCAID-060001	Interior Doors: Coiling	C10 - Int. Construct.	2	\$19,840	14
FCAID-060048	GWH-1	D20 - Plumbing	3	\$10,610	14
FCAID-060010	Exterior Doors: Hollow Metal, Double (199	B20 - Ext. Enclosure	3	\$39,680	14
FCAID-060036	Interior Flooring: Carpet	C30 - Int. Finishes	3	\$6,710	13
FCAID-060183	Electric Meter	G40 - Site Electric	2	\$1,530	13
FCAID-060014	Exterior Doors: Hollow Metal, Single (1994	B20 - Ext. Enclosure	3	\$9,540	13
FCAID-060035	Interior Ceiling: Acoustical Tile	C30 - Int. Finishes	3	\$10,240	12
FCAID-060042	Interior Flooring: Vinyl Sheet	C30 - Int. Finishes	3	\$2,210	12

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.

BENNETT ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-060123	RTU-5	D30 - HVAC	4	\$71,100	19
FCAID-060051	Building Automation System	D30 - HVAC	4	\$432,720	18
FCAID-060040	Interior Flooring: Ceramic Tile	C30 - Int. Finishes	5	\$46,890	13
FCAID-060124	UH-1	D30 - HVAC	5	\$3,520	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.

BENNETT ES

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED REMAINING LIFE	REPLACEMENT COST	PRIORITY SCORE
FCAID-060157	Interior Lighting: Fluorescent	D50 - Electrical	7	\$773,030	23
FCAID-060156	Fire Alarm System	D50 - Electrical	8	\$393,330	21
FCAID-060056	CU-2	D30 - HVAC	9	\$12,570	16
FCAID-060055	CU-1-Walk-In Cooler	D30 - HVAC	9	\$5,030	14
FCAID-060057	CU-2-Walk-In Freezer	D30 - HVAC	9	\$12,570	14
FCAID-060176	Transformer-1	D50 - Electrical	6	\$2,900	13
FCAID-060166	Panel LP	D50 - Electrical	6	\$3,270	13
FCAID-060158	Panel B	D50 - Electrical	6	\$3,270	13
FCAID-060177	Transformer-2	D50 - Electrical	6	\$2,900	13
FCAID-060168	Panel PP	D50 - Electrical	6	\$3,270	13
FCAID-060015	Exterior Doors: Hollow Metal, Single (2002)	B20 - Ext. Enclosure	9	\$109,740	13
FCAID-060018	Exterior Windows: Aluminum Framed (2002)	B20 - Ext. Enclosure	9	\$38,830	13
FCAID-060178	Transformer-3	D50 - Electrical	6	\$2,900	13
FCAID-060011	Exterior Doors: Hollow Metal, Double (2002)	B20 - Ext. Enclosure	9	\$79,360	12
FCAID-060050	Air Seperator-1	D30 - HVAC	8	\$7,530	9
FCAID-060109	Glycol Feeder-1	D30 - HVAC	8	\$1,880	9