POUDRE SCHOOL DISTRICT KINARD MIDDLE SCHOOL



COMETO

## FACILITY CONDITION ASSESSMENT

FORT COLLINS, CO OCTOBER 2023



Together, Building a Thriving Planet



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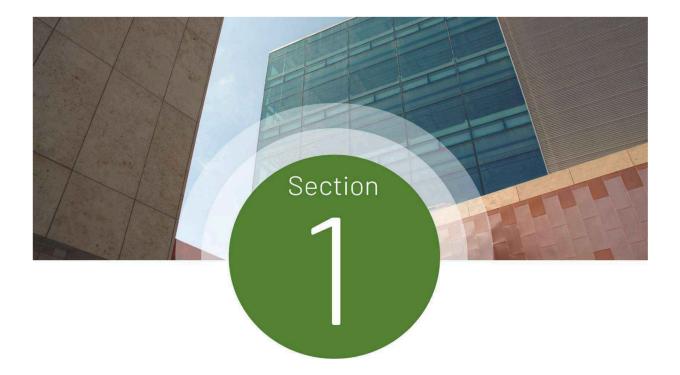
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# Executive Summary



## **Project Goals**

The contents of this report present the results of the Facility Condition Assessment (FCA) performed at Kinard Core Knowledge MS within the Poudre School District (PSD) on June 15, 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
KINARD CORE KNOWLEDGE MS	112,735	2006
TOTAL	112,735	

#### **Facility Summary**

#### **Kinard Core Knowledge MS**

Kinard Core Knowledge MS is located at 3002 E. Trilby Rd., Fort Collins, CO 80528. This 112,735 SF facility consists of two levels and was initially constructed in 2006. The equity index for this school is 0.31.



Kinard Core Knowledge MS

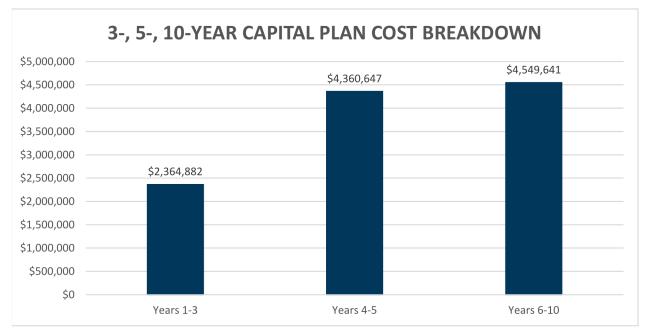
#### **Assessment Summary**

This section summarizes the building systems at the facility and describes the general condition observed based on the assessment performed on June 15, 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.

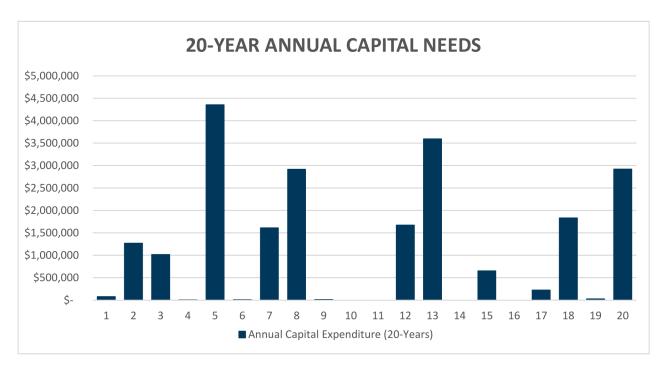
Replacement costs include 3% inflation year over year.



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

## 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.



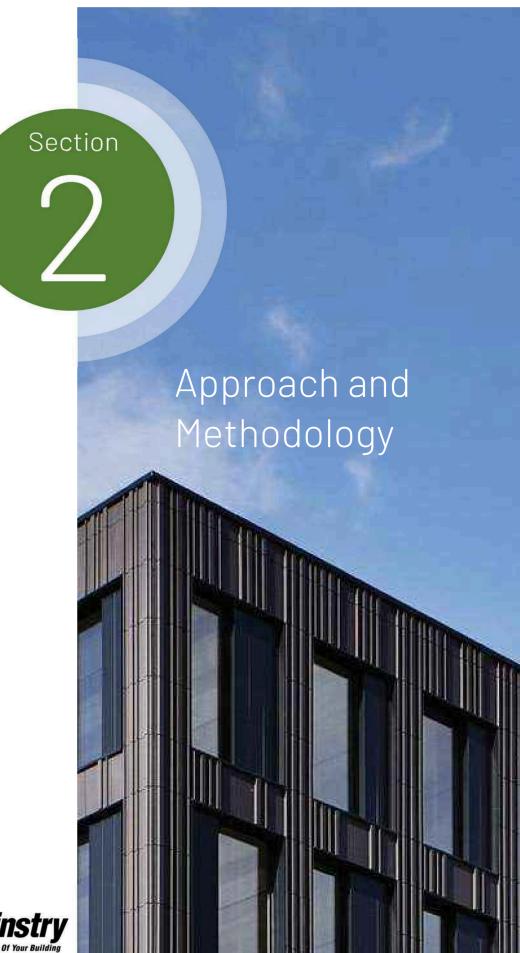
Replacement costs include 3% inflation year over year.

#### Annual Capital Expenditure by Year

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

Subsystem	Years 1-5	Years 6-10	Years 11-15	Years 15-20
B20 - Enclosure	\$0	\$0	\$1,795,532	\$0
B30 - Roofing	\$0	\$938,253	\$0	\$0
C10 - Int. Construction	\$0	\$0	\$11,791	\$0
C20 - Stairs	\$0	\$0	\$0	\$0
C30 - Interior Finishes	\$1,645,476	\$1,202,462	\$1,202,462 \$1,671,753	
D10 - Conveying	\$0	\$0	\$0 \$0	
D20 - Plumbing	\$3,151	\$147,399	\$0	\$35,600
D30 - HVAC	\$1,274,986	\$2,118,569	\$14,315	\$1,712,540
D40 - Fire Suppression	\$0	\$0	\$1,772,891	\$0
D50 - Electrical	\$3,791,554	\$107,648	\$649,688	\$2,479,086
E10 - Equipment	\$10,362	\$29,665	\$0	\$16,143
Total:	\$5,080,053	\$2,403,281	\$2,436,893	\$4,376,308

20-Year Annual	Capital Expend	iture by Subsystem
20 / Cui / IIII / au	capital Experia	care by babbystern





## **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 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.				

#### UniFormat Classification of Building Systems

## **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:

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

ASSET TYPE	ASSET SIZE	ENERGY Cost impact (1-5)
	less than 5 ton	2
Rooftop Unit	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		
Air Curtain		
Air Dryer		
Cabinet Unit Heater		
Dehumidifier		
Electric Duct Heater	All sizes	2
Humidifier		
Unit Heater	1	
Unit Ventilator	1	
Walk-In Condenser	1	
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	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.

## **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.

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:

## School Percentage in these areas added together as decimals 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.

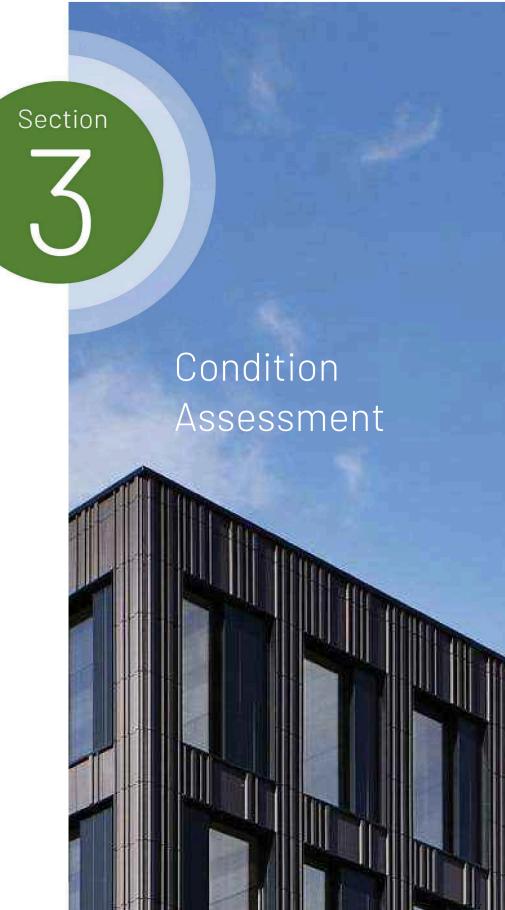
Category	Equity Index
Low	0.29
High	3.20
Average	1.11
Median	0.95

The equity index for Kinard Core Knowledge MS is 0.31.

## Sample Calculation:

	School					Total of	Equity Index Number =
School	Population				McKinney-	Previous	school average / district
Name	K-12 Total	F/R	ELL	SPED	Vento	Columns	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





## SYSTEMS DESCRIPTION

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

#### **Exterior Enclosure**

The original building was constructed in 2006. The exterior of this two-story facility is brick, CMU, metal panel, aluminum storefront, and metal-clad wood windows. There are concrete column accents at the West and SE facades. The building is relatively new

#### Roofing

The rolled asphalt roofing is estimated 8 years of remaining life.

Of special note is the

fair amount of pre-cast roof coping

which seem to be in good condition.

#### **Interior Construction and Finishes**

The interior of this space make use of exterior type CMU finishes as well as drywall partitions, open ceilings in common spaces. ACT ceilings in classrooms, sheet vinyl, tile, concrete, and epoxy flooring in the fitness areas. The main circulation space has several 'floating' staircases with extensive guardrail/handrail assemblies. A movable partition separates the flex space from a secondary gym. Carpeting will be the first finish to require replacement within two years.

Conveyance

The building is provided a single passenger elevator. The elevator is estimated to require replacement in approximately 18 years.

#### **Electrical and Lighting**

The building includes both 120/208V and 277/480V service. Electrical assets, including panelboards, transformers, VFDs, and the main switchboard date to 2006. Emergency back-up lighting dates to 2006, as does the majority of the building's interior fluorescent lighting fixtures. Gym lighting was upgraded to LED in 2020. Recommend replacement of the remaining fluorescent lighting fixtures with LED lighting fixtures in approximately 5 years. The fire alarm system and the security system are original but have 5 years of remaining life. The back-up generator **Exercise and the security replacement** is expected to require replacement in approximately three years.

#### **HVAC Systems**

HVAC assets include (4) air handling units, (73) heat pumps, (7) ERVs, and exhaust fans. A water-source ground loop serves the heat pumps, as do three gas-fired boilers. The (73) original ground source heat pumps are now two years past expected life and are estimated to require replacement in three years. The BAS dates to 2006 and has 8 years of remaining life.

#### Plumbing

Plumbing assets include two gas-fired water heaters that were updated in 2019-2022, backflow preventers, and (9) circulation pumps. Plumbing pumps are expected to require replacement within 7 years.

#### **Fire Suppression**

The fire alarm system is original and will need to be replaced in approximately 5 years. The wet fire sprinkler system also dates to the 2006 original construction, and has 13 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 associated condensing units. These units are original to the 2006 construction and are expected to require replacement in approximately 8 years. T

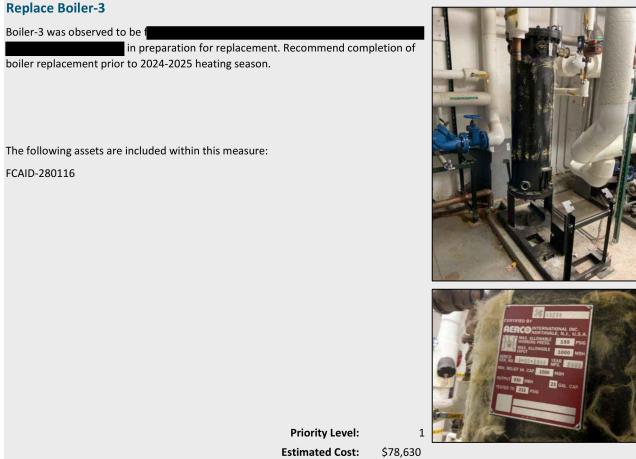
. Replace condensing units within two years.

## **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.

Kinard Core Knowledge MS



**Remaining Life:** 

1 Year

## Condition Assessment

## **Replace (73) Ground-Source Heat Pumps**

The (73) original 2006-built ground source heat pumps are now two years past expected life and are estimated to require replacement within in three years. This measure is a high priority as replacement of (73) heat pumps constitutes a significant Capital Expenditure.

The following assets are included within this measure:

FCAID-280118 through FCAID-280190





Priority Level:	2
Estimated Cost:	\$860,480
Remaining Life:	3 Years

## Replace CU-1-Walk-In Cooler & CU-2-Walk-In Freezer & CU-3

CU-1-Walk-In Cooler, CU-2-Walk-In Freezer, and CU-3

s are now two years past

expected life. Replace condensing units within two years.

The following assets are included within this measure:

FCAID-280079 through FCAID-280081





Priority Level:	2
Estimated Cost:	\$25,140
Remaining Life:	2 Years

## Condition Assessment

## **Replace Back-Up Generator**

. Recommend replacement within

three years.

The following assets are included within this measure:

The following assets are included within this measure:

FCAID-280075





Priority Level:	3
Estimated Cost:	\$51,270
Remaining Life:	3 Years

## **Replace Carpeting**

FCAID-280030

Though the carpeting has been maintained well by PSD Staff, it is now 7 years past expected life. Recommend replacement within two years.





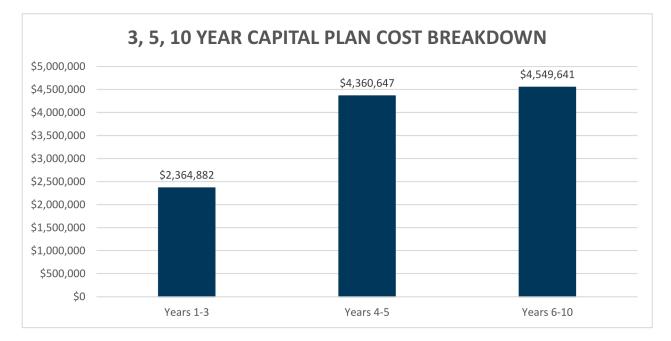
Priority Level:3Estimated Cost:\$1,207,710Remaining Life:2 Years

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## 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

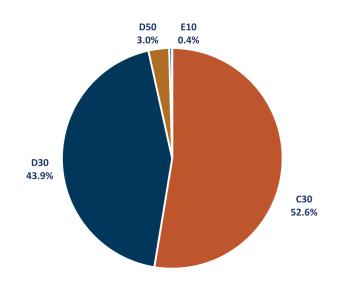
The table below displays replacement costs for the campus, and the number of associated assets expected to fail within the next ten years. Assets requiring replacement or extensive maintenance in this plan are presented in Appendices A, B, and C.

REPLACEMENT PERIOD	ASSET QUANTITY	CUMULATIVE REPLACEMENT COST
3-Year Plan	87	\$2,364,882
5-Year Plan	44	\$4,360,647
10-Year Plan	66	\$4,549,641
Total	197	\$11,275,171

## **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 \$2,364,882. The specific assets that will reach end of life in this period are listed in Appendix A.

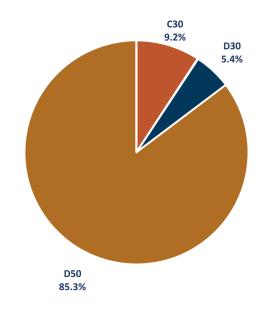
SUBSYSTEM	Years 1-3	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$0	0%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$1,243,941	53%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$0	0%
D30 - HVAC	\$1,038,809	44%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$71,770	3%
E10 - Equipment	\$10,362	<1%
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 \$4,360,647. The specific assets that will reach end of life in this period are listed in Appendix A.

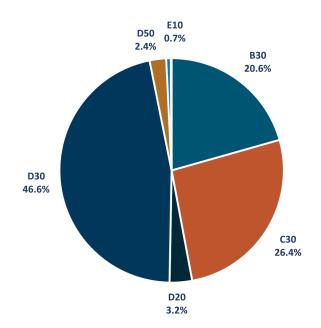
SUBSYSTEM	Years 4-5	Percent
A10 - Foundations	\$0	0%
B10 - Superstructure	\$0	0%
B20 - Exterior Enclosure	\$0	0%
B30 - Roofing	\$0	0%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$401,535	9%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$3,151	<1%
D30 - HVAC	\$236,177	5%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$3,719,784	85%
E10 - Equipment	\$0	0%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$0	0%



## **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 \$4,549,641. 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	\$938,253	21%
C10 - Int. Construction	\$0	0%
C20 - Stairs	\$0	0%
C30 - Interior Finishes	\$1,202,462	26%
D10 - Conveying	\$0	0%
D20 - Plumbing	\$147,399	3%
D30 - HVAC	\$2,118,569	47%
D40 - Fire Protection	\$0	0%
D50 - Electrical	\$107,648	2%
E10 - Equipment	\$29,665	1%
G20 - Site Improvements	\$0	0%
G40 - Site Electrical	\$5,645	<1%



## **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 - KINARD CORE KNOWLEDGE MS**

	KINARD CORE KNOWLE	DGE MS
	BUILDING TYPE: Mic	dle School
	YEAR BUILT:	2006
W LCOM: TO KINAKD	GROSS AREA (SF):	.12,735
	DATE ASSESSED: Jun	e 13, 2023
	PRIORITY SCORE:	16.4
		PRIORITY
SUBSYSTEM:	DESCRIPTION	SCORE
B20 - Ext. Enclosure	The original building was constructed in 2006. The exterior of this two-story facility is brick, CMU metal panel, aluminum storefront, and metal-clad wood windows. There are concrete column accents at the West and SE facades. The building is relatively new	13.2
	The rolled asphalt roofing is <b>the second seco</b>	
B30 - Roofing	Of special note is the	15.3
	fair amount of pre-cast roof coping which seem to be in good condition.	
C10 - Int. Construction	The interior of this space make use of exterior type CMU finishes as well as drywall partitions, open ceilings in common spaces. ACT ceilings in classrooms, sheet vinyl, tile, concrete, and epoxy flooring in the fitness areas. The main circulation space has several 'floating' staircases with	13.3
C30 - Interior Finishes	extensive guardrail/handrail assemblies. A movable partition separates the flex space from a secondary gym. Carpeting will be the first finish to require replacement within two years.	16.2
D20 - Plumbing	Plumbing assets include two gas-fired water heaters that were updated in 2019-2022, backflow preventers, and (9) circulation pumps. Plumbing pumps are expected to require replacement within 7 years.	12.3
D30 - HVAC	HVAC assets include (4) air handling units, (73) heat pumps, (7) ERVs, and exhaust fans. A water- source ground loop serves the heat pumps, as do three gas-fired boilers. The (73) original ground source heat pumps are now two years past expected life and are estimated to require replacement in three years. The BAS dates to 2006 and has 8 years of remaining life.	15.4
D40 - Fire Suppression	The fire alarm system is original and will need to be replaced in approximately 5 years. The wet fire sprinkler system also dates to the 2006 original construction, and has 13 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, VFDs, and the main switchboard date to 2006. Emergency back-up lighting dates to 2006, as does the majority of the building's interior fluorescent lighting fixtures. Gym lighting was upgraded to LED in 2020. Recommend replacement of the remaining fluorescent lighting fixtures with LED lighting fixtures in approximately 5 years. The fire alarm system and the security system are original but have 5 years of remaining life. The back-up generator is expected to require replacement in approximately three years.	21.3
E10 - Equipment	The Kitchen area is provided one walk-in cooler and one walk-in freezer with associated condensing units. These units are original to the 2006 construction and are expected to require replacement in approximately 8 years.	15.2

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. [ $\leq 12 = \text{green}$ , 12-24 = yellow,  $\geq 24 = \text{red}$ ]

Appendices

A. 3-YEAR PLAN ASSETS LIST B. 5-YEAR PLAN ASSETS LIST C.10-YEAR PLAN ASSETS LIST

## **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.

#### **KINARD CORE KNOWLEDGE MS**

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED Remaining	REPLACEMENT COST	PRIORITY Score
FCAID-280116	Boiler-3	D30 - HVAC	1	\$78,630	23
FCAID-280030	Interior Floor Finishes: Carpet	C30 - Int. Finishes	2	\$1,207,710	19
FCAID-280079	CU-1-Walk-In Cooler	E10 - Equipment	2	\$5 <i>,</i> 030	18
FCAID-280081	CU-3	D30 - HVAC	2	\$15 <i>,</i> 080	18
FCAID-280080	CU-2-Walk-In Freezer	E10 - Equipment	2	\$5,030	18
FCAID-280075	Back-Up Generator	D50 - Electrical	3	\$51,270	17
FCAID-280183	HP-C06	D30 - HVAC	3	\$11,900	16
FCAID-280175	НР-В37	D30 - HVAC	3	\$11,900	16
FCAID-280159	HP-B21	D30 - HVAC	3	\$11,900	16
FCAID-280167	НР-В29	D30 - HVAC	3	\$11,900	16
FCAID-280163	HP-B25	D30 - HVAC	3	\$11,900	16
FCAID-280118	HP-A01	D30 - HVAC	3	\$8,520	16
FCAID-280171	НР-В33	D30 - HVAC	3	\$11,900	16
FCAID-280119	HP-A02	D30 - HVAC	3	\$7,980	16
FCAID-280179	HP-C02	D30 - HVAC	3	\$11,900	16
FCAID-280120	HP-A03	D30 - HVAC	3	\$11,900	16
FCAID-280187	HP-D03	D30 - HVAC	3	\$11,900	16
FCAID-280151	HP-B11	D30 - HVAC	3	\$11,900	16
FCAID-280155	HP-B16	D30 - HVAC	3	\$7,980	16
FCAID-280121	HP-A04	D30 - HVAC	3	\$11,900	16
FCAID-280157	HP-B18	D30 - HVAC	3	\$11,900	16
FCAID-280122	HP-A05	D30 - HVAC	3	\$11,900	16
FCAID-280161	НР-В23	D30 - HVAC	3	\$11,900	16
FCAID-280123	HP-A06	D30 - HVAC	3	\$11,900	16
FCAID-280165	НР-В27	D30 - HVAC	3	\$7 <i>,</i> 980	16
FCAID-280124	HP-A07	D30 - HVAC	3	\$19,860	16

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	HP-B31	D30 - HVAC	3	\$7,980	16
	HP-A08	D30 - HVAC	3	\$19,860	16
	HP-B35	D30 - HVAC	3	\$11,900	16
	HP-A09	D30 - HVAC	3	\$11,900	16
	HP-B39	D30 - HVAC	3	\$15,860	16
FCAID-280127	HP-A10	D30 - HVAC	3	\$7,980	16
FCAID-280181	HP-C04	D30 - HVAC	3	\$7,980	16
FCAID-280128	HP-A11	D30 - HVAC	3	\$11,900	16
FCAID-280185	HP-D01	D30 - HVAC	3	\$11,900	16
FCAID-280129	HP-A12	D30 - HVAC	3	\$11,900	16
FCAID-280189	WWHP-2	D30 - HVAC	3	\$19,860	16
FCAID-280130	HP-A13	D30 - HVAC	3	\$11,900	16
FCAID-280152	HP-B12	D30 - HVAC	3	\$11,900	16
FCAID-280131	HP-A15	D30 - HVAC	3	\$11,900	16
FCAID-280154	HP-B15	D30 - HVAC	3	\$11,900	16
FCAID-280132	HP-A16	D30 - HVAC	3	\$11,900	16
FCAID-280156	HP-B17	D30 - HVAC	3	\$11,900	16
FCAID-280133	HP-A17	D30 - HVAC	3	\$11,900	16
FCAID-280158	HP-B19	D30 - HVAC	3	\$11,900	16
FCAID-280134	HP-A18	D30 - HVAC	3	\$11,900	16
FCAID-280160	НР-В22	D30 - HVAC	3	\$11,900	16
FCAID-280135	HP-A19	D30 - HVAC	3	\$7,980	16
FCAID-280162	НР-В24	D30 - HVAC	3	\$11,900	16
FCAID-280136	HP-A20	D30 - HVAC	3	\$11,900	16
FCAID-280164	НР-В26	D30 - HVAC	3	\$11,900	16
FCAID-280137	HP-A21	D30 - HVAC	3	\$11,900	16
FCAID-280166	HP-B28	D30 - HVAC	3	\$11,900	16
FCAID-280138	HP-A22	D30 - HVAC	3	\$11,900	16
FCAID-280168	HP-B30	D30 - HVAC	3	\$11,900	16
FCAID-280139	HP-A23	D30 - HVAC	3	\$7,980	16
FCAID-280170	НР-В32	D30 - HVAC	3	\$15,860	16
FCAID-280140	HP-A24	D30 - HVAC	3	\$15,860	16
FCAID-280172	НР-В34	D30 - HVAC	3	\$7,980	16
FCAID-280141	HP-B01	D30 - HVAC	3	\$11,900	16
FCAID-280174	НР-В36	D30 - HVAC	3	\$11,900	16
FCAID-280142	HP-B02	D30 - HVAC	3	\$8,520	16
FCAID-280176	HP-B38	D30 - HVAC	3	\$7,980	16
FCAID-280143	НР-ВОЗ	D30 - HVAC	3	\$8,520	16
FCAID-280178	HP-C01	D30 - HVAC	3	\$19,860	16
FCAID-280144	HP-B04	D30 - HVAC	3	\$11,900	16
FCAID-280180	НР-СОЗ	D30 - HVAC	3	\$11,900	16
FCAID-280145	НР-В05	D30 - HVAC	3	\$8,520	16
FCAID-280182	НР-С05	D30 - HVAC	3	\$11,900	16
FCAID-280146	НР-ВОб	D30 - HVAC	3	\$7,980	16
	НР-С07	D30 - HVAC	3	\$11,900	16
FCAID-280147	HP-B07	D30 - HVAC	3	\$7,980	16

HP-B08	D30 - HVAC	3	\$11,900	16
WWHP-1	D30 - HVAC	3	\$19,860	16
НР-В09	D30 - HVAC	3	\$7,980	16
WWHP-3	D30 - HVAC	3	\$19,860	16
HP-B10	D30 - HVAC	3	\$11,900	16
HP-B14	D30 - HVAC	3	\$11,900	16
EF-15	D30 - HVAC	3	\$6,710	14
P-6	D30 - HVAC	3	\$13,190	14
HUH-4	D30 - HVAC	3	\$2,510	13
HUH-1	D30 - HVAC	3	\$2,510	13
Electrical: Recessed Can Fixture, Fluoresce	D50 - Electrical	3	\$2,430	13
Electrical: Wall Pack, Fluorescent	D50 - Electrical	3	\$13,950	13
HUH-3	D30 - HVAC	3	\$2,510	13
HUH-2	D30 - HVAC	3	\$2,510	13
	WWHP-1 HP-B09 WWHP-3 HP-B10 HP-B14 EF-15 P-6 HUH-4 HUH-1 Electrical: Recessed Can Fixture, Fluoresce Electrical: Wall Pack, Fluorescent HUH-3	WWHP-1D30 - HVACHP-B09D30 - HVACWWHP-3D30 - HVACHP-B10D30 - HVACHP-B14D30 - HVACEF-15D30 - HVACP-6D30 - HVACHUH-4D30 - HVACHUH-1D30 - HVACElectrical: Recessed Can Fixture, FluoresceD50 - ElectricalElectrical: Wall Pack, FluorescentD50 - ElectricalHUH-3D30 - HVAC	WWHP-1D30 - HVAC3HP-B09D30 - HVAC3WWHP-3D30 - HVAC3HP-B10D30 - HVAC3HP-B14D30 - HVAC3EF-15D30 - HVAC3P-6D30 - HVAC3HUH-4D30 - HVAC3HUH-1D30 - HVAC3Electrical: Recessed Can Fixture, FluoresceD50 - Electrical3Electrical: Wall Pack, FluorescentD50 - Electrical3HUH-3D30 - HVAC3	WWHP-1 D30 - HVAC 3 \$19,860   HP-B09 D30 - HVAC 3 \$7,980   WWHP-3 D30 - HVAC 3 \$19,860   HP-B10 D30 - HVAC 3 \$19,860   HP-B14 D30 - HVAC 3 \$11,900   EF-15 D30 - HVAC 3 \$6,710   P-6 D30 - HVAC 3 \$13,190   HUH-4 D30 - HVAC 3 \$2,510   HUH-1 D30 - HVAC 3 \$2,510   HUH-3 D30 - HVAC 3 \$2,510

## **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.

## **KINARD CORE KNOWLEDGE MS**

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED Remaining Life	REPLACEMENT Cost	PRIORITY Score
FCAID-280212	Emergency Back-Up Lighting	D50 - Electrical	5	\$429,520	24
FCAID-280213	Interior Lighting: Fluorescent	D50 - Electrical	5	\$1,567,730	24
FCAID-280211	Fire Alarm System	D50 - Electrical	5	\$878,210	22
FCAID-280249	Security System	D50 - Electrical	5	\$429,520	20
FCAID-280042	Interior Floor Finishes: Hardwood Floor	C30 - Int. Finishes	5	\$165,400	15
FCAID-280109	RH-1	D30 - HVAC	5	\$27,120	14
FCAID-280103	EF-4	D30 - HVAC	5	\$8,190	13
FCAID-280084	EF-11	D30 - HVAC	5	\$8,190	13
FCAID-280107	EF-8	D30 - HVAC	5	\$1,260	13
FCAID-280087	EF-14	D30 - HVAC	5	\$12,980	13
FCAID-280101	EF-27	D30 - HVAC	5	\$6,710	13
FCAID-280089	EF-16	D30 - HVAC	5	\$6,710	13
FCAID-280105	EF-6	D30 - HVAC	5	\$5,550	13
FCAID-280090	EF-17	D30 - HVAC	5	\$5 <i>,</i> 550	13
FCAID-280085	EF-12	D30 - HVAC	5	\$8,190	13
FCAID-280091	EF-18	D30 - HVAC	5	\$1,260	13
FCAID-280100	EF-26	D30 - HVAC	5	\$5,550	13
FCAID-280092	EF-19	D30 - HVAC	5	\$6,710	13
FCAID-280102	EF-3	D30 - HVAC	5	\$8,660	13
FCAID-280094	EF-20	D30 - HVAC	5	\$6,710	13
FCAID-280104	EF-5	D30 - HVAC	5	\$8,190	13
FCAID-280095	EF-21	D30 - HVAC	5	\$8,660	13
FCAID-280106	EF-7	D30 - HVAC	5	\$1,260	13
FCAID-280096	EF-22	D30 - HVAC	5	\$6,710	13
FCAID-280086	EF-13	D30 - HVAC	5	\$8,190	13

FCAID-280108	EF-9	D30 - HVAC	5	\$8,190	13
FCAID-280110	RH-2	D30 - HVAC	5	\$8,190	13
FCAID-280082	EF-1	D30 - HVAC	5	\$1,260	13
FCAID-280083	EF-10	D30 - HVAC	5	\$8,190	13
FCAID-280098	EF-24	D30 - HVAC	5	\$8,190	13
FCAID-280099	EF-25	D30 - HVAC	5	\$8,190	13
FCAID-280097	EF-23	D30 - HVAC	5	\$6,210	13
FCAID-280093	EF-2	D30 - HVAC	5	\$5,550	13
FCAID-280198	GUH-1	D30 - HVAC	5	\$3,520	12
FCAID-280041	Interior Floor Finishes: Vinyl Sheet Flooring	C30 - Int. Finishes	5	\$55,350	12
FCAID-280039	Interior Floor Finishes: Traffic Coating	C30 - Int. Finishes	5	\$33,210	12
FCAID-280034	Interior Wall Finishes: FRP	C30 - Int. Finishes	4	\$5,540	12
FCAID-280040	Interior Floor Finishes: VCT	C30 - Int. Finishes	5	\$88,560	12
FCAID-280038	Interior Floor Finishes: LVT	C30 - Int. Finishes	5	\$8,860	11
FCAID-280049	BFP-GS Field Loop Make-Up	D20 - Plumbing	5	\$400	11
FCAID-280045	BFP-AHU-1 Evap	D20 - Plumbing	5	\$400	11
FCAID-280046	BFP-DCW	D20 - Plumbing	5	\$800	11
FCAID-280047	BFP-Fire	D20 - Plumbing	5	\$800	11
FCAID-280048	BFP-GS Building Loop Make-Up	D20 - Plumbing	5	\$400	11

## 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.

## **KINARD CORE KNOWLEDGE MS**

ASSET ID	DESCRIPTION	SUBSYSTEM	OBSERVED Remaining Life	REPLACEMENT Cost	PRIORITY Score
FCAID-280070	AHU-2	D30 - HVAC	8	\$113,760	19
FCAID-280071	AHU-3	D30 - HVAC	8	\$42 <i>,</i> 660	18
FCAID-280069	AHU-1	D30 - HVAC	8	\$51,190	18
FCAID-280072	AHU-4	D30 - HVAC	8	\$79 <i>,</i> 630	18
FCAID-280019	Roofing: Rolled Asphalt	B30 - Roofing	8	\$562 <i>,</i> 740	16
FCAID-280076	Building Automation System	D30 - HVAC	8	\$966,140	16
FCAID-280113	FCU-1	D30 - HVAC	6	\$8,870	15
FCAID-280029	Interior Ceiling Finishes: ACT	C30 - Int. Finishes	7	\$910,450	15
FCAID-280016	Roofing: Solar Tunnels	B30 - Roofing	7	\$148,190	15
FCAID-280277	Walk-In Freezer	E10 - Equipment	8	\$12,060	14
FCAID-280052	BP-1	D30 - HVAC	7	\$6 <i>,</i> 690	14
FCAID-280053	BP-2	D30 - HVAC	7	\$6,690	14
FCAID-280276	Walk-In Cooler	E10 - Equipment	8	\$12,060	14
FCAID-280015	Roof Ladders	B30 - Roofing	7	\$17,500	13
FCAID-280057	P-13	D20 - Plumbing	7	\$5,620	13
FCAID-280054	P-10	D20 - Plumbing	7	\$9,710	13
FCAID-280058	P-3	D20 - Plumbing	7	\$9,710	13
FCAID-280050	P-5	D30 - HVAC	7	\$13,190	13
FCAID-280059	P-4	D20 - Plumbing	7	\$9,710	13
FCAID-280017	Roofing: Metal Flashing	B30 - Roofing	7	\$18,650	13
FCAID-280060	P-7	D20 - Plumbing	7	\$4,630	13
FCAID-280055	P-11	D20 - Plumbing	7	\$5,620	13
FCAID-280061	P-8	D20 - Plumbing	7	\$19,490	13
FCAID-280062	P-9	D20 - Plumbing	7	\$19,490	13
FCAID-280056	P-12	D20 - Plumbing	7	\$5,620	13

FCAID-280037	Interior Finishes: Tile Flooring	C30 - Int. Finishes	8	\$93,780	12
FCAID-280063	GWH-1-Kitchen	D20 - Plumbing	8	\$10,610	11
FCAID-280269	VFD-P-10	D50 - Electrical	7	\$5,060	11
FCAID-280267	VFD-AHU-4-RF	D50 - Electrical	7	\$5,480	11
FCAID-280013	Exterior Door: Roof Hatch	B30 - Roofing	7	\$21,810	11
FCAID-280271	VFD-P-4	D50 - Electrical	7	\$5,060	11
FCAID-280273	VFD-P-6	D50 - Electrical	7	\$5,630	11
FCAID-280275	VFD-P-9	D50 - Electrical	7	\$6,510	11
FCAID-280266	VFD-AHU-3-SF	D50 - Electrical	7	\$5,060	11
FCAID-280204	ATS-1	D50 - Electrical	8	\$12,460	11
FCAID-280268	VFD-AHU-4-SF	D50 - Electrical	7	\$5,480	11
FCAID-280210	Electrical: Wall Pack, LED	D50 - Electrical	7	\$610	11
FCAID-280270	VFD-P-3	D50 - Electrical	7	\$5,060	11
FCAID-280262	VFD-AHU-1-SF	D50 - Electrical	7	\$5,210	11
FCAID-280272	VFD-P-5	D50 - Electrical	7	\$5,630	11
FCAID-280263	VFD-AHU-2-RF	D50 - Electrical	7	\$5,480	11
FCAID-280274	VFD-P-8	D50 - Electrical	7	\$6,510	11
FCAID-280264	VFD-AHU-2-SF	D50 - Electrical	7	\$5,480	11
FCAID-280064	GWH-2-Building	D20 - Plumbing	9	\$10,610	11
FCAID-280265	VFD-AHU-3-RF	D50 - Electrical	7	\$5,060	11
FCAID-280074	AS-2	D30 - HVAC	7	\$25,860	11
FCAID-280078	PF-2	D30 - HVAC	7	\$750	10
FCAID-280196	ERV-6	D30 - HVAC	8	\$27,730	10
FCAID-280194	ERV-4	D30 - HVAC	8	\$36,260	10
FCAID-280191	ERV-1	D30 - HVAC	8	\$97,410	10
FCAID-280197	ERV-7	D30 - HVAC	8	\$34,130	10
FCAID-280192	ERV-2	D30 - HVAC	8	\$87,670	10
FCAID-280073	AS-1	D30 - HVAC	7	\$11,310	10
FCAID-280193	ERV-3	D30 - HVAC	8	\$98,690	10
FCAID-280077	PF-1	D30 - HVAC	7	\$750	10
FCAID-280065	Water Meter-DCW	D20 - Plumbing	8	\$2 <i>,</i> 830	9
FCAID-280066	Water Meter-GS Building Loop Make-Up	D20 - Plumbing	8	\$2,830	9
FCAID-280195	ERV-5	D30 - HVAC	8	\$5,330	9
FCAID-280117	Gas Meter	D30 - HVAC	8	\$3,430	9
FCAID-280068	Water Meter-HW 140 Degree	D20 - Plumbing	8	\$2,830	9
FCAID-280205	Electric Meter	G40 - Site Electric	8	\$1,530	9
FCAID-280111	EXT-1	D30 - HVAC	8	\$3,430	9
FCAID-280206	Electric Meter MSB	G40 - Site Electric	8	\$1,530	9
FCAID-280112	EXT-2	D30 - HVAC	8	\$3,430	9
FCAID-280207	Electric Meter TVSS-1	G40 - Site Electric	8	\$1,530	9
FCAID-280067	Water Meter-GS Field Loop Make-Up	D20 - Plumbing	8	\$2,830	9