Facility Condition Assessment Summary Report

This report provides a summary of the Facility Condition Index (FCI) value of a school facility and select major building systems. The FCI calculation represents the cost of needed repairs divided by the replacement value. The FCI is a numerical value of condition and helps to identify the need for renewal or replacement of specific parts of the facility. The FCI is particularly useful when comparing similar facilities within the same portfolio.

Hackett School

Governance	DISTRICT	Report Type	Elementary
Address	2161 E. York St.	Enrollment	365
	Philadelphia, Pa 19125	Grade Range	'00-05'
Phone/Fax	215-291-4706 / 215-291-4169	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Hackett	Turnaround Model	N/A

Building/System FCI Tiers

Facility Condition Index (FCI) = Cost of Assessed Deficiencies / Replacement Value

< 15%	15 to 25%	25 to 45%	45 to 60%	> 60%
Buildings				
Minimal Current Capital Funding Required	Refurbish Systems in building	Replace Systems in building.	Building should be considered for major renovation.	Building should be considered for closing/replacement.
Systems				
Perform routine maintenance on system	System requires minor repairs	System should be studied to determine repair vs. replacement.	System is nearing end of its life expectancy and should be considered for replacement	System should be replaced as part of the Capital Program

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**38.03%**	**$20,889,835**	**$54,928,932**
Building	37.31 %	$19,954,950	$53,489,082
Grounds	64.93 %	$934,885	$1,439,850

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.29 %	$1,185,870	$1,328,113
Exterior Walls (Shows condition of the structural condition of the exterior facade)	07.72 %	$309,495	$4,006,581
Windows (Shows functionality of exterior windows)	67.17 %	$1,313,258	$1,954,986
Exterior Doors (Shows condition of exterior doors)	00.00 %	$0	$157,398
Interior Doors (Classroom doors)	128.55 %	$489,781	$381,011
Interior Walls (Paint and Finishes)	00.00 %	$0	$1,824,727
Plumbing Fixtures	03.10 %	$45,475	$1,467,596
Boilers	00.00 %	$0	$2,026,629
Chillers/Cooling Towers	59.45 %	$1,579,795	$2,657,304
Radiators/Unit Ventilators/HVAC	145.04 %	$6,768,565	$4,666,565
Heating/Cooling Controls	132.68 %	$1,944,283	$1,465,425
Electrical Service and Distribution	96.99 %	$1,021,208	$1,052,935
Lighting	40.98 %	$1,542,644	$3,764,514
Communications and Security (Cameras, Pa System and Fire Alarm)	35.78 %	$504,485	$1,410,065

Please note that some FCIs may be over 100% because there are times when replacing a building system requires that other building systems be upgraded to complete the installation. A FCI of 0.0% represents that there are no current deficiencies with the associated system.

School District of Philadelphia

S530001;Hackett

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

The organization of this report, as displayed in the Table of Contents, follows the structure of the associated eCOMET database. The overall node for each school campus begins with the letter "S", which indicates the "Site" label. Each Site is comprised of separate "Building" and "Grounds" nodes; their asset names begin with the letters "B" and "G" respectively. Information rolls up to the Site node from the Building and Grounds nodes. This Site report combines facility information with subsections for the Buildings And Grounds nodes.

The basis for the evaluation of condition is the functional systems and elements of a building and grounds organized according to the UNIFORMAT II Elemental Classification. The grouping of these systems and elements and applying a current replacement value to them develops a representative building cost model. Cost Models are typically developed for similar building types and functions. Evaluation of systems and their elements takes into account their current replacement values, life cycles, installation dates and next renewal dates. Systems and their elements that are within their useful lives are further evaluated to identify current deficient conditions that may have a significant impact on a system's or element's remaining service life, and to determine if they are beyond their predicted expected life. The system's or element's current replacement value is based on RS Means Commercial Cost Data.

Following are the cost model's system details for this facility. The Replacement Value is the amount needed to replace the property of the same present value. The Current Repair Amount, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the corrective actions due to packaging the work. Facility Condition Index (FCI) is an industry-standard measurement calculated as the ratio of the repair costs to correct a facility's deficiencies to the facility's Current Replacement Value. Condition Index (CI) for a system is calculated as the sum of a the deficiencies divided by the sum of a system's Replacement Value (both values include soft-cost) expressed as a percentage ranging from 0% 100%.

Gross Area (SF):	108,550
Year Built:	1967
Last Renovation:	
Replacement Value:	$54,928,932
Repair Cost:	$20,889,834.88
Total FCI:	38.03 %
Total RSLI:	76.23 %

Description:

Facility Assessment, July 2015

School District of Philadelphia

Hackett Elementary School

2161 E York St.

Philadelphia, PA 19125

108,550 SF / 596 Students / LN 03

The Hackett Elementary school building is located at 2161 E. York Street in Philadelphia, PA. The 3 story with partial basement, approximately 108,550 square foot building was originally constructed in 1967.

Mr. Tom Sharer, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned renovation projects. Mr. Tilmon Hodges, building engineer, accompanied us on our tour of the school and provided limited information on the

building systems and recent maintenance history. The interiors appear to be recently renovated (probably between 2005 and 2010), however, no actual renovation year was available at the time of the site visit.

STRUCTURAL/ EXTERIOR CLOSURE:

The original building typically rests on concrete foundations and concrete bearing walls that are not showing signs of settlement. There are no signs of moisture penetration through basement walls

The main structure consists typically of combination of cast-in-place concrete columns, beams and concrete slabs in the basement; and structural steel framing, columns and bar joists supporting concrete slabs. The roof structure consists of bar joists supporting precast concrete roof panels. The superstructure is in good condition.

The building envelope is typically face brick masonry with CMU backup. In general, masonry is in fair to good condition with some minor cracks and missing mortar. The exterior columns are clad with cementitious panels to accentuate the structural grid. These panels are sealed to adjacent brick with sealant where mortar was missing; joints at panels' perimeter show substantial deterioration. Water penetration through walls has not been reported. First floor walls are covered with anti-graffiti coating which is deteriorated and in some places peeling off the face brick.

The building windows appear to be extruded aluminum double hung windows single acrylic glazed. All windows are generally in poor condition with some of the windows inoperable; most of the windows have security screens in fair to poor condition. The leaks around the windows perimeters have not been reported and are not evident.

The exterior doors are typically hollow metal doors and frames, painted. The doors are generally in good condition; no weather-stripping is installed; some doors have vision glazing with security screens.

Roofing system is a built-up system approximately 15 to 20 years old and in fair condition; all roofing and flashing is typically in fair condition with some deterioration of the built-up system and flashing sealant; leaks have not been reported.

INTERIORS:

The building partition wall types include painted CMU and hollow metal, glazed borrowed light partitions; first floor corridors near main entrance are face brick. Partitions are generally in good condition.

Interior doors are generally solid core wood doors, some glazed, with hollow metal frames. The doors leading to exit stairways are hollow metal doors and frames in good condition.

Fittings include toilet accessories and toilet partitions, generally in good condition, installed approximately in 2000, no accessible compartments; chalkboards in good condition. Handrails and ornamental metals are generally in good condition. Built-in cabinets are steel in good condition. Interior identifying signage is typically directly painted on wall or door surfaces generally in good condition.

The interior wall finishes in the original building are generally painted CMU. Generally, paint is in good condition throughout the building.

Most ceilings in the original building are 2x4 suspended acoustical panels. The suspension system and tile are in good condition.

Flooring in classrooms and auditorium/ cafeteria and gymnasium is VCT (approximately 70% of floor area); and painted concrete in toilets. Flooring in the kitchen is quarry tile in good condition. Most flooring is in fair to good condition. Library has carpet in poor condition.

Stair construction is generally steel with concrete filled steel pan treads cast iron non-slip treads in good condition.

Institutional and Commercial equipment includes: stage equipment, generally in good condition; A/V equipment in very good condition; gym equipment – basketball backstops, scoreboards, etc.; generally in fair condition. Other equipment includes kitchen equipment, generally in good condition.

Furnishings include fixed casework in classrooms, corridors and library, generally in fair to good condition; window shades/blinds, generally in good condition; there is no fixed seating in auditorium/cafeteria .

CONVEYING SYSTEMS:

The building has a 2,000 lb traction elevator serving all floors; generally in good condition, however, the cabin size and configuration does not meet ADA standards.

PLUMBING:

Plumbing Fixtures - Many of the original plumbing fixtures remain in service. Fixtures in the restrooms on each floor consist of both floor and wall mounted flush valve water closets, wall hung urinals and lavatories with wheel handle faucets. The units appear to be in good condition and should be provide reliable service for the next 5-10 years.

Drinking fountains in the corridors and at the restrooms consist of wall hung fixtures with integral refrigerated coolers. They are beyond their service life and should be replaced; most are NOT accessible type.

A service sink is available in a janitor closet in the corridor on each floor for use by the janitorial staff.

The Kitchen has one three compartment stainless steel sink with lever operated faucets. There is no grease trap. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution - A 4" city water service enters the boiler room from the paved play area on the east side of the school. The 4" meter and valves are located in the boiler room. A reduced pressure backflow preventer is installed. The original domestic hot and cold water distribution piping with copper piping and sweat fittings is still in service. The maintenance staff reports no significant problems with scale build up in the domestic piping and the supply is adequate to the fixtures.

One Bradford White gas fired, 75 gallon, vertical hot water heater with circulating pump, installed on 9/14/2012, supplies hot water for domestic use. The unit is located in the mechanical room on the basement level. The hot water heater is equipped with a T&P relief valve, and expansion tank. The domestic hot water heater is within its service life and should provide reliable service for the next 5-7 years. A water softener was located in the boiler room.

Sanitary Waste - The original sanitary sewer piping is a mixture of galvanized piping with threaded fittings and heavy weight cast iron piping with hub and spigot fittings.

A sewage ejector pit located in basement boiler room receives water from the basement area. It has one pump that was recently installed. The pit is not sealed, but should be.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for 46 years and will require more frequent attention from the maintenance staff as time passes. The District should hire a qualified contractor to examine the sanitary waste piping using video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

Rain Water Drainage - The rain water drains from the roof are routed through mechanical chases in the building and appear to be original. The drain piping should be inspected by a qualified contractor and repaired as necessary.

MECHANICAL:

Energy Supply - An 8" city gas service enters the building from Trenton Avenue near the intersection with E. Hagert Street. The gas meter is 6" and located in the in the boiler room. The gas main has a booster pump connected.

Heat Generating Systems - Building heating hot water is generated by two Gasmaster GMI 2ML stainless steel boilers with, maximum output of 1,900 MBH, installed in 2003. Each boiler is equipped with a modulating burner designed to operate on natural gas. Combustion air makeup is supplied by louvers equipped with motorized dampers. No major issues with the boilers were reported by the Building Engineer. Steel water tube boilers have an anticipated service life of 24 years or more; these units have been in service 12 years. The boilers appear to have been maintained well. The District should provide reliable service for the next 10 to 15 years.

Cooling Generating Systems - Chilled water is generated by one York water cooled chiller located in the boiler room with heat rejected by one Evapco LSTA galvanized cooling tower located in the boiler room. Centrifugal chillers have an anticipated service life of 28 years; this unit has been in service approximately 45 years and needs to be replaced. Galvanized cooling tower have an anticipated service life of 18 years; this unit has been in service over 20 years. The existing centrifugal chiller and cooling tower are well beyond their service life and should be replaced with a new packaged air cooled chiller fitted with modern controls.

Distribution Systems - Building water distribution piping is black steel with threaded fittings. The distribution piping has been damaged by condensation and has significant rust damage. The piping has been in use beyond its service life and will require more frequent attention from the maintenance staff to address pipe/valve failures as time passes. The District should hire a qualified contractor to examine the distribution piping and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures. The District should budget for replacing this piping over the next 5 years.

A two pipe distribution system supplies building heating or cooling water to the unit ventilators and air handling units (AHU). There are two distribution loop water pumps which can serve either the boilers or the chiller depending on valve configuration. There are two condenser water loop pumps which serve the cooling tower and chiller. All pumps appear to be original to the building, are well beyond the anticipated service life of 25 years, and should be replaced. There is a moisture problem in the building and all of the distribution piping is damaged from rust. Much of the insulation in the boiler room is covered in mold. All distribution piping and insulation should be replaced.

Unit ventilators provide heating and cooling for the majority of classrooms, offices, and indirectly to the hallways. The unit ventilators are original to the building, beyond their service life, and have rust on their interiors. The existing unit ventilators should be removed and new units installed.

Conditioned air is provided to several spaces in the building by air handling units. Heating and ventilation unit HV-1, located in the mechanical room behind the gymnasium, serves Room 106. Heating and ventilation unit HV-2, located in the mechanical room behind the gymnasium, serves Room 107. AHU-2, located in the second floor crawl space, serves rooms 215-219. AHU-3, located in Fan Room 2, serves the Cafeteria/Auditorium. AHU-5, located in the mechanical room behind the gymnasium, serves the Gymnasium. AHU -6, located in Fan Room 1, serves the Kitchen and is for heating only. These units are beyond their service life, show signs of damage from rust, and should be replaced.

Terminal & Package Units - The restrooms on the first floor are exhausted by two fans located in the fan rooms on the second floor. The restrooms on the second floor are exhausted by two fans located in the crawl space above the second floor. The Building Engineer reports that all exhaust fans are operations.

A kitchen hood with integral Ansul fire suppression system is installed above the gas fired cooking equipment. There were no spray nozzles visible for the hood fire suppression system. The equipment looks well within its service life.

Controls & Instrumentation - The original pneumatic systems still provide basic control functions. Pneumatic room thermostats are intended to control the dual system unit ventilator control valves. In reality the ventilator control valves are wide open and heating and cooling control is achieved via the boilers or chiller. Pneumatic control air is supplied from a duplex Quincy compressor and Hankison air dryer located in the boiler room. The pneumatic systems are beyond their service life and require too much attention from the maintenance staff. The original control valves and pneumatic actuators are beyond their service life and should be rebuilt or replaced. These controls should be converted to DDC.

A new building automation system (BAS) with modern DDC modules and communications network should be installed to serve the HVAC systems in this building to improve reliability and energy efficiency. An interface should be provided with the preferred system in use throughout the District.

Sprinklers - The school building is NOT covered by an automatic sprinkler system. Installing a sprinkler system with quick response type heads should reduce insurance costs by providing protection for the property investment. A fire pump may be required depending on the available city water pressure.

ELECTRICAL:

Site Electrical Service - The present electrical service is from Medium Voltage overhead lines (13.2KV) on wooden poles along Hagert St. near Trenton St. The Overhead lines are brought down on the face of the pole and run underground in conduit into a 750 KVA dry type transformer with 120V/208V secondary. The main service is extended to the building penetrating into the basement in the electrical room (part of the basement boiler room). The utility main disconnect switch and utility metering is in this electrical room. There is other electrical equipment also housed in the electrical room. These include the, main distribution switchboard, and a 20KW emergency generator, as well as the Fire Alarm Panel and controller. The main switchboard is outdated and has reached its useful life (45+ years).

Distribution System and Raceway System- The distribution system is 120V/208V three phase. There are total of 8 distribution panels for lighting and receptacles. These panels are old and have reached their useful life. The raceway is mainly conduits run above the ceiling.

Receptacles - There is inadequate receptacles in classrooms, multi-purpose room, computer room, etc. We recommend two receptacles in each wall of class rooms and other purpose rooms. Also, we recommend adding a wire-mold system with receptacles on every 3' for the computer room.

Lighting- The building has a mix of T-8 and outdated T-12 lighting with fixtures that are obsolete.

Fire Alarm System – The present Fire Alarm system is inadequate and is not addressable. A new Automated Fire Alarm System is needed.

Telephone/LAN – The present telephone system is adequate.

Public Address/Intercom/Paging – Although the PA system is not working, the school uses the telephone systems for public announcement. This system is working adequately for most part.

Clock and Program System – The present clocks are not functioning properly, it works in some locations, but not all classrooms.

Television System – There is no TV system in school.

Security System - The present security system is adequate.

Emergency Power System – The present emergency power system is inadequate, old and undersized. A larger emergency power system (30 KVA) is needed.

Emergency Lighting System / Exit Lighting- The emergency lighting and exit lighting is inadequate throughout each floor and stairways.

Lightning Protection System- There is adequate Lightning Protection System.

Grounding System - The present grounding system is adequate

Site Lighting - The present Site Lighting System is adequate

Site Video Surveillance - The present Site Video Surveillance System is inadequate with no existing cameras.

Site Paging - The present Site Paging System is adequate

GROUNDS (SITE):

There is no parking lot at the site. Playground pavement adjacent to the building is in poor condition, paving is cracked and deteriorated; there is no playground equipment. Perimeter picket fence separating the playground from the street is generally in good condition. There is minimal landscaping at the North West corner of the site, generally in good condition.

ACCESSIBILITY:

Generally, the building has an accessible route per ADA requirements. However, toilets are not equipped with accessible fixtures, and accessories, such as grab bars, and accessible partitions. None of the doors in the building have ADA required door handles. Elevator cabin is not wheel chair accessible.

RECOMMENDATIONS:

- Repair cracks in panels covering exterior columns
- Install all new roofing system including insulation within next 5 to 10 years; tear-down existing roofing; install flashing, and counter flashing
- Provide new anti-graffiti coating first floor ext. walls (remove old coating)
- Replace all windows within next 4 to 5 years
- Replace security screens on 1st and 2nd floor windows
- Replace interior doors hardware for ADA accessibility
- Replace existing carpet

- Resurface playground paving.
- Replace 2000 lb elevator with ADA compliant 2500 lb elevator
- Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. These units are well beyond their service life and most are NOT accessible type.
- Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Hire a qualified contractor to examine the distribution piping, in service for 45 years and damaged, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the existing centrifugal chiller and cooling tower with a new 300 ton packaged air cooled chiller fitted with modern controls. All associated piping and pumping systems should also be replaced.
- Replace building water distribution system in the boiler room with new distribution and condenser loop pumps, piping, and controls.
- Replace the existing unit ventilators with two pipe units that have integral heat exchangers to introduce outdoor air to the building.
- Replace heating and ventilation unit HV-1, located in the mechanical room behind the gymnasium, which serves Room 106.
- Replace heating and ventilation unit HV-2, located in the mechanical room behind the gymnasium, which serves Room 107.
- Replace AHU-2, located in the second floor crawl space, which serves rooms 215-219.
- Replace AHU-3, located in Fan Room 2, which serves the Cafeteria/Auditorium.
- Replace AHU-5, located in the mechanical room behind the gymnasium, which serves the Gymnasium.
- Replace AHU-6, located in Fan Room 1, which serves the Kitchen.
- Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.
- Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.
- Upgrade the existing electrical service to a new service with a new 1000 KVA dry-type Transformer, 2.4KV to 480V/277V, 3Ph. Install a new 1200A, 480V, 3 Ph. Switchboard. The new Main switchboard shall be sized to handle the existing loads plus any new HVAC loads. Install a new 500 KVA step down transformer from 480V to 120V/208V, and a main 120V/208V Panel Board for all the lighting/receptacle loads.
- Install 8 120V/208V panels to replace the existing panels (two in each floor). Also replace the power feeders, conduit & wire to the four panels from the new 120V/208V three phase main Panel Board.
- Install two receptacles in all of class rooms and other purpose rooms. Add a wire-mold system with receptacles on every 3' for the computer room.
- Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate, however, using the state-of-the-art LED lighting will improve the energy usage.
- Install a new Automated Fire Alarm System to be located in the new Electrical Room.
- Install a new clock system.
- Install a new emergency power system (30 KVA generator).
- Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.
- Install a new Security system with cameras.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S530001		

Site Condition Summary

The Table below shows the CI and FCI for each major system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	54.00 %	0.00 %	$0.00
A20 - Basement Construction	54.00 %	0.00 %	$0.00
B10 - Superstructure	54.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	64.86 %	26.52 %	$1,622,753.41
B30 - Roofing	50.00 %	89.29 %	$1,185,870.38
C10 - Interior Construction	52.72 %	21.08 %	$561,640.46
C20 - Stairs	54.00 %	0.00 %	$0.00
C30 - Interior Finishes	122.59 %	0.34 %	$16,786.14
D10 - Conveying	85.71 %	403.61 %	$670,322.07
D20 - Plumbing	41.33 %	34.20 %	$758,006.55
D30 - HVAC	91.56 %	85.24 %	$10,292,654.53
D40 - Fire Protection	92.47 %	177.49 %	$1,552,857.62
D50 - Electrical	110.11 %	51.63 %	$3,294,058.45
E10 - Equipment	47.81 %	0.00 %	$0.00
E20 - Furnishings	72.50 %	0.00 %	$0.00
G20 - Site Improvements	75.71 %	83.95 %	$934,885.27
G40 - Site Electrical Utilities	0.00 %	0.00 %	$0.00
Totals:	**76.23 %**	**38.03 %**	**$20,889,834.88**

Condition Deficiency Priority

Facility Name	Gross Area (S.F.)	FCI %	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)
B530001;Hackett	108,550	37.31	$2,700,177.19	$2,230,805.96	$9,048,689.34	$2,292,500.93	$3,682,776.19
G530001;Grounds	75,000	64.93	$0.00	$0.00	$0.00	$934,885.27	$0.00
Total:		**38.03**	**$2,700,177.19**	**$2,230,805.96**	**$9,048,689.34**	**$3,227,386.20**	**$3,682,776.19**

Deficiencies By Priority

- 1 - Response Time (< 2 yr) - $2,700,177.19
- 2 - Response Time (2-3 yrs) - $2,230,805.96
- 3 - Response Time (3-4 yrs) - $9,048,689.34
- 4 - Response Time (4-5 yrs) - $3,227,386.20
- 5 - Response Time (> 5 yrs) - $3,682,776.19

Budget Estimate Total: $20,889,834.88

Executive Summary

Building condition is evaluated based on the functional systems and elements of a building and organized according to the UNIFORMAT II Elemental Classification. The grouping of these systems and elements and applying a current replacement value to them develops a representative building cost model. Cost Models are developed for similar building types and functions. Systems and their elements are evaluated based on their current replacement values, life cycles, installation dates and next renewal dates. Systems and their elements that are within their useful lives are further evaluated to identify current deficient conditions that may have a significant impact on a system's or element's remaining service life, and to determine if they are beyond their predicted expected life. The system's or element's current replacement value is based on RS Means Commercial Cost Data.

Following are the cost model's system details for this facility. The Replacement Value is the amount needed to replace the property of the same present value. The Current Repair Amount, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the corrective actions due to packaging the work. Facility Condition Index (FCI) FCI is an industry-standard measurement of facility condition calculated as the ratio of the costs to correct a facility's deficiencies to the facility's Current Replacement Value. It ranges from 0% (new) to 100% (very poor). Condition Index (CI) is calculated as the sum of a renewable system's Remaining Service Life (RSL) divided by the sum of a system's Replacement Value (both values exclude soft-cost to simplify calculation updates) expressed as a percentage ranging from 100% (new) to 0% (expired).

Function:	Elementary School
Gross Area (SF):	108,550
Year Built:	1969
Last Renovation:	
Replacement Value:	$53,489,082
Repair Cost:	$19,954,949.61
Total FCI:	37.31 %
Total RSLI:	76.70 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B530001
Sewage Ejector:	Yes	Status:	Accepted by SDP
Site ID:	S530001		

Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
A10 - Foundations	54.00 %	0.00 %	$0.00
A20 - Basement Construction	54.00 %	0.00 %	$0.00
B10 - Superstructure	54.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	64.86 %	26.52 %	$1,622,753.41
B30 - Roofing	50.00 %	89.29 %	$1,185,870.38
C10 - Interior Construction	52.72 %	21.08 %	$561,640.46
C20 - Stairs	54.00 %	0.00 %	$0.00
C30 - Interior Finishes	122.59 %	0.34 %	$16,786.14
D10 - Conveying	85.71 %	403.61 %	$670,322.07
D20 - Plumbing	41.33 %	34.20 %	$758,006.55
D30 - HVAC	91.56 %	85.24 %	$10,292,654.53
D40 - Fire Protection	92.47 %	177.49 %	$1,552,857.62
D50 - Electrical	110.11 %	51.63 %	$3,294,058.45
E10 - Equipment	47.81 %	0.00 %	$0.00
E20 - Furnishings	72.50 %	0.00 %	$0.00
Totals:	**76.70 %**	**37.31 %**	**$19,954,949.61**

Condition Detail

This section of the report contains results of the Facility Condition Assessment. The building is separated into system components based on UNIFORMAT II classification. The columns in the System Listing table below represent the following:

1. System Code: A code that identifies the system.
2. System Description: A brief description of a system present in the building.
3. Unit Price $: The unit price of the system.
4. UoM: The unit of measure for of the system.
5. Qty: The quantity for the system
6. Life: anticipated service life for thesystem based on Building Owners and Managers Association (BOMA) recommendations.
7. Year Installed: The date of system installation.
8. Calc Next Renewal Year: The date of system expiration based on the life, NR stands for non renewable.
9. Next Renewal Year: The suggested system expiration date by the assessor based on visual inspection.
10. CI: The Condition Index of the system.
11. FCI: The Facility Condition Index of the system.
12. RSL: Remaining Service Life.
13. eCR: eCOMET Condition Rating (not used).
14. Deficiency $: The financial investment to repair/replace system.

System Listing

The System Listing table below lists each of the systems organized by their UNIFORMAT II classification. The assessment team was tasked with recording the most recent replacement year of each system, determining the remaining service life based on the theoretical life, and evaluating the condition to confirm the forecast next replacement year. The system listing is the basis for all data contained in the Building Assessment Report.

Additionally, a condition rating (eCR) based on the following guidelines is provided as observed at the time of the assessment.

- Excellent (E) - No noticeable distress or damage. The entire system is free from observable defect.
- Very Good (VG) - Overall no serviceability reduction for the entire system. No degradation of critical components and minor distress and defect noticeable for some but not non critical components within the system.
- Good (G) - Slight or no serviceability reduction for the entire system. There may be noticeable defects for some non critical components and slight noticeable degradation of the critical components.
- Fair (F) - Overall serviceability is degraded but adequate. There may be moderate deterioration for very few of the critical components and few of the non critical components may have severe degradation.
- Marginal (MA) - Overall serviceability and reliability loss. Most if not all of the non critical components suffer from severe degradation and a few of the critical component may have severe degradation.
- Moderate (MO) - Overall a significant serviceability loss. Most if not all the components have severe degradation with the reminder of the component showing visible distress.
- Very Poor (VP) - Overall the system is barely functional. All of the components are severely degraded.
- Non-Functional (NF) - Overall the system does not function with all the components having no serviceability and suffer from severe degradation.

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$18.40	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$1,997,320
A1030	Slab on Grade	$7.73	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$839,092
A2010	Basement Excavation	$6.55	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$711,003
A2020	Basement Walls	$12.70	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$1,378,585
B1010	Floor Construction	$75.10	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$8,152,105
B1020	Roof Construction	$13.88	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$1,506,674
B2010	Exterior Walls	$36.91	S.F.	108,550	100	1969	2069		54.00 %	7.72 %	54		$309,495.31	$4,006,581
B2020	Exterior Windows	$18.01	S.F.	108,550	40	1969	2009	2050	87.50 %	67.17 %	35		$1,313,258.10	$1,954,986
B2030	Exterior Doors	$1.45	S.F.	108,550	25	1969	1994	2030	60.00 %	0.00 %	15			$157,398
B3010105	Built-Up	$37.76	S.F.	35,000	20	1969	1989	2025	50.00 %	89.73 %	10		$1,185,870.38	$1,321,600
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.		30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.		25				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.	108,550	20	1969	1989	2025	50.00 %	0.00 %	10			$6,513
C1010	Partitions	$17.91	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$1,944,131
C1020	Interior Doors	$3.51	S.F.	108,550	40	1990	2030		37.50 %	128.55 %	15		$489,781.13	$381,011
C1030	Fittings	$3.12	S.F.	108,550	40	2000	2040		62.50 %	21.22 %	25		$71,859.33	$338,676
C2010	Stair Construction	$1.41	S.F.	108,550	100	1969	2069		54.00 %	0.00 %	54			$153,056

Site Assessment Report - B530001;Hackett

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	108,550	10	2007	2017	2027	120.00 %	0.00 %	12			$1,433,946
C3010231	Vinyl Wall Covering	$0.97	S.F.	108,550	15				0.00 %	0.00 %				$105,294
C3010232	Wall Tile	$2.63	S.F.	108,550	30				0.00 %	0.00 %				$285,487
C3020411	Carpet	$7.30	S.F.	1,500	10	2004	2014	2027	120.00 %	153.30 %	12		$16,786.14	$10,950
C3020412	Terrazzo & Tile	$75.52	S.F.	1,200	50	1969	2019	2050	70.00 %	0.00 %	35			$90,624
C3020413	Vinyl Flooring	$9.68	S.F.	76,000	20	1995	2015	2035	100.00 %	0.00 %	20			$735,680
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	30,400	50	1969	2019	2025	20.00 %	0.00 %	10			$29,488
C3030	Ceiling Finishes	$20.97	S.F.	108,550	25	2004	2029	2054	156.00 %	0.00 %	39			$2,276,294
D1010	Elevators and Lifts	$1.53	S.F.	108,550	35	1969	2004	2045	85.71 %	403.61 %	30		$670,322.07	$166,082
D2010	Plumbing Fixtures	$13.52	S.F.	108,550	35	1969	2004	2025	28.57 %	3.10 %	10		$45,475.14	$1,467,596
D2020	Domestic Water Distribution	$1.68	S.F.	108,550	25	1969	1994	2025	40.00 %	104.21 %	10		$190,041.33	$182,364
D2030	Sanitary Waste	$2.90	S.F.	108,550	25	1969	1994	2042	108.00 %	146.43 %	27		$460,969.30	$314,795
D2040	Rain Water Drainage	$2.32	S.F.	108,550	30	1969	1999	2025	33.33 %	24.43 %	10		$61,520.78	$251,836
D3020	Heat Generating Systems	$18.67	S.F.	108,550	25	2003	2028		52.00 %	0.00 %	13			$2,026,629
D3030	Cooling Generating Systems	$24.48	S.F.	108,550	28	1969	1997	2045	107.14 %	59.45 %	30		$1,579,795.33	$2,657,304
D3040	Distribution Systems	$42.99	S.F.	108,550	25	1969	1994	2042	108.00 %	145.04 %	27		$6,768,576.27	$4,666,565
D3050	Terminal & Package Units	$11.60	S.F.	108,550	20	1969	1989	2023	40.00 %	0.00 %	8			$1,259,180
D3060	Controls & Instrumentation	$13.50	S.F.	108,550	20	1969	1989	2037	110.00 %	132.68 %	22		$1,944,282.93	$1,465,425
D4010	Sprinklers	$7.05	S.F.	108,550	35			2052	105.71 %	202.91 %	37		$1,552,857.62	$765,278
D4020	Standpipes	$1.01	S.F.	108,550	35				0.00 %	0.00 %				$109,636
D5010	Electrical Service/Distribution	$9.70	S.F.	108,550	30	1969	1999	2047	106.67 %	96.99 %	32		$1,021,207.87	$1,052,935
D5020	Lighting and Branch Wiring	$34.68	S.F.	108,550	20	1969	1989	2037	110.00 %	40.98 %	22		$1,542,643.98	$3,764,514
D5030	Communications and Security	$12.99	S.F.	108,550	15	1969	1984	2032	113.33 %	35.78 %	17		$504,484.87	$1,410,065
D5090	Other Electrical Systems	$1.41	S.F.	108,550	30	1969	1999	2047	106.67 %	147.48 %	32		$225,721.73	$153,056
E1020	Institutional Equipment	$4.82	S.F.	108,550	35				0.00 %	0.00 %				$523,211
E1090	Other Equipment	$11.10	S.F.	108,550	35	2004	2039		68.57 %	0.00 %	24			$1,204,905
E2010	Fixed Furnishings	$2.13	S.F.	108,550	40	2004	2044		72.50 %	0.00 %	29			$231,212
								Total	**76.70 %**	**37.31 %**			**$19,954,949.61**	**$53,489,082**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

System: C3010 - Wall Finishes — This system contains no images

Note: Paint 100%

System: C3020 - Floor Finishes — This system contains no images

Note: VCT 70%
Carpet 2%
Concrete 27%
Quarry tile 1%

System: C3030 - Ceiling Finishes — This system contains no images

Note: Acoustical tile 60%
GWB 20%
Exposed/ painted 20%

System: D5010 - Electrical Service/Distribution — This system contains no images

Note: Two 75 KVA Transformers.

Renewal Schedule

eCOMET forecasts future Capital Renewal funding needed to address expiring systems based on the Next Renewal year found in the Cost Models. A 3% annual inflation factor is applied to the costs for systems expiring in future years. The table below reflects recommended Capital Renewal funding needs over the next 10 years. Note: Cells with a zero value indicate systems for which renewal is not scheduled in that year.

Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$19,954,950**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,754,601**	**$0**	**$4,818,393**	**$26,527,943**
*** A - Substructure**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A10 - Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1010 - Standard Foundations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A1030 - Slab on Grade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A20 - Basement Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2010 - Basement Excavation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
A2020 - Basement Walls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B - Shell	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B10 - Superstructure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1010 - Floor Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B1020 - Roof Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B20 - Exterior Enclosure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2010 - Exterior Walls	$309,495	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$309,495**
B2020 - Exterior Windows	$1,313,258	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,313,258**
B2030 - Exterior Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B30 - Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010 - Roof Coverings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010105 - Built-Up	$1,185,870	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,953,732	**$3,139,602**
B3010120 - Single Ply Membrane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010130 - Preformed Metal Roofing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3010140 - Shingle & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,628	**$9,628**
C - Interiors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C10 - Interior Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C1010 - Partitions	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

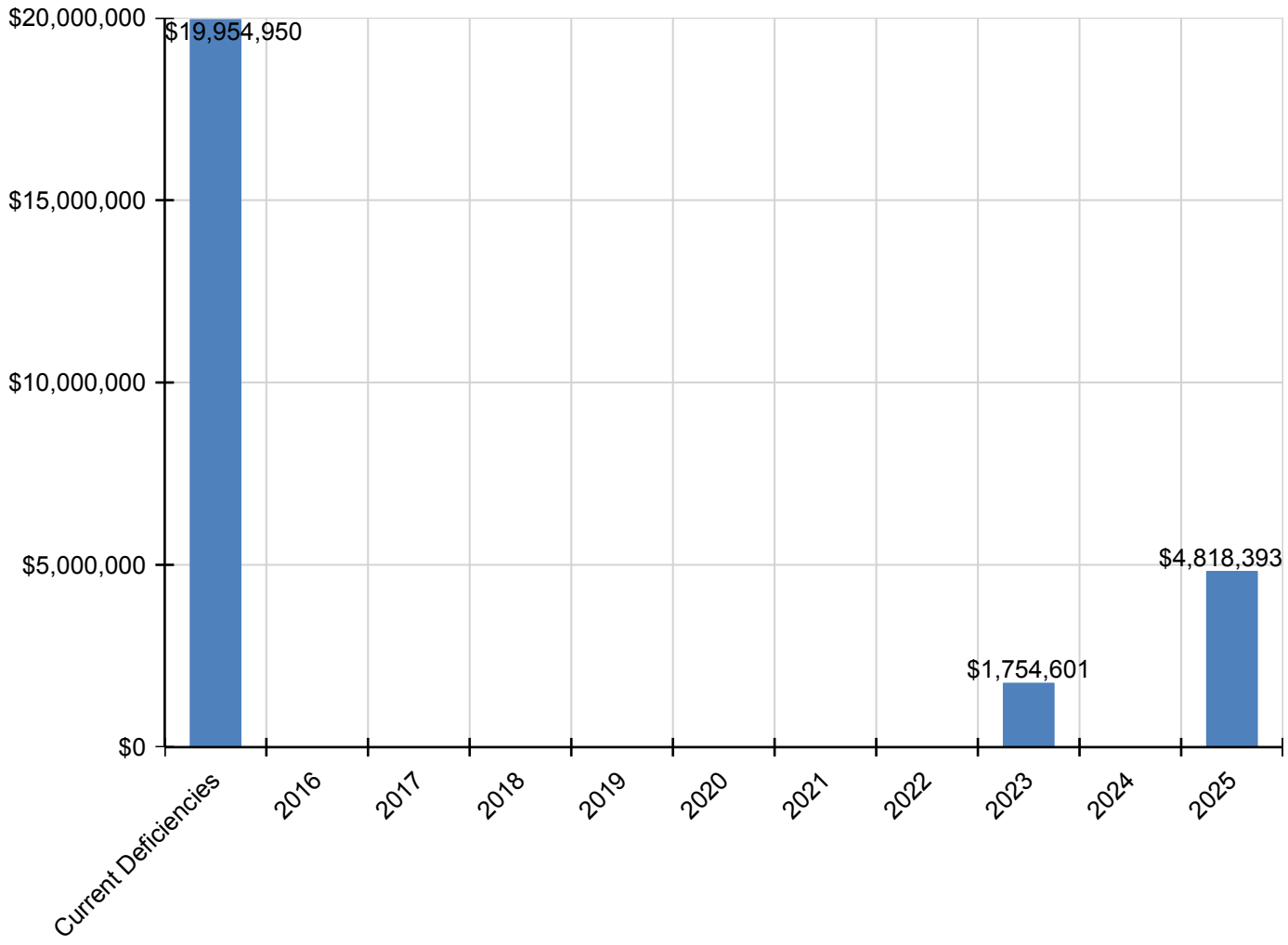
C1020 - Interior Doors	$489,781	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$489,781**
C1030 - Fittings	$71,859	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$71,859**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$16,786	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$16,786**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020415 - Concrete Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$43,593	**$43,593**
C3030 - Ceiling Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$670,322	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$670,322**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$45,475	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,169,559	**$2,215,035**
D2020 - Domestic Water Distribution	$190,041	$0	$0	$0	$0	$0	$0	$0	$0	$0	$269,590	**$459,631**
D2030 - Sanitary Waste	$460,969	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$460,969**
D2040 - Rain Water Drainage	$61,521	$0	$0	$0	$0	$0	$0	$0	$0	$0	$372,292	**$433,812**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3030 - Cooling Generating Systems	$1,579,795	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,579,795**
D3040 - Distribution Systems	$6,768,576	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,768,576**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$1,754,601	$0	$0	**$1,754,601**
D3060 - Controls & Instrumentation	$1,944,283	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,944,283**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,552,858	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,552,858**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$1,021,208	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,021,208**
D5020 - Lighting and Branch Wiring	$1,542,644	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,542,644**
D5030 - Communications and Security	$504,485	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$504,485**
D5090 - Other Electrical Systems	$225,722	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$225,722**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

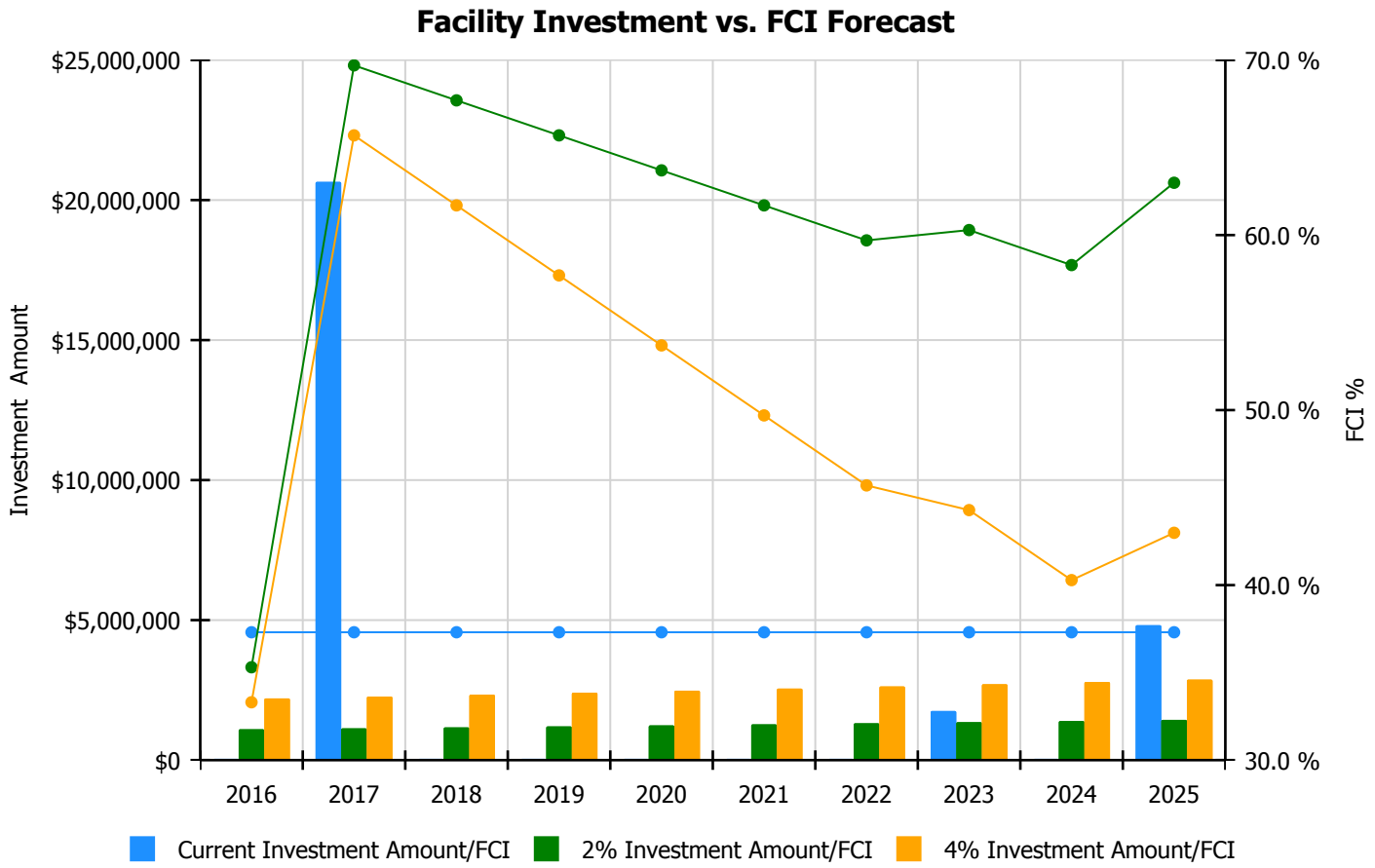
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

The chart below illustrates the effect of various investment levels on the building FCI for the next 10 years. The levels of investment shown below include:

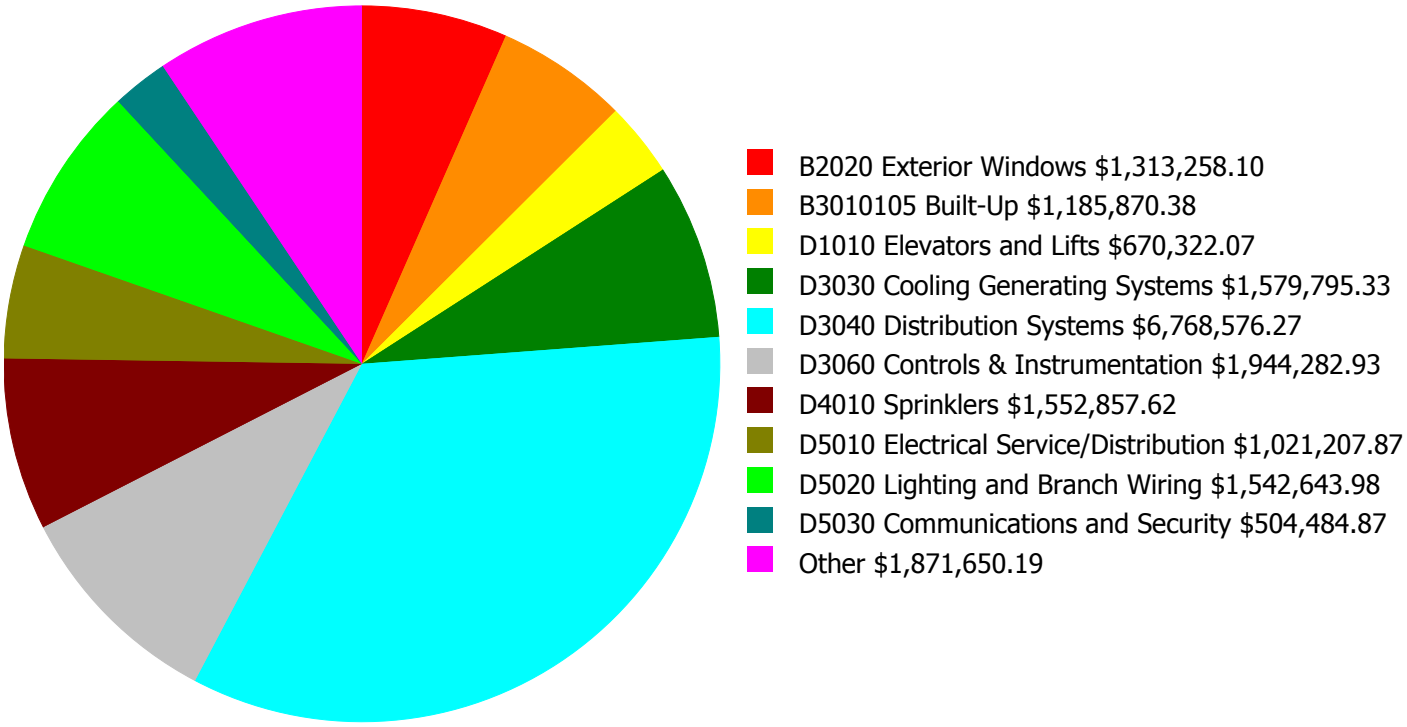
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value of the building, escalated for inflation



Year	Investment Amount Current FCI - 37.31%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$1,101,875.00	35.31 %	$2,203,750.00	33.31 %
2017	$20,649,691	$1,134,931.00	69.70 %	$2,269,863.00	65.70 %
2018	$0	$1,168,979.00	67.70 %	$2,337,959.00	61.70 %
2019	$0	$1,204,049.00	65.70 %	$2,408,097.00	57.70 %
2020	$0	$1,240,170.00	63.70 %	$2,480,340.00	53.70 %
2021	$0	$1,277,375.00	61.70 %	$2,554,750.00	49.70 %
2022	$0	$1,315,696.00	59.70 %	$2,631,393.00	45.70 %
2023	$1,754,601	$1,355,167.00	60.29 %	$2,710,335.00	44.29 %
2024	$0	$1,395,822.00	58.29 %	$2,791,645.00	40.29 %
2025	$4,818,393	$1,437,697.00	62.99 %	$2,875,394.00	42.99 %
Total:	**$27,222,685**	**$12,631,761.00**		**$25,263,526.00**	

Deficiency Summary by System

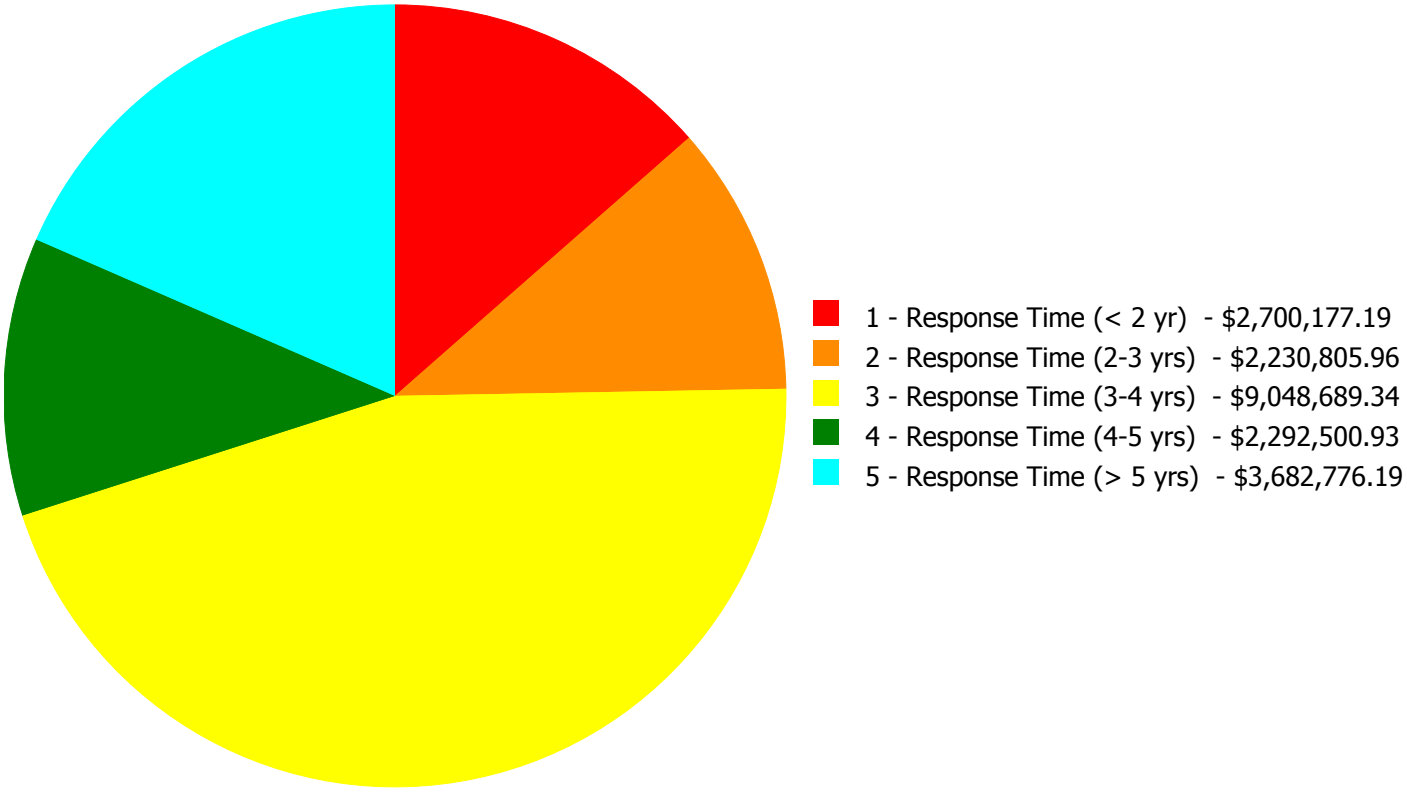
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $19,954,949.61

Deficiency Summary by Priority

The following chart shows the total repair costs broken down by priority. Assessors assigned deficiencies within eCOMET to one of the following priority categories:



Budget Estimate Total: $19,954,949.61

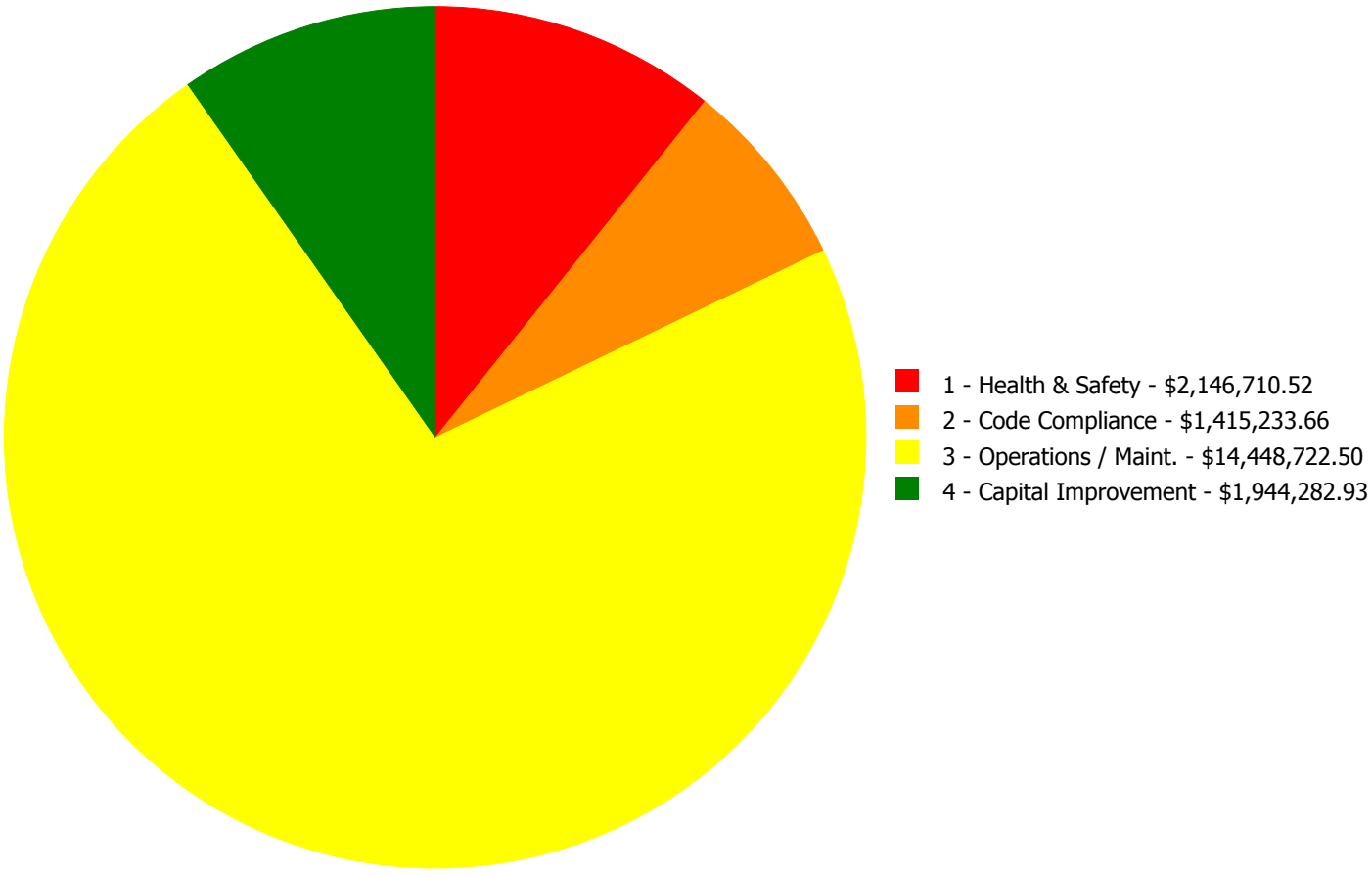
Deficiency By Priority Investment Table

The table below shows the current investment cost grouped by deficiency priority and building system.

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$120,396.08	$0.00	$0.00	$189,099.23	$0.00	$309,495.31
B2020	Exterior Windows	$0.00	$0.00	$0.00	$760,635.22	$552,622.88	$1,313,258.10
B3010105	Built-Up	$0.00	$0.00	$0.00	$0.00	$1,185,870.38	$1,185,870.38
C1020	Interior Doors	$0.00	$0.00	$0.00	$489,781.13	$0.00	$489,781.13
C1030	Fittings	$0.00	$0.00	$0.00	$71,859.33	$0.00	$71,859.33
C3020411	Carpet	$0.00	$0.00	$16,786.14	$0.00	$0.00	$16,786.14
D1010	Elevators and Lifts	$0.00	$0.00	$670,322.07	$0.00	$0.00	$670,322.07
D2010	Plumbing Fixtures	$0.00	$0.00	$45,475.14	$0.00	$0.00	$45,475.14
D2020	Domestic Water Distribution	$0.00	$190,041.33	$0.00	$0.00	$0.00	$190,041.33
D2030	Sanitary Waste	$0.00	$460,969.30	$0.00	$0.00	$0.00	$460,969.30
D2040	Rain Water Drainage	$0.00	$0.00	$0.00	$61,520.78	$0.00	$61,520.78
D3030	Cooling Generating Systems	$0.00	$1,579,795.33	$0.00	$0.00	$0.00	$1,579,795.33
D3040	Distribution Systems	$1,026,923.49	$0.00	$5,741,652.78	$0.00	$0.00	$6,768,576.27
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$1,944,282.93	$1,944,282.93
D4010	Sprinklers	$1,552,857.62	$0.00	$0.00	$0.00	$0.00	$1,552,857.62
D5010	Electrical Service/Distribution	$0.00	$0.00	$622,816.37	$398,391.50	$0.00	$1,021,207.87
D5020	Lighting and Branch Wiring	$0.00	$0.00	$1,542,643.98	$0.00	$0.00	$1,542,643.98
D5030	Communications and Security	$0.00	$0.00	$183,271.13	$321,213.74	$0.00	$504,484.87
D5090	Other Electrical Systems	$0.00	$0.00	$225,721.73	$0.00	$0.00	$225,721.73
	Total:	$2,700,177.19	$2,230,805.96	$9,048,689.34	$2,292,500.93	$3,682,776.19	$19,954,949.61

Deficiency Summary by Category

The following chart shows the total repair costs broken down by deficiency categories. Assessors assigned deficiencies to one of the following categories:



Budget Estimate Total: $19,954,949.61

Deficiency Details by Priority

The deficiency detail notes listed below provide additional information on identified deficiencies found within the facility.

Priority 1 - Response Time (< 2 yr):

System: B2010 - Exterior Walls

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Re-caulk exterior control joints and other caulk joints

Qty: 6,000.00

Unit of Measure: L.F.

Estimate: $120,396.08

Assessor Name: System

Date Created: 09/15/2015

Notes: Repair cracks in panels covering exterior columns

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Perform testing to identify and replace damaged steam and condensate piping.

Qty: 108,550.00

Unit of Measure: S.F.

Estimate: $1,026,923.49

Assessor Name: System

Date Created: 08/07/2015

Notes: Hire a qualified contractor to examine the distribution piping, in service for 45 years and damaged, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D4010 - Sprinklers

Location: Throughout building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Install a fire protection sprinkler system

Qty: 108,550.00

Unit of Measure: S.F.

Estimate: $1,552,857.62

Assessor Name: System

Date Created: 08/07/2015

Notes: Install a fire protection sprinkler system with quick response type heads to reduce insurance costs by providing protection for the property. A fire pump may be required depending on the available city water pressure.

Priority 2 - Response Time (2-3 yrs):

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 2 - Response Time (2-3 yrs)

Correction: Replace domestic water piping (75 KSF)

Qty: 108,550.00

Unit of Measure: S.F.

Estimate: $190,041.33

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace building water distribution system in the boiler room with new distribution and condenser loop pumps, piping, and controls.

System: D2030 - Sanitary Waste

Location: Throughout building

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 2 - Response Time (2-3 yrs)

Correction: Inspect sanitary waste piping and replace damaged sections. (+100KSF)

Qty: 108,550.00

Unit of Measure: S.F.

Estimate: $460,969.30

Assessor Name: System

Date Created: 08/07/2015

Notes: Hire a qualified contractor to perform a detailed examination of the sanitary waste piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3030 - Cooling Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 2 - Response Time (2-3 yrs)

Correction: Install chilled water system with distribution piping and pumps. (+150KSF)

Qty: 108,550.00

Unit of Measure: S.F.

Estimate: $1,579,795.33

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace the existing centrifugal chiller and cooling tower with a new 300 ton packaged air cooled chiller fitted with modern controls. All associated piping and pumping systems should also be replaced.

Priority 3 - Response Time (3-4 yrs):

System: C3020411 - Carpet

Location: Interior/ Library

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Remove and replace carpet

Qty: 1,500.00

Unit of Measure: S.F.

Estimate: $16,786.14

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace existing carpet

System: D1010 - Elevators and Lifts

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 3 - Response Time (3-4 yrs)

Correction: Add interior elevator - 4 floors - adjust the electrical run lengths to hook up the elevator

Qty: 1.00

Unit of Measure: Ea.

Estimate: $670,322.07

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace 2000 lb elevator with ADA compliant 2500 lb elevator

System: D2010 - Plumbing Fixtures

Location: Corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Remove and Replace Water Fountains - without ADA new recessed alcove

Qty: 6.00

Unit of Measure: Ea.

Estimate: $45,475.14

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace the wall hung drinking fountains and integral refrigerated coolers in the corridors and at the restrooms. These units are well beyond their service life and most are NOT accessible type.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace the existing unit ventilators with new units designed to provide adequate ventilation per ASHRAE Std 62 - insert the SF of bldg. in the qty.

Qty: 108,550.00

Unit of Measure: S.F.

Estimate: $4,362,944.71

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace the existing unit ventilators with two pipe units that have integral heat exchangers to introduce outdoor air to the building.

System: D3040 - Distribution Systems

Location: Fan Room 2

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace HVAC unit for Auditorium (200 seat).

Qty: 200.00

Unit of Measure: Seat

Estimate: $333,093.30

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace AHU-3, located in Fan Room 2, which serves the Cafeteria/Auditorium.

System: D3040 - Distribution Systems

Location: Crawl Space

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace indoor AHU, CV, DT (15T)

Qty: 15.00

Unit of Measure: TonAC

Estimate: $281,099.01

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace AHU-2, located in the second floor crawl space, which serves rooms 215-219.

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace HVAC unit for Gymnasium (single station)

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $227,475.37

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace AHU-5, located in the mechanical room behind the gymnasium, which serves the Gymnasium.

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace indoor AHU, CV, DT (15T)

Qty: 10.00

Unit of Measure: TonAC

Estimate: $187,403.32

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace heating and ventilation unit HV-1, located in the mechanical room behind the gymnasium, which serves Room 106.

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace indoor AHU, CV, DT (15T)

Qty: 10.00

Unit of Measure: TonAC

Estimate: $187,403.32

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace heating and ventilation unit HV-2, located in the mechanical room behind the gymnasium, which serves Room 107.

System: D3040 - Distribution Systems

Location: Fan Room 1

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace HVAC unit for Cafeteria (850)

Qty: 596.00

Unit of Measure: Student

Estimate: $162,233.75

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace AHU-6, located in Fan Room 1, which serves the Kitchen.

System: D5010 - Electrical Service/Distribution

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace Panelboard

Qty: 1.00

Unit of Measure: Ea.

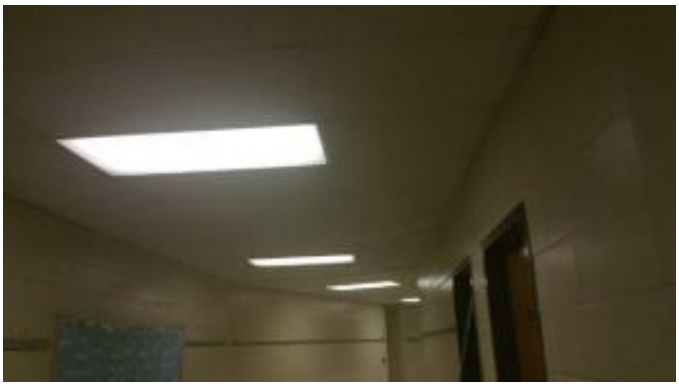
Estimate: $622,816.37

Assessor Name: System

Date Created: 08/10/2015

Notes: Install 8 120V/208V panels to replace the existing panels (two in each floor). Also replace the power feeders, conduit wire to the four panels from the new 120V/208V three phase main Panel Board.

System: D5020 - Lighting and Branch Wiring



Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace Lighting Fixtures (SF)

Qty: 0.00

Unit of Measure: S.F.

Estimate: $1,422,458.98

Assessor Name: System

Date Created: 08/10/2015

Notes: Install new lighting fixtures for all the class rooms, and other rooms. New fluorescent lighting (T-5) will be adequate, however, using the state-of-the-art LED lighting will improve the energy usage.

System: D5020 - Lighting and Branch Wiring

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace Wiring Devices (SF) - surface mounted conduit and boxes

Qty: 0.00

Unit of Measure: S.F.

Estimate: $120,185.00

Assessor Name: System

Date Created: 08/10/2015

Notes: Install two receptacles in all of class rooms and other purpose rooms. Add a wire-mold system with receptacles on every 3' for the computer room.

System: D5030 - Communications and Security

Location: Throughout the building

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 3 - Response Time (3-4 yrs)

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

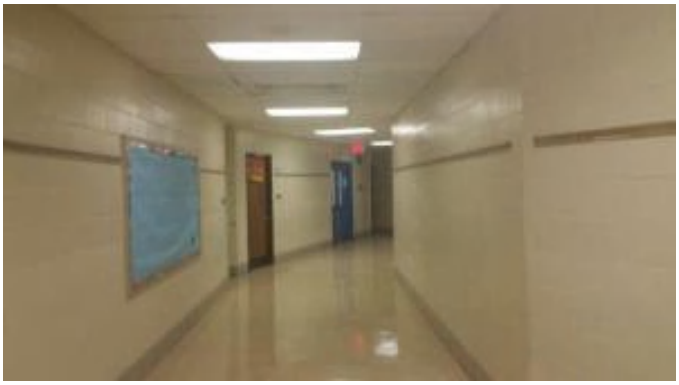
Estimate: $183,271.13

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a new Automated Fire Alarm System to be located in the new Electrical Room.

System: D5090 - Other Electrical Systems



Location: throughout the building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 3 - Response Time (3-4 yrs)

Correction: Add Emergency/Exit Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $132,883.60

Assessor Name: System

Date Created: 08/10/2015

Notes: Install new battery packed emergency lights and exit lights in all the hallways, stairways, and in each class room or other purpose rooms.

System: D5090 - Other Electrical Systems

Location: Electrical room in the basement.

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 3 - Response Time (3-4 yrs)

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $92,838.13

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a new emergency power system (100 KVA generator).

Priority 4 - Response Time (4-5 yrs):

System: B2010 - Exterior Walls

Location: Exterior

Distress: Appearance

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove graffiti - power wash and paint

Qty: 15,000.00

Unit of Measure: S.F.

Estimate: $189,099.23

Assessor Name: System

Date Created: 09/15/2015

Notes: Provide new anti-graffiti coating first floor ext. walls (remove old coating)

System: B2020 - Exterior Windows

Location: Exterior/ walls

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove and replace aluminum windows - pick the appropriate size and style and insert the number of units

Qty: 135.00

Unit of Measure: Ea.

Estimate: $760,635.22

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace all windows within next 4 to 5 years

System: C1020 - Interior Doors

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace door knobs with compliant lever type

Qty: 880.00

Unit of Measure: Ea.

Estimate: $489,781.13

Assessor Name: System

Date Created: 09/15/2015

Notes: Replace interior doors hardware for ADA accessibility

System: C1030 - Fittings

Location: Interiors

Distress: Accessibility

Category: 2 - Code Compliance

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove and replace toilet partitions

Qty: 28.00

Unit of Measure: Ea.

Estimate: $71,859.33

Assessor Name: System

Date Created: 09/16/2015

Notes: Replace non-ADA compliant toilet partitions; reconfigure remaining toilet partitions

System: D2040 - Rain Water Drainage

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace roof drains - per drain including piping

Qty: 1.00

Unit of Measure: Ea.

Estimate: $61,520.78

Assessor Name: System

Date Created: 08/07/2015

Notes: Hire a qualified contractor to perform a detailed examination of the rain water drainage piping using visual inspection and video cameras to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D5010 - Electrical Service/Distribution

Location: Electrical room in the basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Replace Electrical DIstribution System (U1)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $398,391.50

Assessor Name: System

Date Created: 08/10/2015

Notes: • Upgrade the existing electrical service to a new service with a new 1000 KVA dry-type Transformer, 2.4KV to 480V/277V, 3Ph. Install a new 1200A, 480V, 3 Ph. Switchboard. The new Main switchboard shall be sized to handle the existing loads plus any new HVAC loads. Install a new 500 KVA step down transformer from 480V to 120V/208V, and a main 120V/208V Panel Board for all the lighting/receptacle loads.

System: D5030 - Communications and Security

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Add/Replace Clock System or Components

Qty: 0.00

Unit of Measure: Ea.

Estimate: $313,394.64

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a new clock system.

System: D5030 - Communications and Security

This deficiency has no image.

Location: throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $7,819.10

Assessor Name: System

Date Created: 08/10/2015

Notes: Install a new Security system with cameras. Note: There is no picture shown since there is no security system or CCTV presently at the school.

Priority 5 - Response Time (> 5 yrs):

System: B2020 - Exterior Windows

Location: Exterior
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Replace security screens
Qty: 3,600.00
Unit of Measure: S.F.
Estimate: $552,622.88
Assessor Name: System
Date Created: 09/15/2015

Notes: Replace security screens on 1st and 2nd floor windows

System: B3010105 - Built-Up

Location: Exterior/ roof
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Remove and Replace Built Up Roof
Qty: 35,000.00
Unit of Measure: S.F.
Estimate: $1,185,870.38
Assessor Name: System
Date Created: 09/15/2015

Notes: Install all new roofing system including insulation within next 5 to 10 years; tear-down existing roofing; install flashing, and counter flashing

System: D3060 - Controls & Instrumentation

Location: Throughout building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 108,550.00

Unit of Measure: S.F.

Estimate: $1,944,282.93

Assessor Name: System

Date Created: 08/07/2015

Notes: Replace the pneumatic controls for the HVAC systems with modern DDC modules, valves and actuators to improve reliability and energy efficiency. Provide a new building automation system (BAS) with communication interface to the preferred system in use throughout the District.

Equipment Inventory

The following table represents the inventory details of the inventory found in the building, which fall under the following subsystems:

Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, packaged water tube, gas fired, steam or hot water, gross output, 1920 MBH	2.00	Ea.	Boiler Room	Gasmaster	GMI 2ML	187.03		25	2003	2028	$41,552.40	$91,415.28
D3020 Heat Generating Systems	Boiler, packaged water tube, gas fired, steam or hot water, gross output, 1920 MBH	2.00	Ea.	Boiler Room	Gasmaster	GMI 2ML	187.02		25	2003	2028	$41,552.40	$91,415.28
D3030 Cooling Generating Systems	Cooling tower, packaged unit, galvanized steel, blow through, centrifugal type, 300 ton, includes standard controls, excludes pumps and piping	1.00	Ea.	Boiler Room	Evapco	LSTA 8-121	983024		28	1969	1997	$48,387.90	$53,226.69
D3030 Cooling Generating Systems	Water chiller, centrifugal liquid chiller, packaged unit, water cooled, 300 ton, includes standard controls, excludes water tower	1.00	Ea.	Boiler Room	York	YT A2 A1B1-CFD			28	1969	1997	$126,852.00	$139,537.20
D5010 Electrical Service/Distribution	Panelboard, 4 wire w/conductor & conduit, NQOD, 120/208 V, 400 A, 5 stories, 50' horizontal	1.00	Ea.	Electrical Room					30	1969	2017	$20,524.05	$22,576.46
D5010 Electrical Service/Distribution	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 1600 A	1.00	Ea.	Electrical Room					20	1969	2047	$40,458.15	$44,503.97
												Total:	**$442,674.88**

Executive Summary

Building condition is evaluated based on the functional systems and elements of a building and organized according to the UNIFORMAT II Elemental Classification. The grouping of these systems and elements and applying a current replacement value to them develops a representative building cost model. Cost Models are developed for similar building types and functions. Systems and their elements are evaluated based on their current replacement values, life cycles, installation dates and next renewal dates. Systems and their elements that are within their useful lives are further evaluated to identify current deficient conditions that may have a significant impact on a system's or element's remaining service life, and to determine if they are beyond their predicted expected life. The system's or element's current replacement value is based on RS Means Commercial Cost Data.

Following are the cost model's system details for this facility. The Replacement Value is the amount needed to replace the property of the same present value. The Current Repair Amount, also known as Condition Needs, represents the budgeted contractor installed costs plus owner's soft costs for the repair, replacement or renewal for a component or system level deficiency. It excludes contributing costs for other components or systems that might also be associated with the corrective actions due to packaging the work. Facility Condition Index (FCI) FCI is an industry-standard measurement of facility condition calculated as the ratio of the costs to correct a facility's deficiencies to the facility's Current Replacement Value. It ranges from 0% (new) to 100% (very poor). Condition Index (CI) is calculated as the sum of a renewable system's Remaining Service Life (RSL) divided by the sum of a system's Replacement Value (both values exclude soft-cost to simplify calculation updates) expressed as a percentage ranging from 100% (new) to 0% (expired).

Function:	
Gross Area (SF):	75,000
Year Built:	1969
Last Renovation:	
Replacement Value:	$1,439,850
Repair Cost:	$934,885.27
Total FCI:	64.93 %
Total RSLI:	58.56 %

Description:

Attributes:

General Attributes:

Bldg ID:	S530001	Site ID:	S530001

Condition Summary

The Table below shows the CI and FCI for each major building system shown at the UNIFORMAT classification Level II. Note that Systems with lower FCIs require less investment than systems with higher FCIs.

UNIFORMAT Classification	RSLI %	FCI %	Current Repair Cost
G20 - Site Improvements	75.71 %	83.95 %	$934,885.27
G40 - Site Electrical Utilities	0.00 %	0.00 %	$0.00
Totals:	**58.56 %**	**64.93 %**	**$934,885.27**

Condition Detail

This section of the report contains results of the Facility Condition Assessment. The building is separated into system components based on UNIFORMAT II classification. The columns in the System Listing table below represent the following:

1. System Code: A code that identifies the system.
2. System Description: A brief description of a system present in the building.
3. Unit Price $: The unit price of the system.
4. UoM: The unit of measure for of the system.
5. Qty: The quantity for the system
6. Life: anticipated service life for thesystem based on Building Owners and Managers Association (BOMA) recommendations.
7. Year Installed: The date of system installation.
8. Calc Next Renewal Year: The date of system expiration based on the life, NR stands for non renewable.
9. Next Renewal Year: The suggested system expiration date by the assessor based on visual inspection.
10. CI: The Condition Index of the system.
11. FCI: The Facility Condition Index of the system.
12. RSL: Remaining Service Life.
13. eCR: eCOMET Condition Rating (not used).
14. Deficiency $: The financial investment to repair/replace system.

System Listing

The System Listing table below lists each of the systems organized by their UNIFORMAT II classification. The assessment team was tasked with recording the most recent replacement year of each system, determining the remaining service life based on the theoretical life, and evaluating the condition to confirm the forecast next replacement year. The system listing is the basis for all data contained in the Building Assessment Report.

Additionally, a condition rating (eCR) based on the following guidelines is provided as observed at the time of the assessment.

- Excellent (E) - No noticeable distress or damage. The entire system is free from observable defect.
- Very Good (VG) - Overall no serviceability reduction for the entire system. No degradation of critical components and minor distress and defect noticeable for some but not non critical components within the system.
- Good (G) - Slight or no serviceability reduction for the entire system. There may be noticeable defects for some non critical components and slight noticeable degradation of the critical components.
- Fair (F) - Overall serviceability is degraded but adequate. There may be moderate deterioration for very few of the critical components and few of the non critical components may have severe degradation.
- Marginal (MA) - Overall serviceability and reliability loss. Most if not all of the non critical components suffer from severe degradation and a few of the critical component may have severe degradation.
- Moderate (MO) - Overall a significant serviceability loss. Most if not all the components have severe degradation with the reminder of the component showing visible distress.
- Very Poor (VP) - Overall the system is barely functional. All of the components are severely degraded.
- Non-Functional (NF) - Overall the system does not function with all the components having no serviceability and suffer from severe degradation.

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$7.65	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$11.52	S.F.	65,000	40	1967	2007	2047	80.00 %	124.85 %	32		$934,885.27	$748,800
G2040	Site Development	$4.36	S.F.	75,000	25	2004	2029	2030	60.00 %	0.00 %	15			$327,000
G2050	Landscaping & Irrigation	$3.78	S.F.	10,000	15	2004	2019	2034	126.67 %	0.00 %	19			$37,800
G4020	Site Lighting	$3.58	S.F.	75,000	30				0.00 %	0.00 %				$268,500
G4030	Site Communications & Security	$0.77	S.F.	75,000	30				0.00 %	0.00 %				$57,750
								Total	**58.56 %**	**64.93 %**			**$934,885.27**	**$1,439,850**

System Notes

The facility description in the site executive summary contains an overview of each system. The notes listed below provide additional information on select systems found within the facility.

No data found for this asset

Renewal Schedule

eCOMET forecasts future Capital Renewal funding needed to address expiring systems based on the Next Renewal year found in the Cost Models. A 3% annual inflation factor is applied to the costs for systems expiring in future years. The table below reflects recommended Capital Renewal funding needs over the next 10 years. Note: Cells with a zero value indicate systems for which renewal is not scheduled in that year.

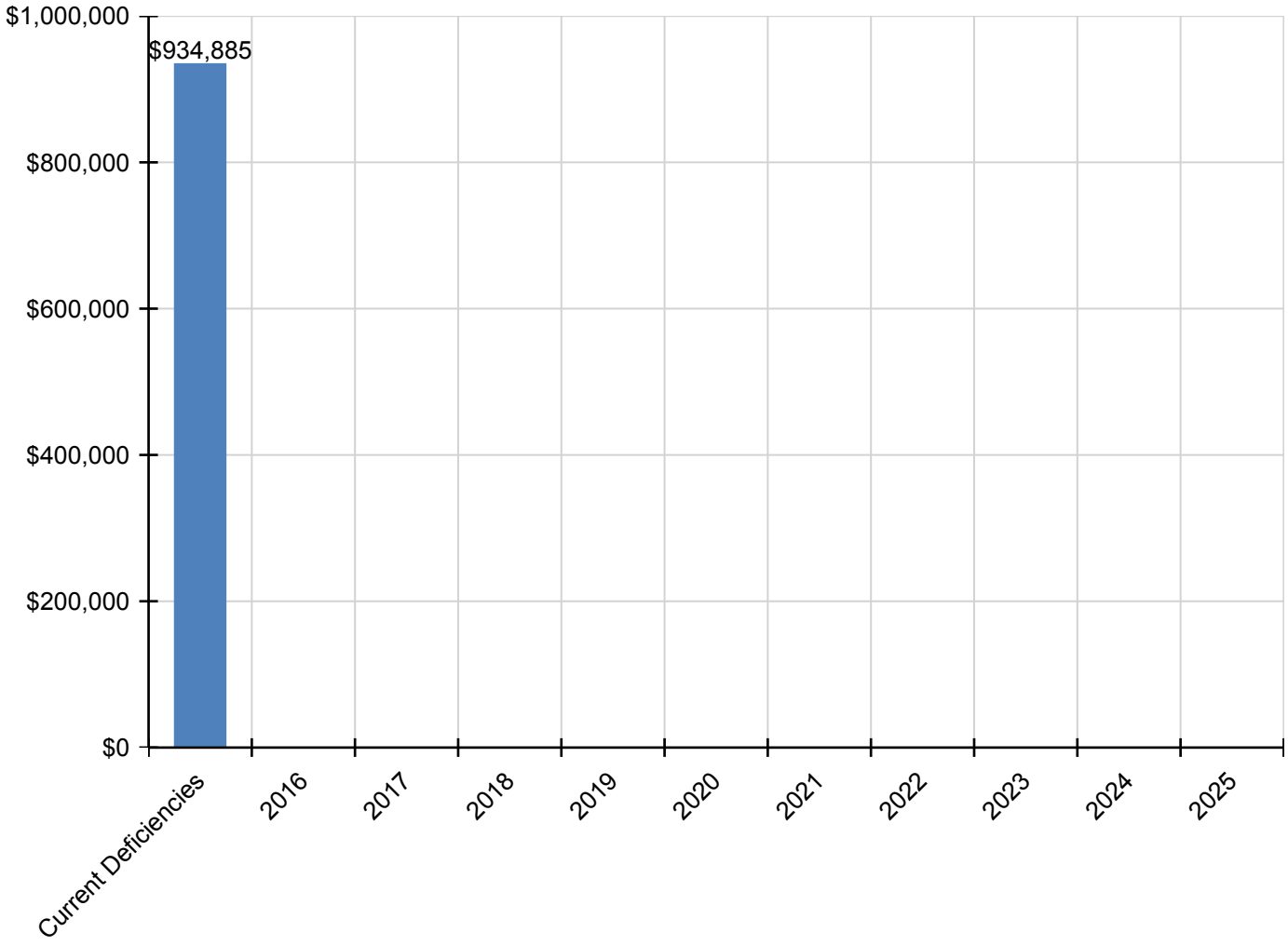
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$934,885**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$934,885**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$934,885	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$934,885**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

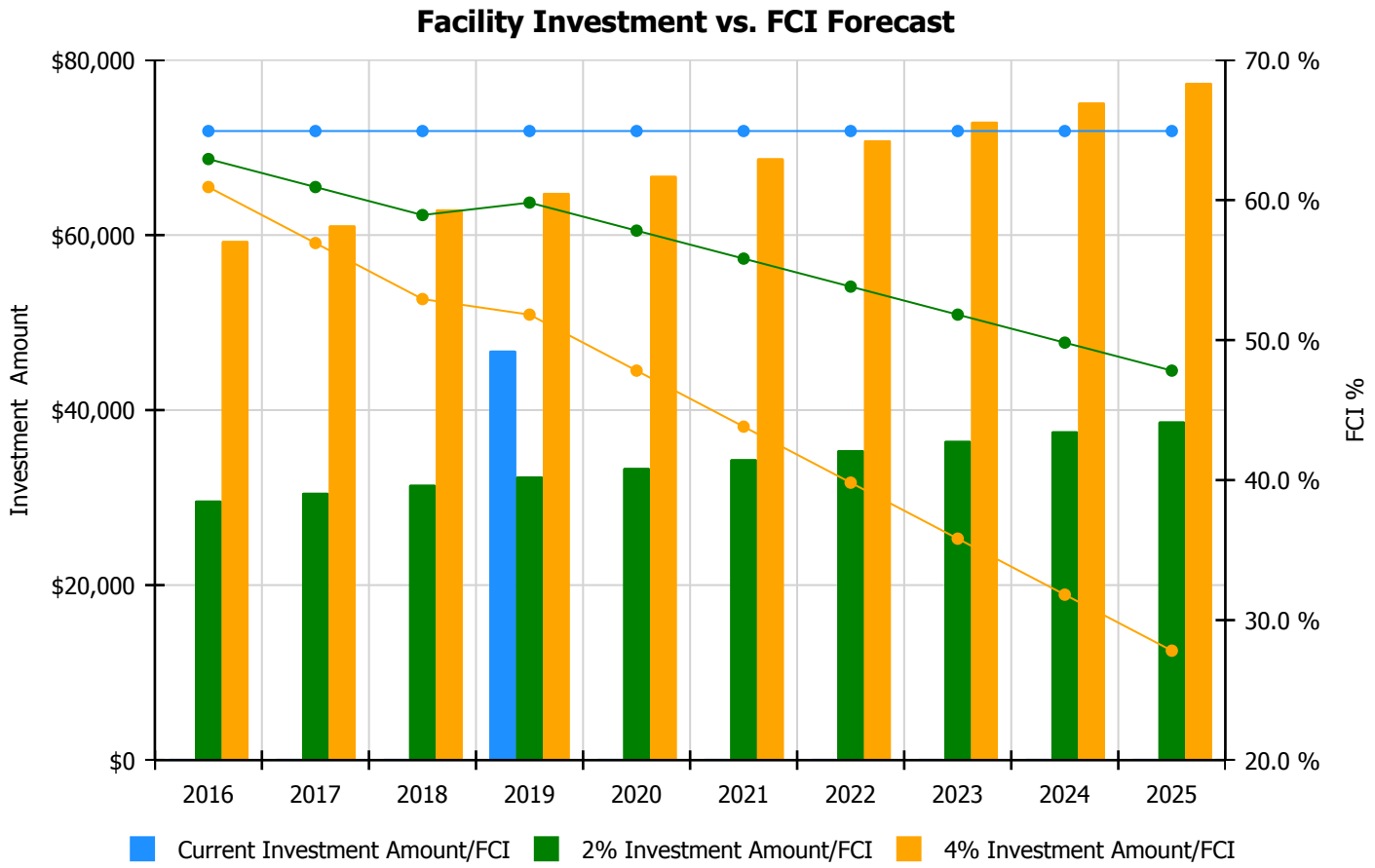
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

The chart below illustrates the effect of various investment levels on the building FCI for the next 10 years. The levels of investment shown below include:

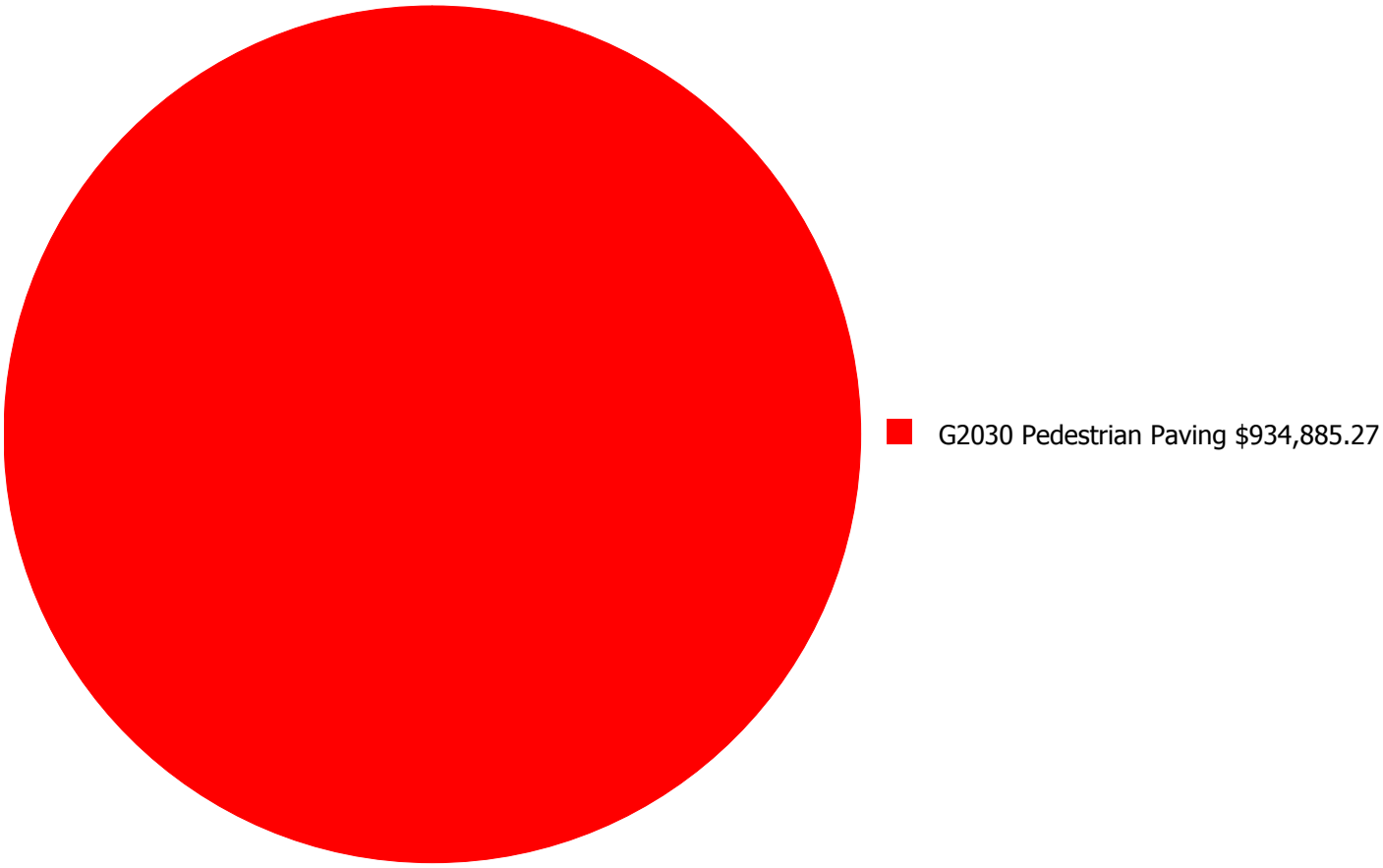
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value of the building, escalated for inflation



Year	Investment Amount Current FCI - 64.93%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$29,661.00	62.93 %	$59,322.00	60.93 %
2017	$0	$30,551.00	60.93 %	$61,101.00	56.93 %
2018	$0	$31,467.00	58.93 %	$62,935.00	52.93 %
2019	$46,799	$32,411.00	59.82 %	$64,823.00	51.82 %
2020	$0	$33,384.00	57.82 %	$66,767.00	47.82 %
2021	$0	$34,385.00	55.82 %	$68,770.00	43.82 %
2022	$0	$35,417.00	53.82 %	$70,833.00	39.82 %
2023	$0	$36,479.00	51.82 %	$72,958.00	35.82 %
2024	$0	$37,574.00	49.82 %	$75,147.00	31.82 %
2025	$0	$38,701.00	47.82 %	$77,402.00	27.82 %
Total:	**$46,799**	**$340,030.00**		**$680,058.00**	

Deficiency Summary by System

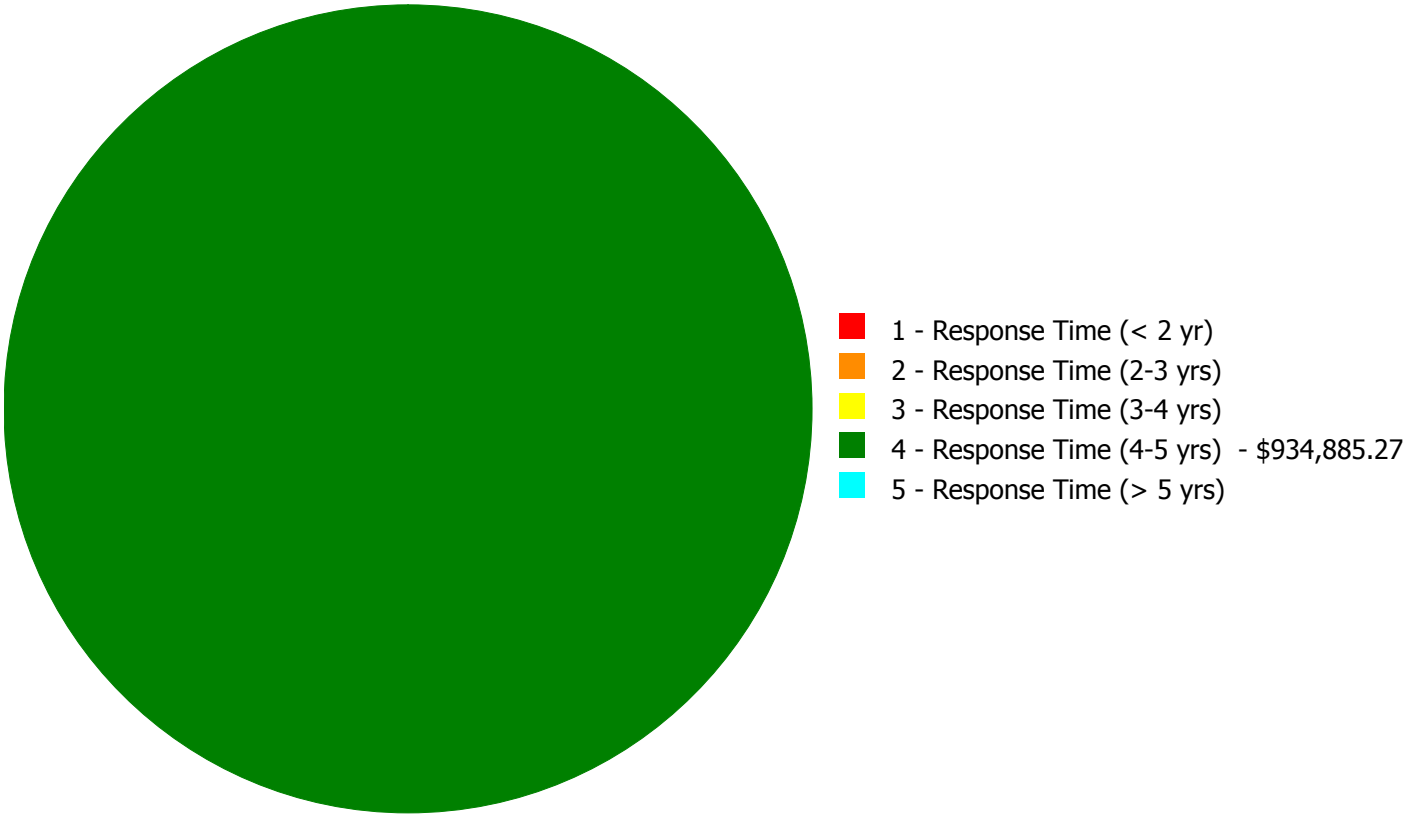
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart lists all current deficiencies associated with this facility.



Budget Estimate Total: $934,885.27

Deficiency Summary by Priority

The following chart shows the total repair costs broken down by priority. Assessors assigned deficiencies within eCOMET to one of the following priority categories:



Budget Estimate Total: $934,885.27

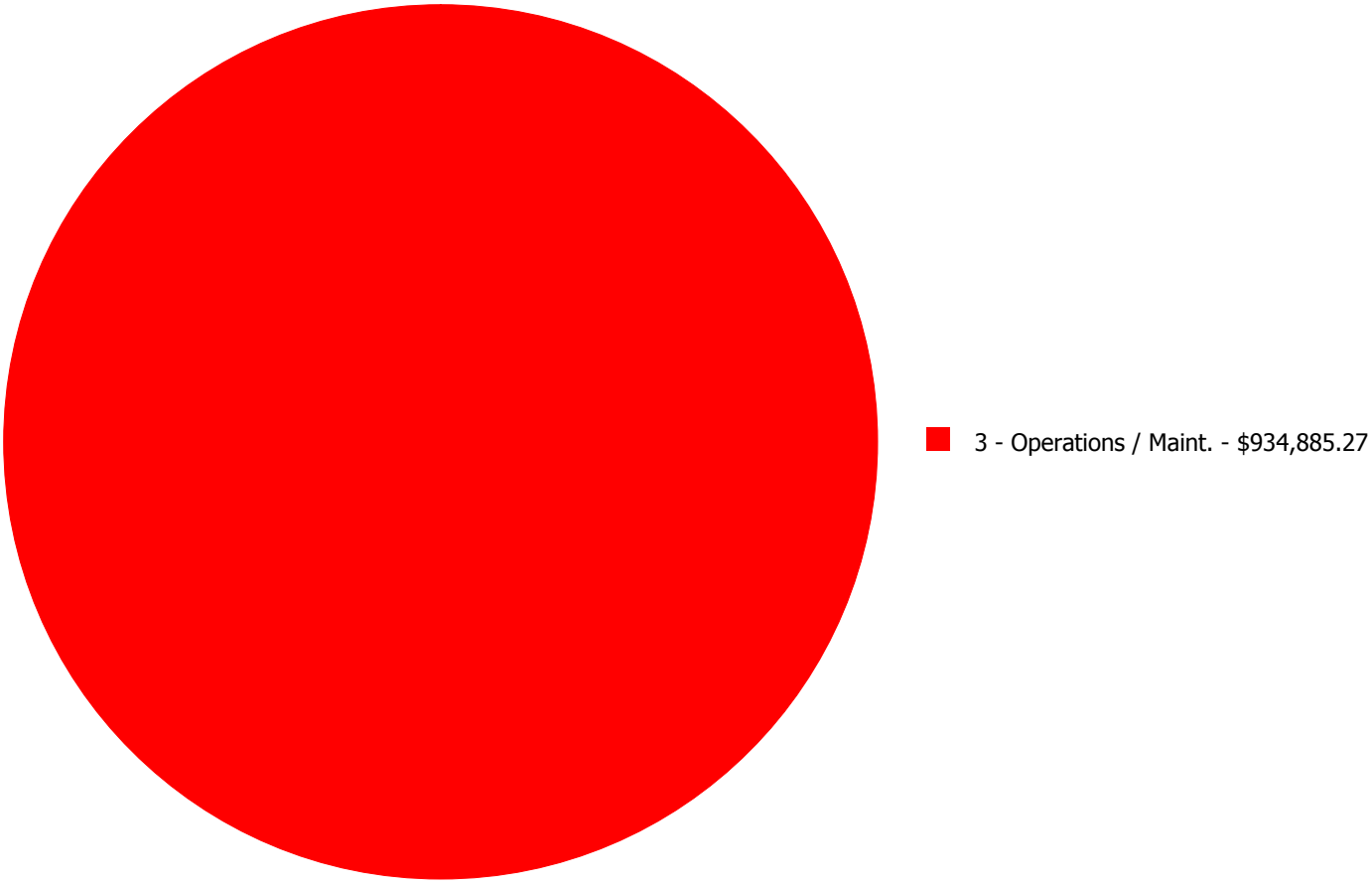
Deficiency By Priority Investment Table

The table below shows the current investment cost grouped by deficiency priority and building system.

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	$0.00	$0.00	$0.00	$934,885.27	$0.00	$934,885.27
	Total:	$0.00	$0.00	$0.00	$934,885.27	$0.00	$934,885.27

Deficiency Summary by Category

The following chart shows the total repair costs broken down by deficiency categories. Assessors assigned deficiencies to one of the following categories:



Budget Estimate Total: $934,885.27

Deficiency Details by Priority

The deficiency detail notes listed below provide additional information on identified deficiencies found within the facility.

Priority 4 - Response Time (4-5 yrs):

System: G2030 - Pedestrian Paving

Location: Grounds/ site

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 4 - Response Time (4-5 yrs)

Correction: Remove and replace concrete sidewalk or concrete paving - 4" concrete thickness

Qty: 65,000.00

Unit of Measure: S.F.

Estimate: $934,885.27

Assessor Name: Tom Moe

Date Created: 09/15/2015

Notes: Resurface playground paving

Equipment Inventory

The following table represents the inventory details of the inventory found in the building, which fall under the following subsystems:

No data found for this asset

Glossary

ABMA	American Boiler Manufacturers Association http://www.abma.com/
ACEEE	American Council for an Energy-Efficient Economy
ACGIH	American Council of Governmental and Industrial Hygienists
AEE	Association of Energy Engineers
AFD	Adjustable Frequency Drive
AFTC	After Tax Cash Flow
AGA	American Gas Association
AHU	Air Handling Unit
Amp	Ampere
ANSI	American National Standards Institute
ARI	Air Conditioning and Refrigeration Institute
ASD	Adjustable Speed Drive
ASHRAE	American Society of Heating Refrigerating and Air-Conditioning Engineers Inc.
ASME	American Society of Mechanical Engineers
Assessment	Visual survey of a facility to determine its condition. It involves looking at the age of systems reviewing information from local sources and visual evidence of potential problems to assign a condition rating. It does not include destructive testing of materials or testing of systems or equipment for functionality.
ATS	After Tax Savings
AW	Annual worth
BACNET	Building Automation Control Network
BAS	Building Automation System
BCR	Benefit Cost Ratio
BEP	Business Energy Professional (AEE)
BF	Ballast Factor
BHP	Boiler Horsepower (boilers)
BHP	Brake Horsepower (motors)
BLCC	Building Life Cycle Cost analysis program (FEMP)
BOCA	Building Officials and Code Administrators
BTCF	Before Tax Cash Flow

BTS	Before Tax Savings
Btu	British thermal unit
Building Addition	An area space or component of a building added to a building after the original building's year built date.
CAA	Clean Air Act
CAAA-90	Clean Air Act Amendments of 1990
CABO	Council of American Building Officials
CAC	Conventional Air Conditioning
CADDET	Center for the Analysis and Dissemination of Demonstrated Energy Technologies
Calculated Next Renewal	The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system.
Capital Renewal	Capital renewal is condition work (excluding suitability and energy audit work) that includes the replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget. Calculated next renewal The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system. Next renewal The assessor adjusted expected useful life of a system or element based on on-site inspection.
CDD	Cooling Degree Days
CDGP	Certified Distributed Generation Professional
CEC	California Energy Commission
CEM	Certified Energy Manager
CEP	Certified Energy Procurement Professional
CFC	Chlorofluorocarbon
CFD	Cash Flow Diagram
CFL	Compact Fluorescent Light
CFM cfm	Cubic Feet per Minute
CHP	Combined Heat and Power (a.k.a. cogeneration)
CHW	Chilled Water
Condition	Condition refers to the state of physical fitness or readiness of a facility system or system element for its intended use.
COP	Coefficient of Performance
Cp	Heat Capacity of Material
CPUC	California Public Utility Commission
CRI	Color Rendering Index
CRT	Cathode Ray Tube VDT HMI

CTC	Competitive Transition Charge
Cu	Coefficient of Utilization
Current Replacement Value (CRV)	CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction standards.
Cv	Value Coefficient
CWS	Chilled Water System
D d	Distance (usually feet)
DB	Dry Bulb
DCV	Demand Control Ventilation
DD	Degree Day
DDB	Double Declining Balance
DDC	Direct Digital Controls
Deferred maintenance	Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.
Deficiency	A deficiency is a repair item that is damaged missing inadequate or insufficient for an intended purpose.
Delta	Difference
Delta P	Pressure Difference
Delta T	Temperature Difference
DG	Distributed Generation
DOE	Department of Energy
DP	Dew Point
DR	Demand Response
DX	Direct Expansion Air Conditioner
EA	Energy Audit
EBITDA	Earnings before Interest Taxes Depreciation and Amortization
ECI	Energy Cost Index
ECM	Energy Conservation Measure
ECO	Energy Conservation Opportunity
ECPA	Energy Conservation and Production Act
ECR	Energy Conservation Recommendation
ECS	Energy Control System

EER	Energy Efficiency Ratio
EERE	Energy Efficiency and Renewable Energy division of US DOE
EIA	Energy Information Agency
EIS	Energy Information System
EMCS	Energy Management Computer System
EMO	Energy Management Opportunity
EMP	Energy Management Project
EMR	Energy Management Recommendation
EMS	Energy Management System
Energy Utilization Index (EUI)	EUI is the measure of total energy consumed in the cooling or heating of a building in a period expressed as British thermal unit (BTU) per (cooled or heated) gross square foot.
EO	Executive Order
EPA	Environmental Protection Agency
EPACT	Energy Policy Act of 1992
EPCA	Energy Production and Conservation Act of 1975
EPRI	Electric Power Research Institute
EREN	Efficiency and Renewable Energy (Division of USDOE)
ERV	Energy Recovery Ventilator
ESCO	Energy Service Company
ESPC	Energy Savings Performance Contract
EUI	Energy Use Index
EWG	Exempt Wholesale Generators
Extended Facility Condition Index (EFCI)	EFCI is calculated as the condition needs for the current year plus facility system renewal needs going out to a set time in the future divided by Current Replacement Value.
f	Frequency
F	Fahrenheit
Facility	A facility refers to site(s) building(s) or building addition(s) or combinations thereof that provide a particular service.
Facility Condition Assessment (FCA)	FCA is a process for evaluating the condition of buildings and facilities for programming and budgetary purposes through an on site inspection and evaluation process.
Facility Condition Index (FCI)	FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value of the facilities. The higher the FCI the poorer the condition of a facility. After an FCI is established for all buildings within a portfolio a building's condition can be ranked relative to other buildings. The FCI may also represent the condition of a portfolio based on the cumulative FCIs of the portfolio's facilities.

FC	Footcandle
FCA	Fuel Cost Adjustment
FEMIA	Federal Energy Management Improvement Act of 1988
FEMP	Federal Energy Management Program
FERC	Federal Energy Regulatory Commission
FESR	Fuel Energy Savings Ratio
FLA	Full Load Amps
FLF	Facility Load Factor (usually monthly)
FLRPM	Full Load Revolutions per Minute
FMS	Facility Management System
FPM fpm	Feet per Minute (velocity)
FSEC	Florida Solar Energy Center
Ft	Foot
GPM gpm	Gallons per Minute
GRI	Gas Research Institute
Gross Square Feet (GSF)	The size of the enclosed floor space of a building in square feet measured to the outside face of the enclosing wall.
GUI	Graphical User Interface
H h	Enthalpy Btu/lb
HCFC	Hydrochlorofluorocarbons
HDD	Heating Degree days
HFC	Hydrofluorocarbons
HHV	Higher Heating Value
HID	High Intensity Discharge (lamp)
HMI	Human Machine Interface
HMMI	Human Man Machine Interface
HO	High Output (lamp)
HP Hp hp	Horsepower
HPS	High Pressure Sodium (lamp)
HR	Humidity Ratio
Hr hr	Hour

HRU	Heat Recovery Unit
HVAC	Heating Ventilation and Air-Conditioning
Hz	Hertz
I	Intensity (lumen output of lamp)
I i	Interest rate or Discount rate
IAQ	Indoor Air Quality
ICA	International Cogeneration Alliance
ICBO	International Conference of Buildings Officials
ICC	International Code Council
ICP	Institutional Conservation Program
IECC	International Energy Conservation Code
IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
Install year	The year a building or system was built or the most recent major renovation date (where a minimum of 70 of the system?s Current Replacement Value (CRV) was replaced).
IRP	Integrated Resource Planning
IRR	Internal Rate of Return
ISO	Independent System Operator
ITA	Independent Tariff Administrator
k	Kilo multiple of thousands in SI system
K	Kelvins (color temperature of lamp)
K k	Thermal Conductivity of Material
KVA	Kilovolt Ampere
KVAR	Kilovolt Ampere Reactive
kW	kiloWatt
kWh	kiloWatt hour
L	Length (usually feet)
LCC	Life Cycle Costing
LDC	Local Distribution Company
LEED	Leadership in Energy and Environmental Design
LEED EB	LEED for Existing Buildings

LEED NC	LEED for new construction
LF	Load Factor
LHV	Lower Heating Value
Life cycle	The period of time that a building or site system or element can be expected to adequately serve its intended function.
LPS	Low Pressure Sodium (lamp)
Lu	Lumen Output of a Lamp or Fixture
M	Mega multiple of millions in SI system
M&V	Measurement and Verification
MACRS	Modified Accelerated Cost Recovery System
MARR	Minimum Attractive Rate of Return
Mbtu	Thousand Btu
MCF	Thousand Cubic Feet (usually of gas)
MEC	Model Energy Code
Mm	Multiple of Thousands in I/P System
MMBtu	Million Btu
MMCS	Maintenance Management Computer System
MMI	Man Machine Interface
MMS	Maintenance Management System
MSE 2000	Management System for Energy 2000 (ANSI Georgia Tech Univ)
MW	MegaWatt
MWH MWh	MegaWatt hour
NAAQS	National Ambient Air Quality Standards
NAESCO	National Association of Energy Service Companies
NAIMA	North American Insulation Manufacturers Association
NEA	National Energy Act of 1978
NECPA	National Energy Conservation Policy Act
NEMA	National Electrical Manufacturer's Association
NERC	North American Electric Reliability Council
Next Renewal	The Next Renewal date is an override of the 'Calculated Next Renewal' date and is based upon the assessor?s visual inspection.

NFPA	National Fire Protection Association
NGPA	National Gas Policy Act of 1978
NLRPM	No Load Revolutions per Minute (speed)
Nn	Equipment or Project lifetime in economic analysis
NOPR	Notice of Proposed Rule Making from FERC
NOx	Nitrogen Oxide Compounds
NPV	Net present value in economic analysis
NREL	National Renewable Energy Laboratory
NUG	Non-Utility Generator
O&M	Operation and Maintenance
OA	Outside Air
ODP	Ozone Depletion Potential
OPAC	Off-Peak Air Conditioning
P	Present value in economic analysis
PBR	Performance Based Rates
PEA	Preliminary Energy Audit
PF	Power Factor
PID	Proportional plus integral plus derivative (control system)
PM	Portfolio Manager in Energy Star rating system
PM	Preventive Maintenance
PoolCo	Power Pool Company or Organization
POU	Point of Use
PQ	Power Quality
PSC	Public Service Commission
PSIA psia	Pounds per square inch absolute (pressure)
PSIG psig	Pounds per square inch gauge (pressure)
PUC	Public Utility Commission
PUHCA	Public Utilities Holding Company Act of 1935
PURPA	Public Utilities Regulatory Policies of 1978
PV	Photovotaic system

PV	Present Value
PW	Present Worth
PX	Power Exchange
q	Rate of heat flow in Btu per hour
Q	Heat load due to conduction using degree days
QF	Qualifying Facility
R	Electrical resistance
R	Thermal Resistance
RC	Remote controller
RCR	Room Cavity Ratio
RCRA	Resource Conservation and Recovery Act
Remaining Service Life (RSL)	RSL is the number of years service remaining for a system or equipment item. It is automatically calculated based on the difference between the current year and the 'Calculated Next Renewal' date or the 'Next Renewal' date whichever one is the later date.
Remaining Service Life Index (RSLI)	RSLI is defined as a percentage ratio of the remaining service life of a system. It usually ranges from 0 to 100
REMR	Repair Evaluation Maintenance Rehabilitation (REMR) is a scale used to objectively rank systems based on their condition
Renewal Schedule	A timeline that provides the items that need repair the year in which the repair is needed and the estimated price of the renewal.
RH	Relative Humidity
RLA	Running Load Amps
RMS	Root Mean Square
RO	Reverse Osmosis
ROI	Return on Investment
RPM	Revolutions Per Minute
RTG	Regional Transmission Group
RTO	Regional Transmission Organization
RTP	Real Time Pricing
SBCCI	Southern Building Code Congress International
SC	Scheduling Coordinator
SC	Shading Coefficient
SCADA	Supervisory Control and Data Acquisition Systems

SEER	Seasonal Energy Efficiency Ratio
SHR	Sensible Heat Ratio
Site	The grounds and utilities roadways landscaping fencing and other typical land improvements needed to support the facility.
Soft Cost	An expense item that is not considered direct construction cost. Soft cost includes architectural engineering financing legal fees and other pre-and-post construction expenses.
SOx	Sulfur Oxide Compounds
SP	Static Pressure
SP SPB	Simple Payback
SPP	Simple Payback Period
SPP	Small Power Producers
STR	Stack Temperature Rise
SV	Specific Volume
System	System refers to building and related site work elements as described by ASTM Uniformat II Classification for Building Elements (E1557-97) a format for classifying major facility elements common to most buildings. Elements usually perform a given function regardless of the design specification construction method or materials used. See also Uniformat II.
T	Temperature
T	Tubular (lamps)
TAA	Technical Assistance Audit
TCP/IP	Transmission Control Protocol/Internet Protocol
TES	Thermal Energy Storage
THD	Total Harmonic Distortion
TOD	Time of Day
TOU	Time of Use
TQM	Total Quality Management
TransCo	Transmission Company
U	Thermal Conductance
UDC	Utility Distribution Company
UL	Underwriters Laboratories
UNIFORMAT II	The ASTM UNIFORMAT II Classification for Building Elements (E1557-97) a format for classifying major facility components common to most buildings.
USGBC	US Green Building Council
v	Specific Volume

V	Volts Voltage
V	Volume
VAV	Variable Air Volume
VDT	Video Display Terminal
VFD	Variable Frequency Drive
VHO	Very High Output
VSD	Variable Speed Drive
W	Watts
W	Width
WB	Wet bulb
WH Wh	Watt Hours
Year built	The year that a building or addition was originally built based on substantial completion or occupancy.
Z	Electrical Impedance