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.

Potter-Thomas School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	3001 N. 6Th St.	Enrollment	582
	Philadelphia, Pa 19133	Grade Range	'00-08'
Phone/Fax	215-227-4423 / 215-227-7196	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Potterthomas	Turnaround Model	Turnaround

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	**38.15%**	**$16,140,792**	**$42,305,809**
Building	36.59 %	$14,714,696	$40,215,252
Grounds	68.22 %	$1,426,095	$2,090,557

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.66 %	$1,680,221	$1,873,916
Exterior Walls (Shows condition of the structural condition of the exterior facade)	06.57 %	$193,737	$2,950,327
Windows (Shows functionality of exterior windows)	64.01 %	$921,461	$1,439,593
Exterior Doors (Shows condition of exterior doors)	235.73 %	$273,220	$115,903
Interior Doors (Classroom doors)	124.98 %	$350,638	$280,565
Interior Walls (Paint and Finishes)	00.00 %	$0	$1,055,915
Plumbing Fixtures	05.61 %	$60,634	$1,080,694
Boilers	56.45 %	$842,405	$1,492,349
Chillers/Cooling Towers	00.00 %	$0	$1,956,760
Radiators/Unit Ventilators/HVAC	124.67 %	$4,284,083	$3,436,320
Heating/Cooling Controls	158.90 %	$1,714,730	$1,079,096
Electrical Service and Distribution	41.69 %	$323,269	$775,350
Lighting	18.11 %	$502,124	$2,772,076
Communications and Security (Cameras, Pa System and Fire Alarm)	24.68 %	$256,233	$1,038,330

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

S539001;Potter-Thomas

Final

Site Assessment Report

February 1, 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):	79,933
Year Built:	1967
Last Renovation:	
Replacement Value:	$42,305,809
Repair Cost:	$16,140,791.56
Total FCI:	38.15 %
Total RSLI:	78.89 %

Description:

Facility Assessment, October 2015

School District of Philadelphia

Potter Thomas Elementary School

3001 N. 6th Street

Philadelphia, PA 19133

79,993 SF / 616 Students / LN 05

The Potter Thomas Elementary school building is located at 3001 N. 6th Street in Philadelphia, PA. The 2 level, approximately 79,993 square foot building was originally constructed in 1967. The building has no basement and two mechanical penthouses on the roof.

Mr. Scott Ovington, Facility Area Coordinator provided input to the Parsons assessment team on current problems and planned renovation projects. Mr. David Ham, building engineer, accompanied us on our tour of the school and provided limited information on the building systems

and recent maintenance history.

STRUCTURAL/ EXTERIOR CLOSURE:

The 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 first level walls.

The main structure consists typically of precast concrete columns, beams and single-T floor elements with topping for long spans. Short span floors are precast concrete planks (Flexicore). Penthouses are framed with tubular steel.

The roof structure over the main building is similar to floor construction. The superstructure is generally in good condition.

The building envelope is typically face brick masonry with CMU backup. In general, masonry is in fair to good condition; however, several cracks and buckling at the roof level have been observed. Water penetration through walls has not been reported. Penthouses are clad with prefinished, standing seam metal panels. The finish is faded.

The building windows are extruded aluminum curtain wall type, single acrylic glazed with tilt-in operable units. Windows are original to the building and deteriorated beyond service life. The leaks around the windows perimeters have been reported. Spandrel panels are poorly insulated and cause water pipes freezing inside the building. First floor vision glass panels are fitted with galvanized steel wire mesh security screens, generally in fair condition.

The exterior doors are typically hollow metal doors and frames, painted, some with vision lights. The doors are generally in poor condition with damaged or missing hardware.

Roofing system is a built-up system over 25 years old and in poor condition. There is evidence of water ponding and large soft spot areas; leaks have been reported. Roof access hatch is original to the building and beyond its service life.

INTERIORS:

The building partition wall types include painted CMU and hollow metal, glazed, borrowed light partitions. Partitions are generally in good condition.

Interior doors are generally solid core wood doors, some glazed, with solid core transoms, in hollow metal frames. Some doors have glazed, hollow metal framed side lights. A number of doors are damaged and missing hardware. The doors leading to exit stairways and along egress routes are hollow metal doors and frames in good condition.

Fittings include toilet accessories and toilet partitions, generally in fair to poor condition, original to the building; no accessible compartments; chalkboards are in poor condition. Handrails and ornamental metals are generally in good condition. Interior identifying signage is typically affixed to door surfaces generally in fair condition.

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

Most ceilings in the building are exposed, painted and with some 2x2 suspended acoustical panels in office areas and corridors. The suspension system and tiles are in fair too poor condition.

Flooring in classrooms and auditorium/ cafeteria and gymnasium is VCT (approximately 64% of floor area); painted concrete in toilets and locker rooms, and ceramic tile in the kitchen. Most VCT flooring is in fair condition. Corridors are generally covered with VAT tile in poor condition.

Stair construction is steel with concrete filled metal pan treads with cast iron non-slip nosings 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 good condition. Other equipment includes kitchen equipment (not used), generally in good condition.

Furnishings include fixed casework in classrooms, corridors and library. Built-in cabinets are wood and in various stages of deterioration. Window shades/blinds are generally in poor condition. There is no fixed seating in auditorium/cafeteria.

CONVEYING SYSTEMS:

The building has a 2,000 lb traction elevator serving 2 floors; generally in poor condition and not conforming to ADA requirements.

PLUMBING:

Plumbing Fixtures - Many of the original plumbing fixtures have been replaced. Fixtures in the restrooms on each floor consist of 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 consist of wall hung fixtures with integral refrigerated coolers. The fixtures are well 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 two (2) sinks; one three compartment stainless steel sink with lever operated faucets and one two compartment stainless steel sink with lever operated faucets. There are no grease traps. Chemicals are injected manually into the sanitizing basins.

Domestic Water Distribution - The incoming domestic water line was not located during the site visit. 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.

Two Paloma instant hot water heaters connected to two circulating pumps, installation dates unknown, supply hot water for domestic use. The units are located in a room off the boiler room. Both of the units were inoperable during the site visit and a service request was placed. These units should be replaced in the next 1-3 years.

Sanitary Waste - The original storm and sanitary sewer piping is heavy weight cast iron with hub and spigot fittings. Downspouts from the roof run down the interior of the building and connect to the storm sewer system below the building slab.

The building does not have a sewage ejector pit or sump pump.

The maintenance staff reported mostly minor problems with the sanitary waste piping systems. However, the sewer piping has been in service for nearly 50 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 - Rain water from the roof is routed down through pipe chases in the interior of the building by cast iron piping with hub and spigot fittings. Some repairs have been made with HDPE piping with no-hub fittings. The drain piping should be inspected by a qualified contractor and repaired as necessary. The Building Engineer reported no major issues with the rain water drainage piping in the addition.

MECHANICAL:

Energy Supply - High pressure city gas enters the building via a 3” pipe and goes through two pressure reducing valves. The meter is 3” and located in the in the boiler room.

A reserve oil supply is stored in a 6,000 gallon underground storage tank (UST). Duplex skid mounted pumps, located in the boiler room, circulate oil through the system. Oil is used as a backup fuel and the District receives credit from the gas utility as an interruptible service. The current supply has been in storage for some time and should be tested for quality on a regular schedule. USTs have an anticipated service life of 20 years.

Heat Generating Systems - Building heating hot water is generated by two 120HP Smith Mills 450 cast iron sectional boilers original to the building, located in the boiler room on the ground floor. Each boiler is equipped with a burner designed to operate on natural gas or fuel oil. Combustion air makeup is supplied by louvers equipped with motorized dampers. Burner oil pumps are not driven by the fan motor. The gas train serving the building does appear to have code required venting of the regulators and dual solenoid valves with venting of the chamber between. Cast iron sectional boilers have an anticipated service life of 35 years or more; these units have been in service approximately 48 years. The District should replace these boilers within the next 1-3 years.

Cooling Generating Systems - Chilled water is generated by one absorption chiller located in the boiler room with heat rejected by one Tower Tech fiberglass cooling tower located behind the building. The manufacturer and model number were not visible on the chiller. The chiller and cooling tower were installed in 1998. The boilers must be run during cooling season to produce chilled water, which is very inefficient. Absorption chillers have an anticipated service life of 30 years; this unit has been in service 17 years and reliable service should be provided for the next 12-15 years.

Fiberglass cooling towers have an anticipated service life of 35 years; this unit has been in service approximately 17 years. The cooling tower frame is rusted and should be replaced.

Distribution Systems - Building dual temperature piping is black steel with threaded fittings. The dual temperature distribution 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 dual temperature 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 10 years.

A two pipe distribution system supplies building heating or cooling water to the unit ventilators, air handling units (AHU) and heating and ventilation units (HV). One 7.5HP Baldor end suction heating water supply pump serves the boilers and is in poor condition. Two 20HP Paco end suction dual temperature pumps, which serve either the boilers or the chiller depending on valve configuration, were installed with the new chiller in 1998. One 30HP Paco end suction condenser water pump serves the cooling tower and absorption chiller. All piping was covered with insulation. The heating water supply pump appears to be original to the building; it is beyond its anticipated service life of 25 years, in poor condition, and 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 and are beyond their service life. Outdoor air for the building is provided by wall openings in the unit ventilators. The existing unit ventilators should be removed and new units installed. Suplemental heating is provided along the perimeter of classrooms by fin tube radiators.

Five (5) air handling units, original to the building, provide conditioned air to the Cafetorium, IMC, offices, and Administration office. Two (2) HV units, original to the building, provide heating to the Gymnasium. Two (2) units, each serving the IMC and offices on the second floor, are located in two penthouse spaces accessible from the roof. Two (2) units, each serving the Cafetorium, are located above the ceiling in the Cafetorium. These units were not accessible during the site visit. One (1) unit, serving the Administration offices, is located in a mechanical room on the first floor. Two (2) HV units, located in a mechanical room above the Gymnasium, serve the Gymnasium and provide heating only. The AHU and HV units are beyond their service life and should be replaced with more efficient modern units.

The school has mechanical ventilation via exhaust fans which exhaust air from the plenum above the drop ceiling. Eleven (11) exhaust fans are located on the roof. All fans but one are operational according to the Building Engineer. No major issues were reported with the exhaust fans, but they are beyond their service life and should be replaced. Five (5) power ventilators, located on the roof, provide relief air to the building. All are in working order and good condition.

Terminal & Package Units - A Fujitsu split system air conditioning system provided cooling to the LAN room located on the second floor. The installation date of this unit is unknown; the anticipated service life of a split system air conditioner is 15 years. The district should budget to replace this unit within the next 7-10 years.

Two kitchen hoods with integral fire suppression and outdoor air make-up systems are installed above the gas fired cooking equipment. An automatic gas shutoff system is not installed with the kitchen hood equipment. The equipment is within service life.

Controls & Instrumentation - The original pneumatic systems no longer 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 primary power is at 13.2KV from the street power pole which feeds a 750KVA transformer (13.2KV – 120V/240V). The secondary power runs underground into the building and finally into the electrical room. This electrical service is rather old and does not have enough capacity for the new HVAC loads. The present main switchboard is rated at 2000 Amp, 120V/240V480 V, 2 phase, 3W, and is located in main electrical room. The PECO meter is also located inside the electrical room. The main 2000A switchboard is outdated and has reached the end

of its useful service.

Distribution system - The electrical distribution is accomplished with a 120V/240V distribution switchboard, and an MCC located in the electrical room. The Switchboard and the MCC as well as several lighting/receptacle panels throughout the building are all outdated and have reached the end of their useful service. The entire distribution system is in poor condition, and has reached the end of its useful service life.

Receptacles - The receptacles in classrooms, computer rooms, libraries, and other areas are not adequate. Minimum of two receptacles on each wall of the classrooms and other rooms are required.

Lighting - Interior building is illuminated by various types of fixtures. Fluorescent lighting (T-5 & T-8) is in majority of the areas, including; classrooms, corridor, offices and Kitchen. Surface or pendant mounted industrial fluorescent fixtures are used in mechanical and electrical rooms. Gymnasium is illuminated by metal halide enclosed glass fixtures. The majority of interior lighting fixtures is in good condition and has recently been upgraded in 2011.

Fire alarm - The present Fire Alarm system is automatic/addressable, and is in compliance with safety codes. There are manual pulls stations throughout the building. There is sufficient number of horn/strobes installed in the classrooms, corridors, offices and other areas in the school. The FA System has recently been upgraded in 2015.

Telephone/LAN - The school telephone and data systems are new and working adequately. A main distribution frame (MDF) along with a telephone PBX system is providing the communication system function for the building. School is also equipped with Wi-Fi system.

Public address - A separate PA system does not exist. School uses the telephone systems for public announcement. This system is working properly. The present Intercom System is functioning properly. Each class room is provided with an intercom telephone service. The system permits paging and intercom communication between main office to each classroom, between each classroom to main office, and between classrooms to classrooms.

Clock and Program system - Clock and program systems are old and not working properly. Classrooms are provided with 12-inch wall mounted, round clocks, and they are not controlled properly by central master control panel.

Television System - Television system is not provided in the school. Most classes are provided with smart boards having the ability to connect to computer and internet.

Security Systems, access control, and video surveillance e- The school is not provided with adequate video surveillance system. Cameras are not installed at all exit doors, corridors, exterior, and other critical areas. The cameras should be controlled by a Closed Circuit Television system (CCTV).

Emergency Power System - School is provided with a 30KW emergency power. The emergency generator feeds an emergency Panel through an Automatic Transfer Switch (ATS). The generator is old and has reached the end of its useful service.

Emergency lighting system, including exit lighting - there are insufficient emergency lights/exit lights in corridors, library and other exit ways. Exit signs and emergency fixtures are old and have reached the end of their Service life.

Lightning Protection System - There is adequate lightning protection system installed in the school. There are lightning rods located in the roof with continuous connection to the ground via stranded aluminum cables.

Grounding - The present grounding system is adequate. All equipment is bonded properly to the ground.

Site Lighting and paging system- The present site lighting and paging system is old and has reached the end of useful service.

GROUNDS (SITE):

The parking lot at the site is unused due to severely deteriorated pavement, and enclosed with chain link fence in very poor condition. Playground pavement adjacent to the building is in poor condition, paving is cracked and deteriorated (approximately 30% of area); the playground equipment is new, installed in mid 2000's. Picket fence separating the playground and kindergarten playground from the street and staff parking is generally in good condition. There is minimal landscaping along south and west side of the building consisting of grass and a few semi-mature trees, generally in fair condition.

ACCESSIBILITY:

Generally, the building has an accessible route per ADA requirements to first floor only. 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 cracked and buckling exterior masonry; tuck point
- Install all new roofing system including insulation within next 3 to 4 years; tear-down existing roofing; install flashing, and counter flashing
- Replace roof hatch
- Replace exterior doors
- Replace all windows (curtain wall)
- Replace security screens on the 1st floor
- Replace damaged interior doors
- Replace interior doors hardware for ADA accessibility
- Replace non-ADA compliant toilet partitions; reconfigure remaining toilet partitions
- Replace VAT tile throughout the building
- Replace all suspended acoustical ceiling in the building
- Replace built-in cabinets in classrooms
- Replace existing 2000 lb traction elevator with new 2500 lb elevator
- Replace pavement in the parking lot
- Provide stall striping including accessible spaces and aisles
- Resurface damaged playground paving (30%)
- Provide engineered fill for sinking playground areas
- 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.
- Replace the two existing Paloma instant hot water heaters, which were inoperable during the site visit.
- Hire a qualified contractor to perform a detailed inspection of the domestic water piping in the original building, in use for almost 50 years, and replace any damaged piping.
- 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.
- Replace the two existing 4,023MBH cast iron sectional boilers and burners with new cast iron sectional boilers of similar size, burners, and power ventilators.
- Hire a qualified contractor to examine the dual temperature distribution piping, in service for nearly 50 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.
- Replace the 7.5HP end suction heating water supply pump which is beyond its service life and is in poor condition.
- Replace the existing unit ventilators with two pipe units that have integral heat exchangers to introduce outdoor air to the building.
- Replace the one (1) air handling units serving the IMC offices which is beyond its service life, with new more efficient units.
- Replace the one (1) air handling unit serving the second floor offices which is beyond its service life, with new more efficient units.
- Replace the one (1) air handling unit serving the Administration office which is beyond its service life, with new more efficient units.
- Replace the two (2) air handling units serving the Cafetorium which are beyond their service lives, with new more efficient units.
- Replace the two (2) heating and ventilation units serving the Gymnasium, which are beyond their service life, by installing a constant volume air handling unit with distribution ductwork and registers.
- Replace eleven (11) roof mounted exhaust fans which are beyond their service life.
- 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.

- Install a new 1000 KVA, 480V 3 phase electrical Service, with a 1600 A 480V Switchgear to handle existing loads plus future HVAC loads.

- Install two new 480 V MCCs to handle the new HVAC loads.

- Install a new 500KV transformer (480V- 120V) to feed the existing 120V distribution panels.
- Install two receptacles on each wall of the classrooms and other areas within the building. Install surface-mounted receptacles in computer rooms.
- Install new Video Surveillance System with Cameras and CCTV.
- Install new Clock System.
- Install a new 100 KW emergency generator.
- Install new emergency exit signs & emergency lights.
- Install additional outdoor lighting for the grounds
- Install additional speakers for the grounds.

Attributes:

General Attributes:			
Active:	Open	Bldg Lot Tm:	Lot 3 / Tm 4
Status:	Accepted by SDP	Team:	Tm 4
Site ID:	S539001		

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.

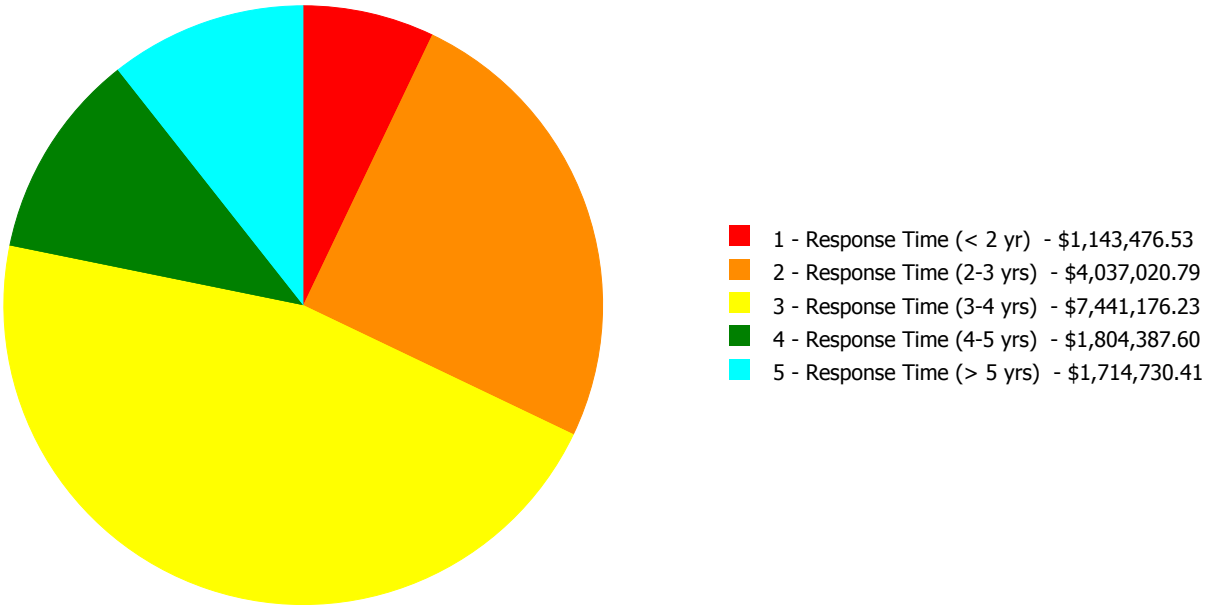
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	52.00 %	0.00 %	$0.00
A20 - Basement Construction	52.00 %	0.00 %	$0.00
B10 - Superstructure	52.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	70.37 %	30.81 %	$1,388,417.52
B30 - Roofing	110.00 %	89.66 %	$1,680,220.62
C10 - Interior Construction	66.32 %	22.18 %	$435,084.15
C20 - Stairs	52.00 %	0.00 %	$0.00
C30 - Interior Finishes	111.72 %	5.07 %	$182,000.02
D10 - Conveying	105.71 %	157.42 %	$192,517.57
D20 - Plumbing	64.72 %	77.27 %	$1,261,218.63
D30 - HVAC	86.85 %	76.94 %	$6,841,217.61
D40 - Fire Protection	105.71 %	177.49 %	$1,143,476.53
D50 - Electrical	110.11 %	31.73 %	$1,490,803.91
E10 - Equipment	28.57 %	0.00 %	$0.00
E20 - Furnishings	105.00 %	58.58 %	$99,739.82
G20 - Site Improvements	84.62 %	78.67 %	$1,242,857.24
G40 - Site Electrical Utilities	106.67 %	35.88 %	$183,237.94
Totals:	**78.89 %**	**38.15 %**	**$16,140,791.56**

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)
B539001;Potter-Thomas	79,933	36.59	$1,143,476.53	$4,037,020.79	$6,109,553.55	$1,709,915.10	$1,714,730.41
G539001;Grounds	117,400	68.22	$0.00	$0.00	$1,331,622.68	$94,472.50	$0.00
Total:		**38.15**	**$1,143,476.53**	**$4,037,020.79**	**$7,441,176.23**	**$1,804,387.60**	**$1,714,730.41**

Deficiencies By Priority



Budget Estimate Total: $16,140,791.56

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):	79,933
Year Built:	1967
Last Renovation:	
Replacement Value:	$40,215,252
Repair Cost:	$14,714,696.38
Total FCI:	36.59 %
Total RSLI:	78.31 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B539001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S539001		

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	52.00 %	0.00 %	$0.00
A20 - Basement Construction	52.00 %	0.00 %	$0.00
B10 - Superstructure	52.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	70.37 %	30.81 %	$1,388,417.52
B30 - Roofing	110.00 %	89.66 %	$1,680,220.62
C10 - Interior Construction	66.32 %	22.18 %	$435,084.15
C20 - Stairs	52.00 %	0.00 %	$0.00
C30 - Interior Finishes	111.72 %	5.07 %	$182,000.02
D10 - Conveying	105.71 %	157.42 %	$192,517.57
D20 - Plumbing	64.72 %	77.27 %	$1,261,218.63
D30 - HVAC	86.85 %	76.94 %	$6,841,217.61
D40 - Fire Protection	105.71 %	177.49 %	$1,143,476.53
D50 - Electrical	110.11 %	31.73 %	$1,490,803.91
E10 - Equipment	28.57 %	0.00 %	$0.00
E20 - Furnishings	105.00 %	58.58 %	$99,739.82
Totals:	**78.31 %**	**36.59 %**	**$14,714,696.38**

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.	79,933	100	1967	2067		52.00 %	0.00 %	52			$1,470,767
A1030	Slab on Grade	$7.73	S.F.	79,933	100	1967	2067		52.00 %	0.00 %	52			$617,882
A2010	Basement Excavation	$6.55	S.F.	79,933	100	1967	2067		52.00 %	0.00 %	52			$523,561
A2020	Basement Walls	$12.70	S.F.	79,933	100	1967	2067		52.00 %	0.00 %	52			$1,015,149
B1010	Floor Construction	$75.10	S.F.	79,933	100	1967	2067		52.00 %	0.00 %	52			$6,002,968
B1020	Roof Construction	$13.88	S.F.	79,933	100	1967	2067		52.00 %	0.00 %	52			$1,109,470
B2010	Exterior Walls	$36.91	S.F.	79,933	100	1967	2067		52.00 %	6.57 %	52		$193,736.83	$2,950,327
B2020	Exterior Windows	$18.01	S.F.	79,933	40	1967	2007	2057	105.00 %	64.01 %	42		$921,461.07	$1,439,593
B2030	Exterior Doors	$1.45	S.F.	79,933	25	1967	1992	2042	108.00 %	235.73 %	27		$273,219.62	$115,903
B3010105	Built-Up	$37.76	S.F.	49,500	20	1967	1987	2037	110.00 %	89.73 %	22		$1,677,159.56	$1,869,120
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.	79,933	20	1967	1987	2037	110.00 %	63.83 %	22		$3,061.06	$4,796
C1010	Partitions	$17.91	S.F.	79,933	100	1967	2067		52.00 %	0.00 %	52			$1,431,600
C1020	Interior Doors	$3.51	S.F.	79,933	40	1967	2007	2057	105.00 %	124.98 %	42		$350,638.30	$280,565
C1030	Fittings	$3.12	S.F.	79,933	40	1967	2007	2057	105.00 %	33.86 %	42		$84,445.85	$249,391
C2010	Stair Construction	$1.41	S.F.	79,933	100	1967	2067		52.00 %	0.00 %	52			$112,706

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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.	79,933	10	2010	2020	2027	120.00 %	0.00 %	12			$1,055,915
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.		30				0.00 %	0.00 %				$0
C3020411	Carpet	$7.30	S.F.	4,795	10	2010	2020	2027	120.00 %	0.00 %	12			$35,004
C3020412	Terrazzo & Tile	$75.52	S.F.	2,398	50	1967	2017	2067	104.00 %	0.00 %	52			$181,097
C3020413	Vinyl Flooring	$9.68	S.F.	65,545	20	1967	1987	2037	110.00 %	28.69 %	22		$182,000.02	$634,476
C3020414	Wood Flooring	$22.27	S.F.		25				0.00 %	0.00 %				$0
C3020415	Concrete Floor Finishes	$0.97	S.F.	7,194	50	2000	2050		70.00 %	0.00 %	35			$6,978
C3030	Ceiling Finishes	$20.97	S.F.	79,933	25	1967	1992	2042	108.00 %	0.00 %	27			$1,676,195
D1010	Elevators and Lifts	$1.53	S.F.	79,933	35	1967	2002	2052	105.71 %	157.42 %	37		$192,517.57	$122,297
D2010	Plumbing Fixtures	$13.52	S.F.	79,933	35	1967	2002	2030	42.86 %	5.61 %	15		$60,633.52	$1,080,694
D2020	Domestic Water Distribution	$1.68	S.F.	79,933	25	1967	1992	2042	108.00 %	338.08 %	27		$453,996.60	$134,287
D2030	Sanitary Waste	$2.90	S.F.	79,933	25	1967	1992	2042	108.00 %	169.16 %	27		$392,131.20	$231,806
D2040	Rain Water Drainage	$2.32	S.F.	79,933	30	1967	1997	2047	106.67 %	191.14 %	32		$354,457.31	$185,445
D3020	Heat Generating Systems	$18.67	S.F.	79,933	35	1967	2002	2052	105.71 %	56.45 %	37		$842,404.69	$1,492,349
D3030	Cooling Generating Systems	$24.48	S.F.	79,933	30	1997	2027		40.00 %	0.00 %	12			$1,956,760
D3040	Distribution Systems	$42.99	S.F.	79,933	25	1967	1992	2042	108.00 %	124.67 %	27		$4,284,082.51	$3,436,320
D3050	Terminal & Package Units	$11.60	S.F.	79,933	20	2005	2025		50.00 %	0.00 %	10			$927,223
D3060	Controls & Instrumentation	$13.50	S.F.	79,933	20	1967	1987	2037	110.00 %	158.90 %	22		$1,714,730.41	$1,079,096
D4010	Sprinklers	$7.05	S.F.	79,933	35			2052	105.71 %	202.91 %	37		$1,143,476.53	$563,528
D4020	Standpipes	$1.01	S.F.	79,933	35			2052	105.71 %	0.00 %	37			$80,732
D5010	Electrical Service/Distribution	$9.70	S.F.	79,933	30	1967	1997	2047	106.67 %	41.69 %	32		$323,268.73	$775,350
D5020	Lighting and Branch Wiring	$34.68	S.F.	79,933	20	1967	1987	2037	110.00 %	18.11 %	22		$502,123.76	$2,772,076
D5030	Communications and Security	$12.99	S.F.	79,933	15	1967	1982	2032	113.33 %	24.68 %	17		$256,232.99	$1,038,330
D5090	Other Electrical Systems	$1.41	S.F.	79,933	30	1967	1997	2047	106.67 %	363.05 %	32		$409,178.43	$112,706
E1020	Institutional Equipment	$4.82	S.F.	79,933	35	1990	2025		28.57 %	0.00 %	10			$385,277
E1090	Other Equipment	$11.10	S.F.	79,933	35	1990	2025		28.57 %	0.00 %	10			$887,256
E2010	Fixed Furnishings	$2.13	S.F.	79,933	40	1967	2007	2057	105.00 %	58.58 %	42		$99,739.82	$170,257
								Total	**78.31 %**	**36.59 %**			**$14,714,696.38**	**$40,215,252**

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 64%
VAT 18%
Carpet 6%
Ceramic tile 3%
Concrete 9%

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

Note: ACT 37%
Exposed painted 63%

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:	**$14,714,696**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$3,251,917**	**$17,966,614**
*** 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	$193,737	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$193,737**
B2020 - Exterior Windows	$921,461	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$921,461**
B2030 - Exterior Doors	$273,220	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$273,220**
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	$1,677,160	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,677,160**
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	$3,061	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,061**
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**

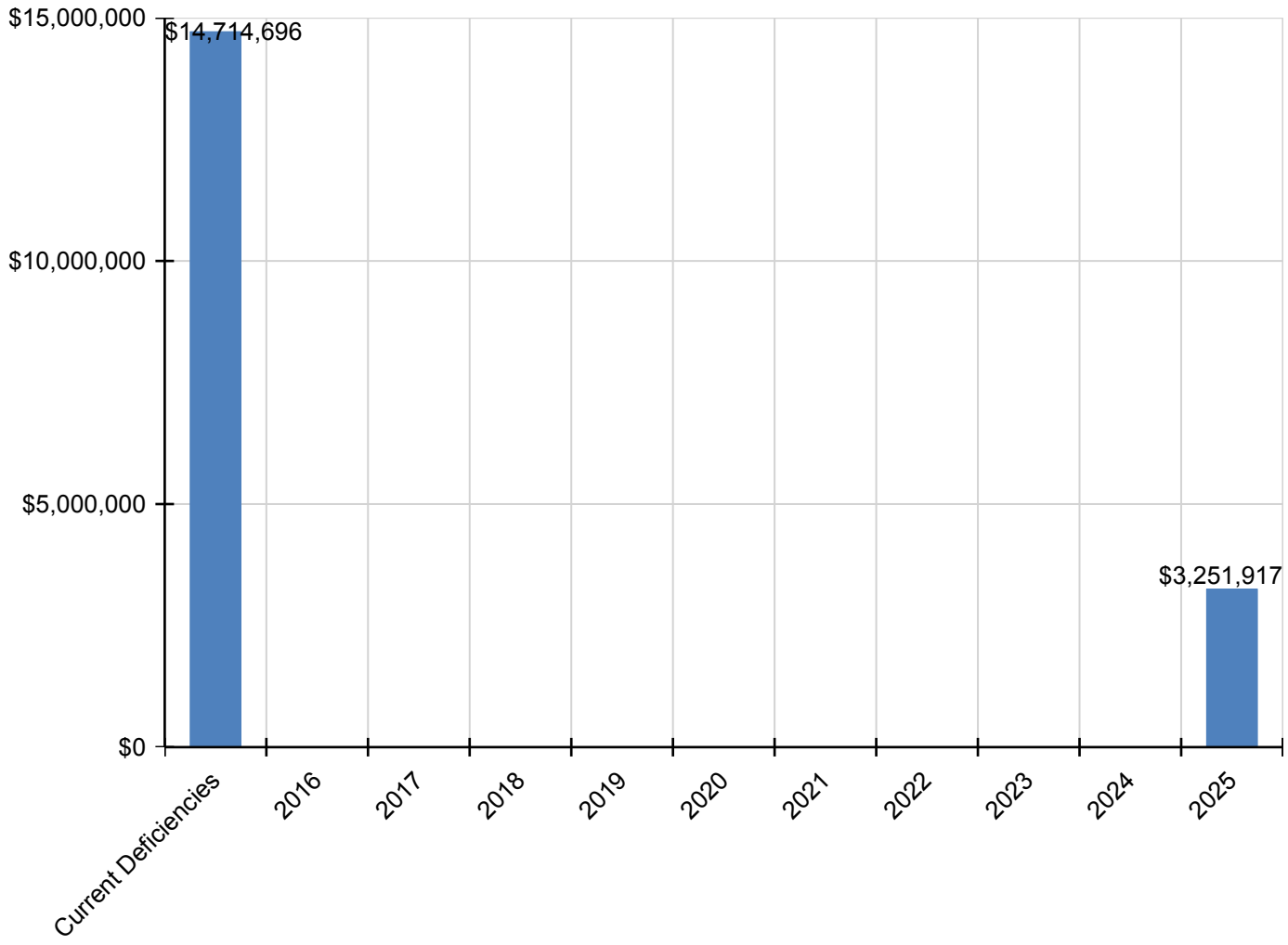
C1020 - Interior Doors	$350,638	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$350,638**
C1030 - Fittings	$84,446	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$84,446**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$182,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$182,000**
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	$0	**$0**
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	$192,518	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$192,518**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$60,634	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$60,634**
D2020 - Domestic Water Distribution	$453,997	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$453,997**
D2030 - Sanitary Waste	$392,131	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$392,131**
D2040 - Rain Water Drainage	$354,457	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$354,457**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$842,405	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$842,405**
D3030 - Cooling Generating Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3040 - Distribution Systems	$4,284,083	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,284,083**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,370,721	**$1,370,721**
D3060 - Controls & Instrumentation	$1,714,730	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,714,730**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,143,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,143,477**
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	$323,269	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$323,269**
D5020 - Lighting and Branch Wiring	$502,124	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$502,124**
D5030 - Communications and Security	$256,233	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$256,233**
D5090 - Other Electrical Systems	$409,178	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$409,178**
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	$569,558	**$569,558**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,311,638	**$1,311,638**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$99,740	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$99,740**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

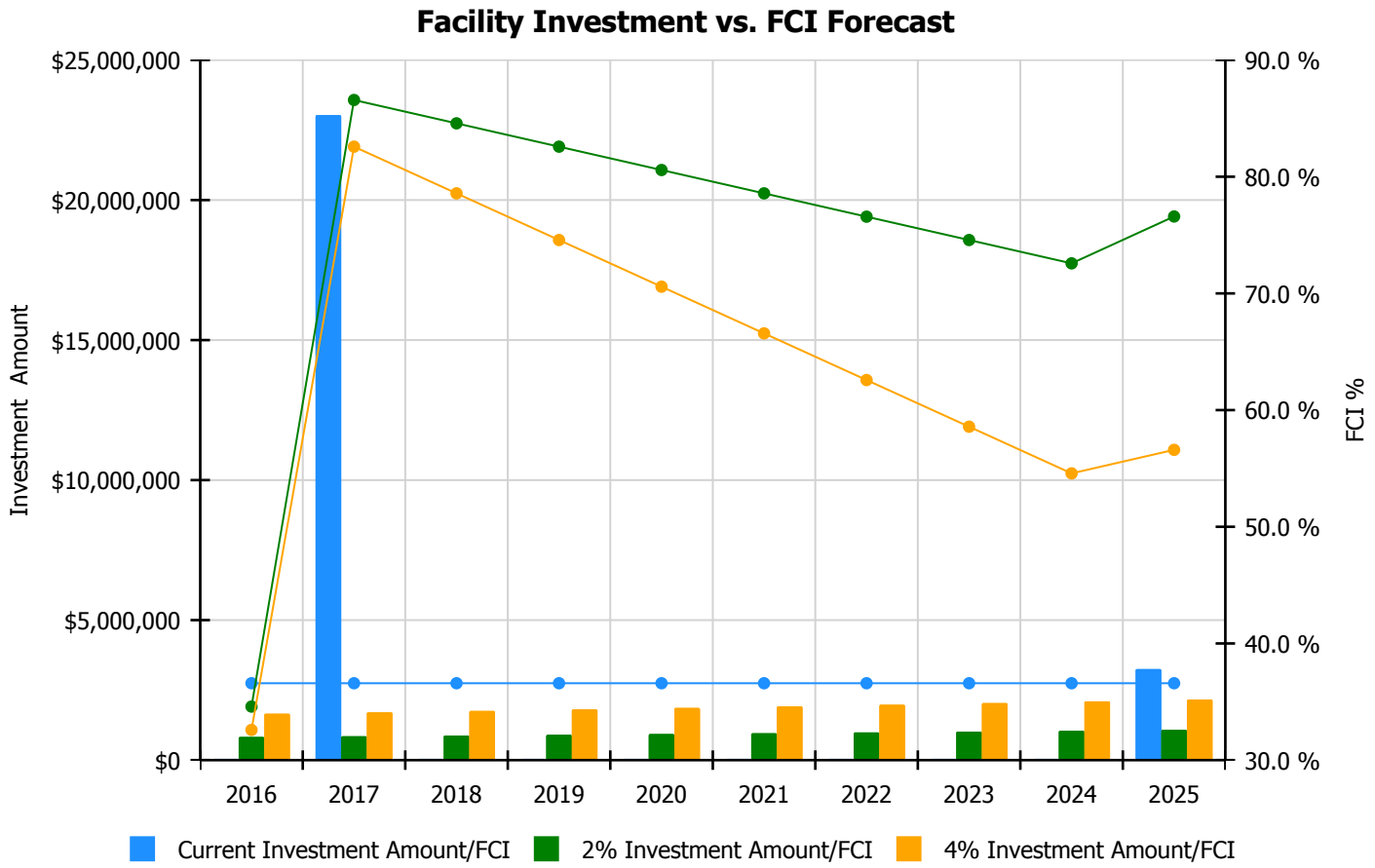
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

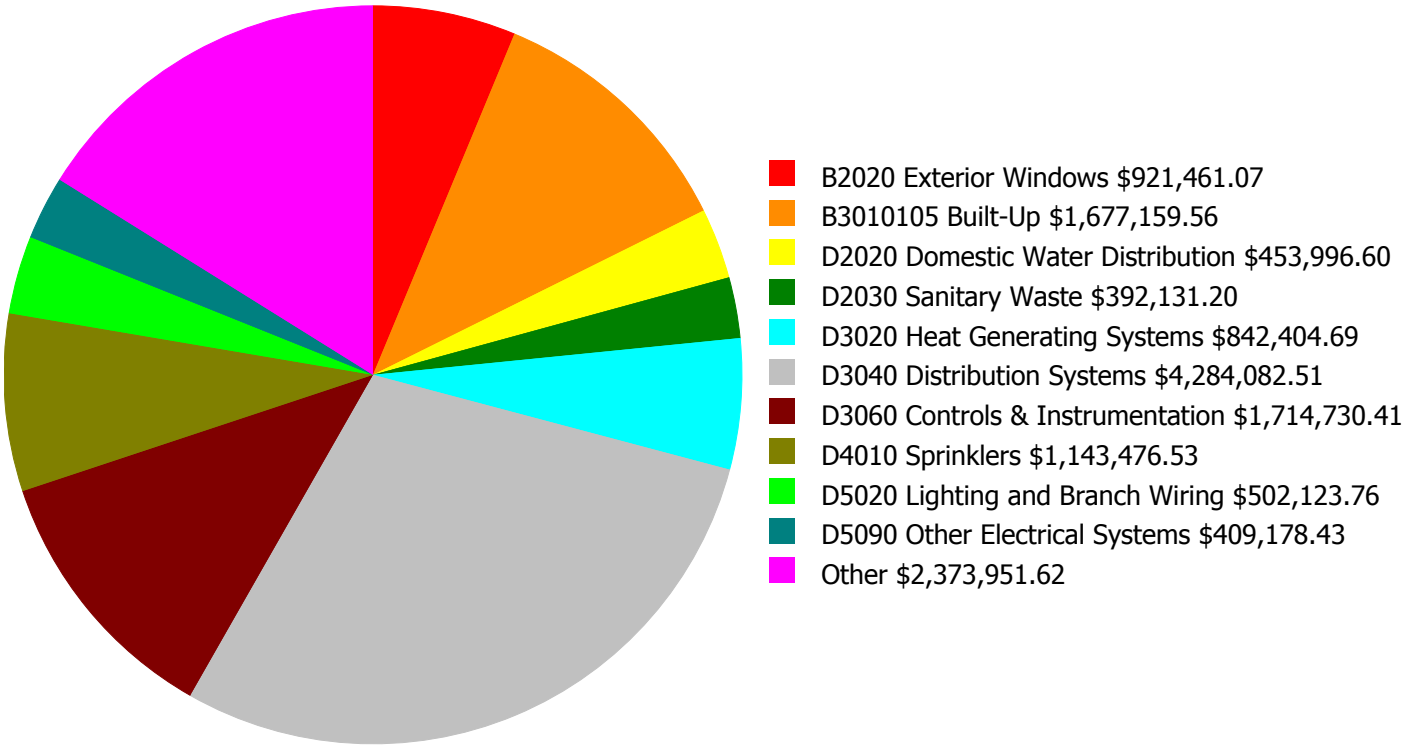
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 36.59%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$828,434.00	34.59 %	$1,656,868.00	32.59 %
2017	$23,032,453	$853,287.00	86.58 %	$1,706,574.00	82.58 %
2018	$0	$878,886.00	84.58 %	$1,757,772.00	78.58 %
2019	$0	$905,252.00	82.58 %	$1,810,505.00	74.58 %
2020	$0	$932,410.00	80.58 %	$1,864,820.00	70.58 %
2021	$0	$960,382.00	78.58 %	$1,920,765.00	66.58 %
2022	$0	$989,194.00	76.58 %	$1,978,387.00	62.58 %
2023	$0	$1,018,870.00	74.58 %	$2,037,739.00	58.58 %
2024	$0	$1,049,436.00	72.58 %	$2,098,871.00	54.58 %
2025	$3,251,917	$1,080,919.00	76.59 %	$2,161,837.00	56.59 %
Total:	**$26,284,370**	**$9,497,070.00**		**$18,994,138.00**	

Deficiency Summary by System

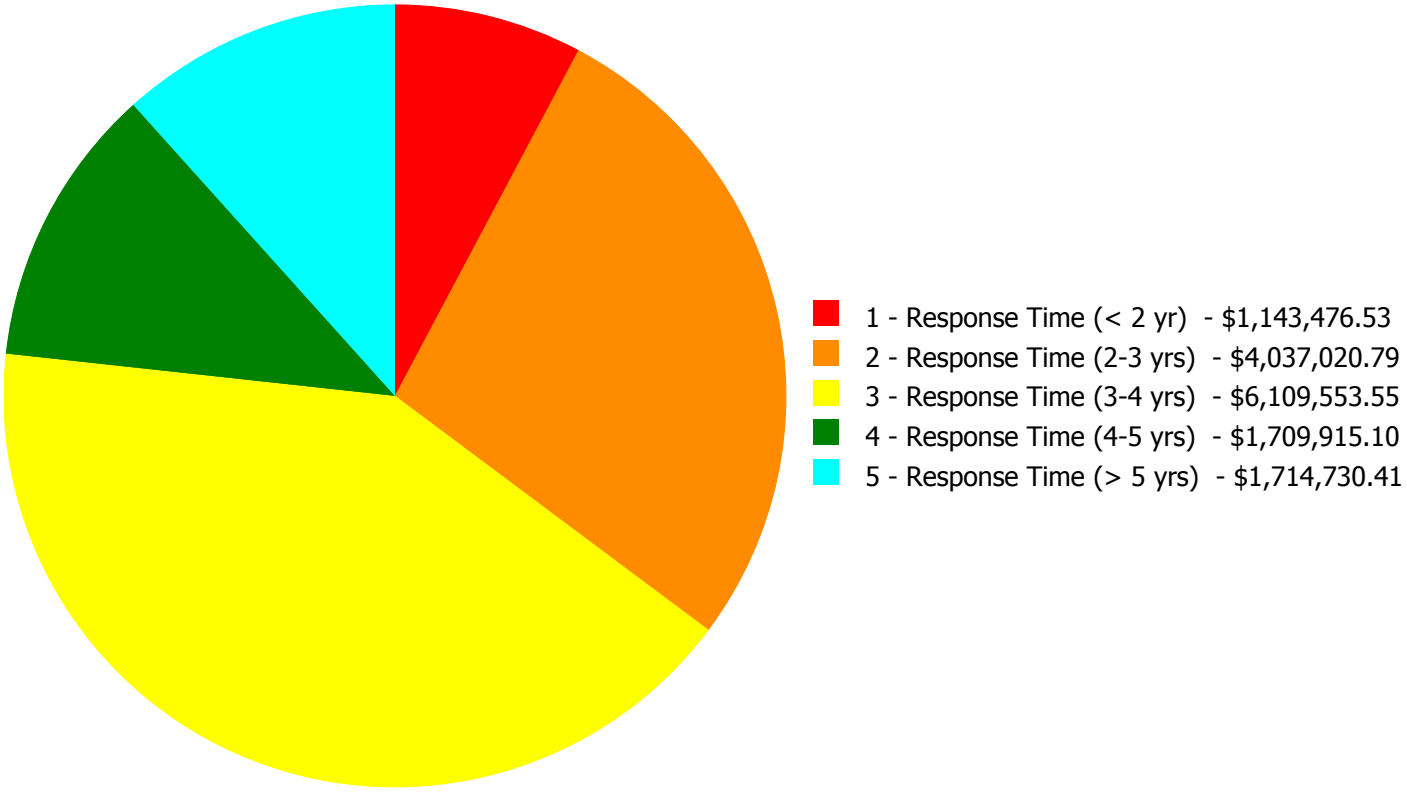
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $14,714,696.38

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: $14,714,696.38

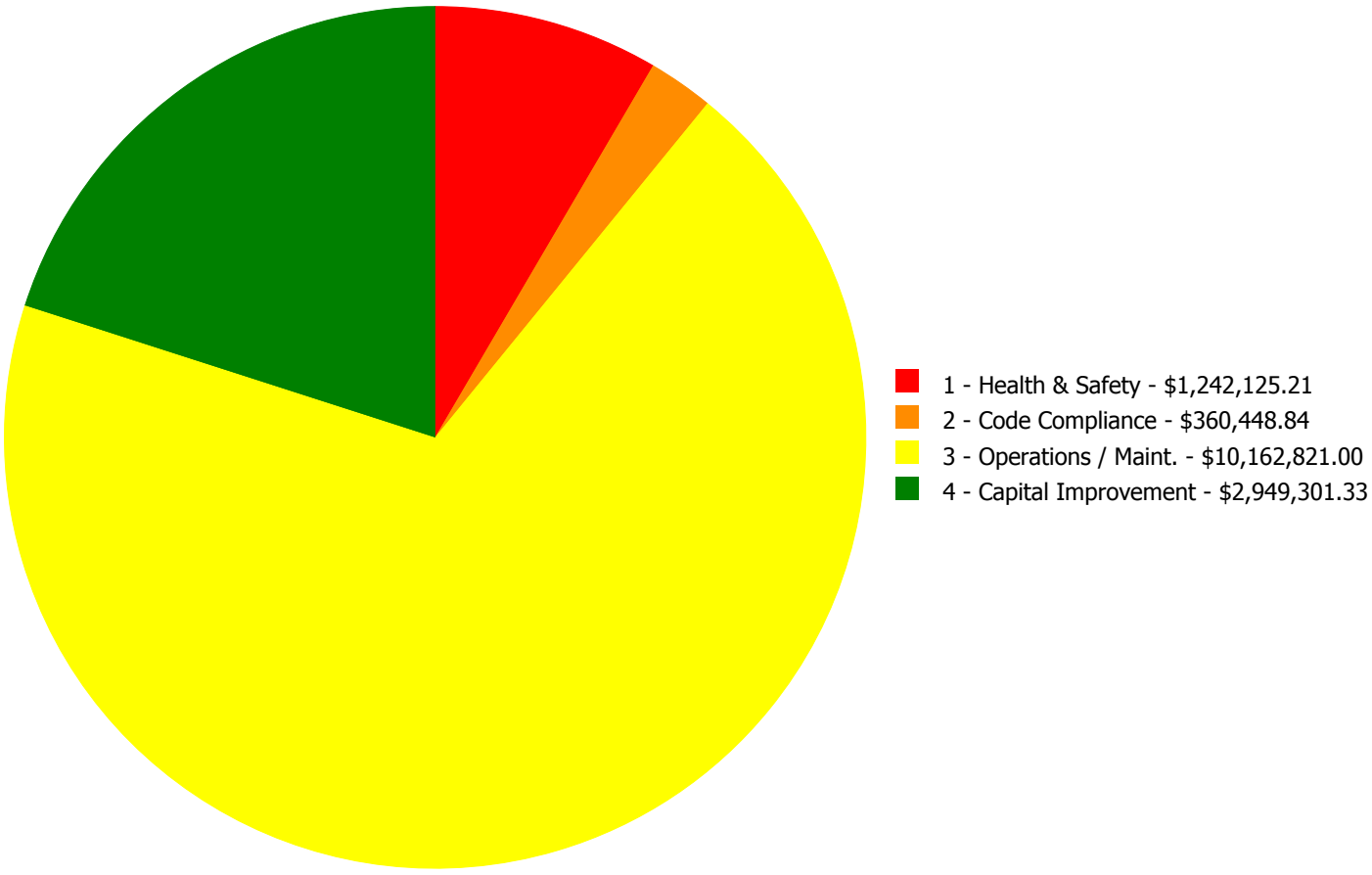
Deficiency By Priority Investment Table

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	$0.00	$0.00	$193,736.83	$0.00	$0.00	$193,736.83
B2020	Exterior Windows	$0.00	$0.00	$921,461.07	$0.00	$0.00	$921,461.07
B2030	Exterior Doors	$0.00	$0.00	$0.00	$273,219.62	$0.00	$273,219.62
B3010105	Built-Up	$0.00	$1,677,159.56	$0.00	$0.00	$0.00	$1,677,159.56
B3020	Roof Openings	$0.00	$3,061.06	$0.00	$0.00	$0.00	$3,061.06
C1020	Interior Doors	$0.00	$0.00	$83,485.42	$267,152.88	$0.00	$350,638.30
C1030	Fittings	$0.00	$0.00	$84,445.85	$0.00	$0.00	$84,445.85
C3020413	Vinyl Flooring	$0.00	$0.00	$0.00	$182,000.02	$0.00	$182,000.02
D1010	Elevators and Lifts	$0.00	$0.00	$192,517.57	$0.00	$0.00	$192,517.57
D2010	Plumbing Fixtures	$0.00	$0.00	$60,633.52	$0.00	$0.00	$60,633.52
D2020	Domestic Water Distribution	$0.00	$48,947.09	$405,049.51	$0.00	$0.00	$453,996.60
D2030	Sanitary Waste	$0.00	$0.00	$392,131.20	$0.00	$0.00	$392,131.20
D2040	Rain Water Drainage	$0.00	$0.00	$354,457.31	$0.00	$0.00	$354,457.31
D3020	Heat Generating Systems	$0.00	$761,614.22	$80,790.47	$0.00	$0.00	$842,404.69
D3040	Distribution Systems	$0.00	$1,546,238.86	$2,429,542.61	$308,301.04	$0.00	$4,284,082.51
D3060	Controls & Instrumentation	$0.00	$0.00	$0.00	$0.00	$1,714,730.41	$1,714,730.41
D4010	Sprinklers	$1,143,476.53	$0.00	$0.00	$0.00	$0.00	$1,143,476.53
D5010	Electrical Service/Distribution	$0.00	$0.00	$0.00	$323,268.73	$0.00	$323,268.73
D5020	Lighting and Branch Wiring	$0.00	$0.00	$502,123.76	$0.00	$0.00	$502,123.76
D5030	Communications and Security	$0.00	$0.00	$0.00	$256,232.99	$0.00	$256,232.99
D5090	Other Electrical Systems	$0.00	$0.00	$409,178.43	$0.00	$0.00	$409,178.43
E2010	Fixed Furnishings	$0.00	$0.00	$0.00	$99,739.82	$0.00	$99,739.82
	Total:	$1,143,476.53	$4,037,020.79	$6,109,553.55	$1,709,915.10	$1,714,730.41	$14,714,696.38

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: $14,714,696.38

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: 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: 79,933.00

Unit of Measure: S.F.

Estimate: $1,143,476.53

Assessor Name: Craig Anding

Date Created: 10/21/2015

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: B3010105 - Built-Up

Location: Exterior
Distress: Building Envelope Integrity
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and Replace Built Up Roof
Qty: 49,500.00
Unit of Measure: S.F.
Estimate: $1,677,159.56
Assessor Name: Craig Anding
Date Created: 01/13/2016

Notes: Install all new roofing system including insulation within next 3 to 4 years; tear-down existing roofing; install flashing, and counter flashing

System: B3020 - Roof Openings

Location: Exterior
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Replace roof hatch - pick the closest size
Qty: 1.00
Unit of Measure: Ea.
Estimate: $3,061.06
Assessor Name: Craig Anding
Date Created: 01/13/2016

Notes: Replace roof hatch

System: D2020 - Domestic Water Distribution

Location: First Floor

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace instantaneous water heater

Qty: 2.00

Unit of Measure: Ea.

Estimate: $48,947.09

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Replace the two existing Paloma instant hot water heaters, which were inoperable during the site visit.

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace boiler, cast iron sectional (100 HP)

Qty: 2.00

Unit of Measure: Ea.

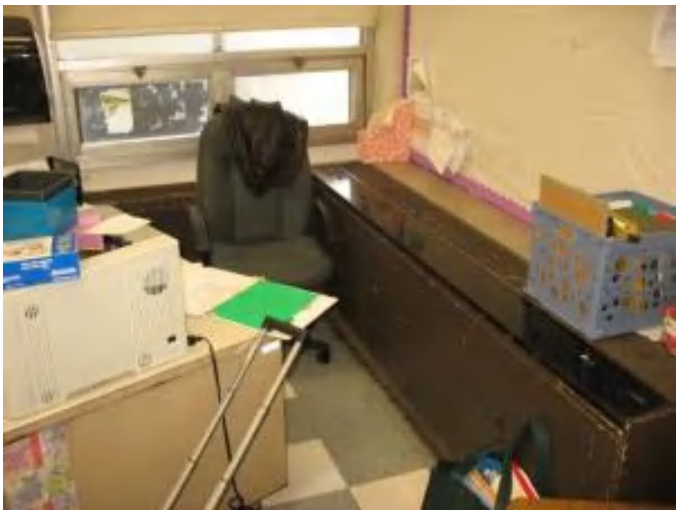
Estimate: $761,614.22

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Replace the two existing 4,023MBH cast iron sectional boilers and burners with new cast iron sectional boilers of similar size, burners, and power ventilators.

System: D3040 - Distribution Systems



Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace classroom unit ventilator (htg/clg coils, 5 tons, 2,000 CFM)

Qty: 31.00

Unit of Measure: Ea.

Estimate: $1,546,238.86

Assessor Name: Craig Anding

Date Created: 10/21/2015

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

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

System: B2010 - Exterior Walls

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Repair cracks in masonry - replace missing mortar and repoint - SF of wall area

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $193,736.83

Assessor Name: Craig Anding

Date Created: 01/13/2016

Notes: Repair cracked and buckling exterior masonry; tuck point

System: B2020 - Exterior Windows

Location: Exterior

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

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

Correction: Remove and replace curtain wall systems - SF of curtain wall area

Qty: 4,500.00

Unit of Measure: S.F.

Estimate: $737,253.44

Assessor Name: Craig Anding

Date Created: 01/13/2016

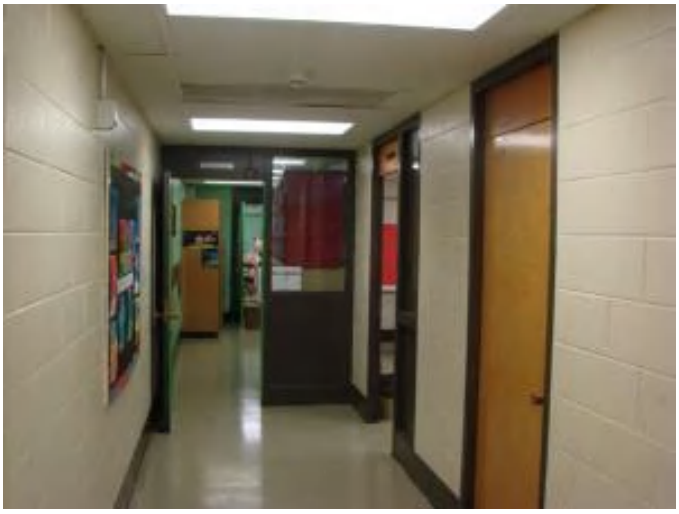
Notes: Replace all windows (curtain wall)

System: B2020 - Exterior Windows

Location: Exterior
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace security screens
Qty: 1,200.00
Unit of Measure: S.F.
Estimate: $184,207.63
Assessor Name: Craig Anding
Date Created: 01/13/2016

Notes: Replace security screens on the 1st floor

System: C1020 - Interior Doors



Location: Interior
Distress: Building / MEP Codes
Category: 2 - Code Compliance
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace door knobs with compliant lever type
Qty: 150.00
Unit of Measure: Ea.
Estimate: $83,485.42
Assessor Name: Craig Anding
Date Created: 01/13/2016

Notes: Replace interior doors hardware for ADA accessibility

System: C1030 - Fittings

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 26.00

Unit of Measure: Ea.

Estimate: $84,445.85

Assessor Name: Craig Anding

Date Created: 01/13/2016

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

System: D1010 - Elevators and Lifts

Location: Interior

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Replace elevator - 2 stop hydraulic

Qty: 1.00

Unit of Measure: Ea.

Estimate: $192,517.57

Assessor Name: Craig Anding

Date Created: 01/13/2016

Notes: Replace existing 2000 lb traction elevator with new 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: 8.00

Unit of Measure: Ea.

Estimate: $60,633.52

Assessor Name: Craig Anding

Date Created: 10/21/2015

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: D2020 - Domestic Water Distribution

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace domestic water piping (75 KSF)

Qty: 79,933.00

Unit of Measure: S.F.

Estimate: $405,049.51

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Hire a qualified contractor to perform a detailed inspection of the domestic water piping in the original building, in use for almost 50 years, and replace any damaged piping.

System: D2030 - Sanitary Waste

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Inspect sanitary waste piping and replace damaged sections. (+50KSF)

Qty: 79,933.00

Unit of Measure: S.F.

Estimate: $392,131.20

Assessor Name: Craig Anding

Date Created: 10/21/2015

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: D2040 - Rain Water Drainage

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Inspect internal rain water drainage piping and replace pipe - based on SF of multi-story building - insert SF of building

Qty: 79,933.00

Unit of Measure: S.F.

Estimate: $354,457.31

Assessor Name: Craig Anding

Date Created: 10/21/2015

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: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace pump, base-mounted, end suction HHW (4" size, 7-1/2 HP, to 350 GPM)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $80,790.47

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Replace the 7.5HP end suction heating water supply pump which is beyond its service life and is in poor condition.

System: D3040 - Distribution Systems

Location: Throughout building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 79,933.00

Unit of Measure: S.F.

Estimate: $756,196.07

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Hire a qualified contractor to examine the dual temperature distribution piping, in service for nearly 50 years, and perform additional testing to locate and replace any damaged piping and to further quantify the extent of potential failures.

System: D3040 - Distribution Systems

Location: Roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace utility set exhaust fan (5 HP)

Qty: 11.00

Unit of Measure: Ea.

Estimate: $433,668.93

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Replace eleven (11) roof mounted exhaust fans which are beyond their service life.

System: D3040 - Distribution Systems

Location: Cafetorium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace HVAC unit for Cafeteria (850)

Qty: 1,236.00

Unit of Measure: Student

Estimate: $336,435.66

Assessor Name: Craig Anding

Date Created: 02/22/2016

Notes: Replace the two (2) air handling units serving the Cafetorium which are beyond their service lives, with new more efficient units.

System: D3040 - Distribution Systems

Location: Penthouse mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace HVAC unit for IMC (850 students).

Qty: 616.00

Unit of Measure: Student

Estimate: $322,982.33

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Replace the two (2) air handling units serving the IMC and office suites which are beyond their service lives, with new more efficient units.

System: D3040 - Distribution Systems

Location: Penthouse mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace HVAC unit for IMC (850 students).

Qty: 616.00

Unit of Measure: Student

Estimate: $322,980.82

Assessor Name: Craig Anding

Date Created: 02/22/2016

Notes: Replace the one (1) air handling units serving the IMC offices which is beyond its service life, with new more efficient units.

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 Admin (2000 students).

Qty: 616.00

Unit of Measure: Student

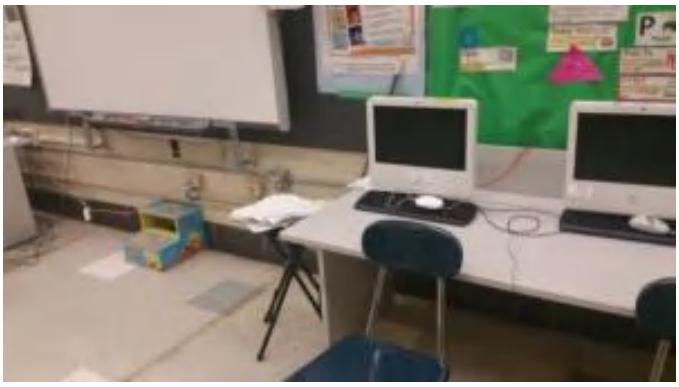
Estimate: $257,278.80

Assessor Name: Craig Anding

Date Created: 02/22/2016

Notes: Replace the one (1) air handling unit serving the Administration office which is beyond its service life, with new more efficient units.

System: D5020 - Lighting and Branch Wiring



Location: throughout the building

Distress: Inadequate

Category: 4 - Capital Improvement

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: $502,123.76

Assessor Name: Craig Anding

Date Created: 12/16/2015

Notes: Install two receptacles on each wall of the classrooms and other areas within the building. Install surface-mounted receptacles in computer rooms.

System: D5090 - Other Electrical Systems

Location: throughout the building
Distress: Beyond Service Life
Category: 4 - Capital Improvement
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace Emergency/Exit Lighting
Qty: 1.00
Unit of Measure: Ea.
Estimate: $286,693.02
Assessor Name: Craig Anding
Date Created: 12/16/2015

Notes: Install new emergency exit signs emergency lights.

System: D5090 - Other Electrical Systems

Location: electrical room
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 3 - Response Time (3-4 yrs)
Correction: Replace standby generator system
Qty: 1.00
Unit of Measure: Ea.
Estimate: $122,485.41
Assessor Name: Craig Anding
Date Created: 12/16/2015

Notes: Install a new 100 KW emergency generator to replace the existing inadequate 30KW Gen Set.

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

System: B2030 - Exterior Doors

Location: Exterior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 30.00

Unit of Measure: Ea.

Estimate: $273,219.62

Assessor Name: Craig Anding

Date Created: 01/13/2016

Notes: Replace exterior doors

System: C1020 - Interior Doors

Location: Interior

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace interior doors - wood doors with hollow metal frames - per leaf

Qty: 56.00

Unit of Measure: Ea.

Estimate: $267,152.88

Assessor Name: Craig Anding

Date Created: 01/13/2016

Notes: Replace damaged interior doors

System: C3020413 - Vinyl Flooring

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove VAT and replace with VCT - SF of area

Qty: 12,000.00

Unit of Measure: S.F.

Estimate: $182,000.02

Assessor Name: Craig Anding

Date Created: 01/13/2016

Notes: Replace VAT tile throughout the building

System: D3040 - Distribution Systems

Location: Gymnasium

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Install HVAC unit for Gymnasium (single station).

Qty: 6,000.00

Unit of Measure: Ea.

Estimate: $308,301.04

Assessor Name: Craig Anding

Date Created: 10/21/2015

Notes: Replace the two (2) heating and ventilation units serving the Gymnasium, which are beyond their service life, by installing a constant volume air handling unit with distribution ductwork and registers.

System: D5010 - Electrical Service/Distribution

Location: electrical room

Distress: Beyond Service Life

Category: 4 - Capital Improvement

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

Correction: Replace Electrical DIstribution System (U1)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $234,699.71

Assessor Name: Craig Anding

Date Created: 12/16/2015

Notes: Install a new 1000 KVA, 480V 3 phase electrical Service, with a 1600 A 480V Switchgear to handle existing loads plus future HVAC loads.

System: D5010 - Electrical Service/Distribution

Location: electrical room

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Electrical Switchgear and Distribution System

Qty: 0.00

Unit of Measure: Ea.

Estimate: $79,189.00

Assessor Name: Craig Anding

Date Created: 12/16/2015

Notes: Install two new 480 V MCCs to handle the new HVAC loads.

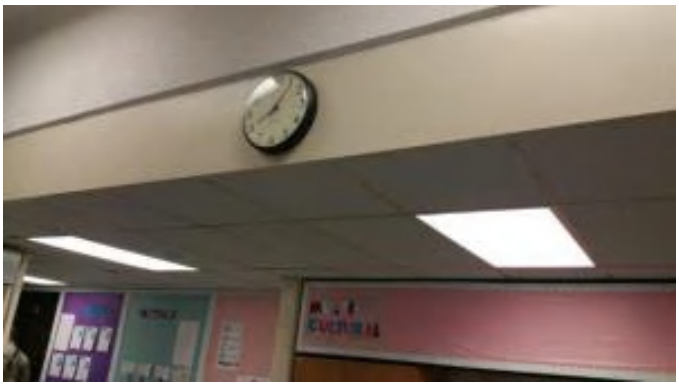
System: D5010 - Electrical Service/Distribution

This deficiency has no image.

Location: electrical room
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 4 - Response Time (4-5 yrs)
Correction: Replace Step Down Transformer
Qty: 0.00
Unit of Measure: Ea.
Estimate: $9,380.02
Assessor Name: Craig Anding
Date Created: 12/16/2015

Notes: Install a new 500KV transformer (480V- 120V) to feed the existing 120V distribution panels.
Note: There is no picture posted, since presently there is no existing 500 KVA step-down transformer

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: $157,584.31
Assessor Name: Craig Anding
Date Created: 12/16/2015

Notes: Install new Clock System.

System: D5030 - Communications and Security

Location: throughout the building

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add/Replace Video Surveillance System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $98,648.68

Assessor Name: Craig Anding

Date Created: 12/16/2015

Notes: Install new Video Surveillance System with Cameras and CCTV.

System: E2010 - Fixed Furnishings

Location: Interior

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace casework - per LF - insert quantities for cabinets in the estimate

Qty: 120.00

Unit of Measure: L.F.

Estimate: $99,739.82

Assessor Name: Craig Anding

Date Created: 01/13/2016

Notes: Replace built-in cabinets in classrooms

Priority 5 - Response Time (> 5 yrs):

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 (75KSF)

Qty: 79,933.00

Unit of Measure: S.F.

Estimate: $1,714,730.41

Assessor Name: Craig Anding

Date Created: 10/21/2015

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
D1010 Elevators and Lifts	Hydraulic, passenger elevator, 3000 lb, 2 floors, 100 FPM	1.00	Ea.	Interior					30	1967	2047	$73,815.00	$81,196.50
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 4070 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	Smith	Mills 450			35	1967	2002	$106,115.00	$233,453.00
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, steam, gross output, 4070 MBH, includes burners, controls and insulated jacket, packaged	2.00	Ea.	Boiler Room	Smith	Mills 450			35	1967	2002	$106,115.00	$233,453.00
D3030 Cooling Generating Systems	Absorption water chiller, indirect-fired, steam or hot water, water cooled, single stage, 200 ton	1.00	Ea.	Boiler Room					30	1998	2028	$298,204.50	$328,024.95
D3030 Cooling Generating Systems	Cooling tower, packaged unit, fiberglass tower on galvanized steel support structure, draw thru, 200 tons, includes standard controls, excludes pumps and piping	1.00	Ea.	Mechanical Yard	Tower Tech				35	1998	2033	$32,429.10	$35,672.01
D3040 Distribution Systems	Pump, general utility, centrifugal, end suction, horizontal base mounted, horizontal split case, rated @ 100' head, single stage, 500 GPM, 20 H.P., 4" discharge, includes drip proof motor	1.00	Ea.	Boiler Room					25	1998	2023	$13,566.00	$14,922.60
D3040 Distribution Systems	Pump, general utility, centrifugal, end suction, horizontal base mounted, horizontal split case, rated @ 100' head, single stage, 500 GPM, 20 H.P., 4" discharge, includes drip proof motor	1.00	Ea.	Boiler Room	Paco				25	1998	2023	$13,566.00	$14,922.60
D3040 Distribution Systems	Pump, general utility, centrifugal, end suction, horizontal base mounted, vertical split case, rated @ 100' head, single stage, 750 GPM, 30 H.P., 4" discharge, includes drip proof motor	1.00	Ea.	Boiler Room	Paco	11-40127			25	1998	2023	$9,832.50	$10,815.75
												Total:	**$952,460.41**

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):	117,400
Year Built:	1967
Last Renovation:	
Replacement Value:	$2,090,557
Repair Cost:	$1,426,095.18
Total FCI:	68.22 %
Total RSLI:	90.01 %

Description:

Attributes:

General Attributes:

Bldg ID:	S539001	Site ID:	S539001

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	84.62 %	78.67 %	$1,242,857.24
G40 - Site Electrical Utilities	106.67 %	35.88 %	$183,237.94
Totals:	**90.01 %**	**68.22 %**	**$1,426,095.18**

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.	27,500	30	1967	1997	2047	106.67 %	133.40 %	32		$280,644.55	$210,375
G2030	Pedestrian Paving	$11.52	S.F.	66,900	40	1967	2007	2057	105.00 %	124.85 %	42		$962,212.69	$770,688
G2040	Site Development	$4.36	S.F.	117,400	25	2000	2025		40.00 %	0.00 %	10			$511,864
G2050	Landscaping & Irrigation	$3.78	S.F.	23,000	15	1967	1982	2032	113.33 %	0.00 %	17			$86,940
G4020	Site Lighting	$3.58	S.F.	117,400	30	1967	1997	2047	106.67 %	23.29 %	32		$97,904.60	$420,292
G4030	Site Communications & Security	$0.77	S.F.	117,400	30	1967	1997	2047	106.67 %	94.40 %	32		$85,333.34	$90,398
								Total	**90.01 %**	**68.22 %**			**$1,426,095.18**	**$2,090,557**

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.

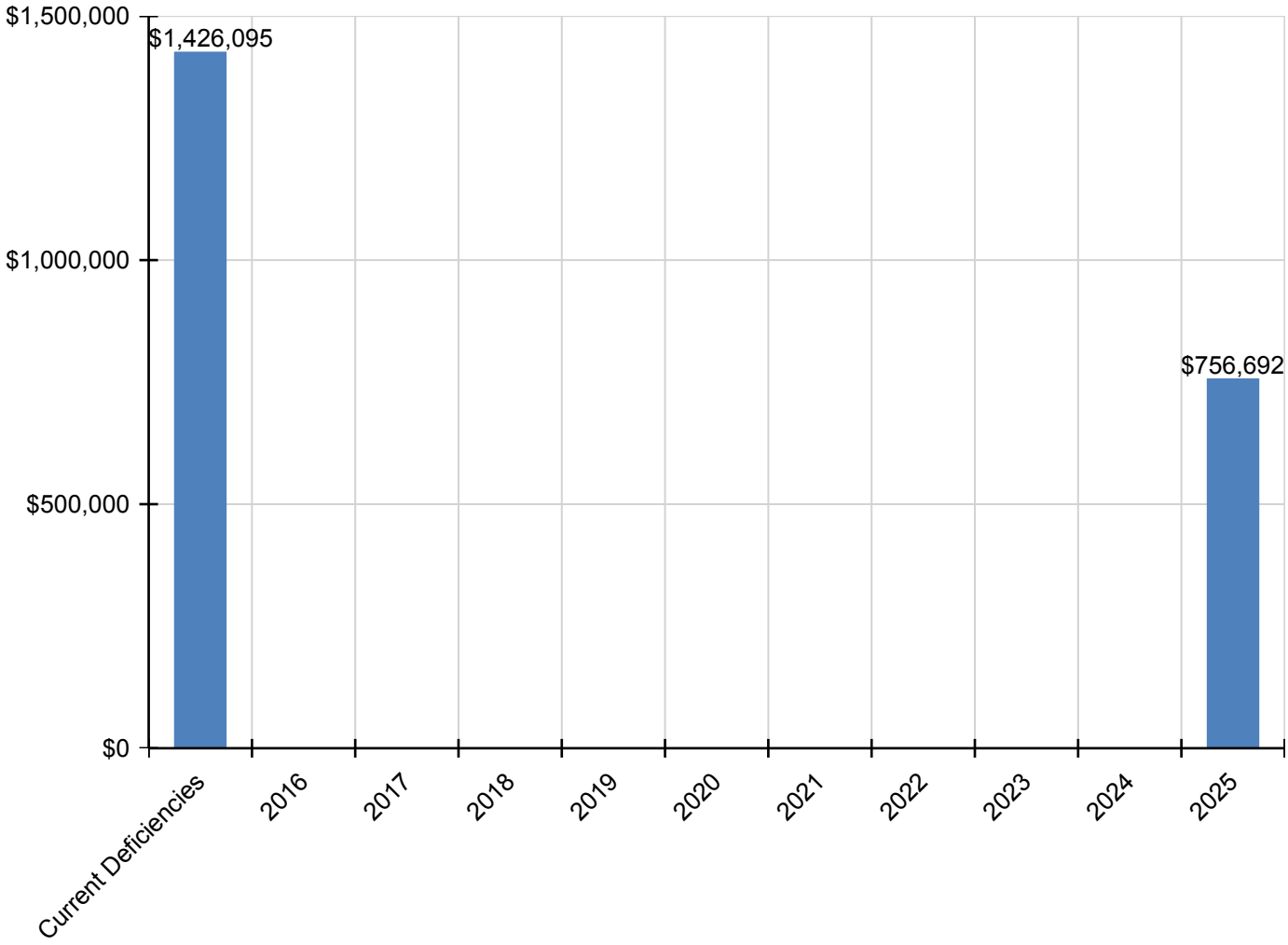
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$1,426,095**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$756,692**	**$2,182,787**
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	$280,645	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$280,645**
G2030 - Pedestrian Paving	$962,213	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$962,213**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$756,692	**$756,692**
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	$97,905	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$97,905**
G4030 - Site Communications & Security	$85,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$85,333**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

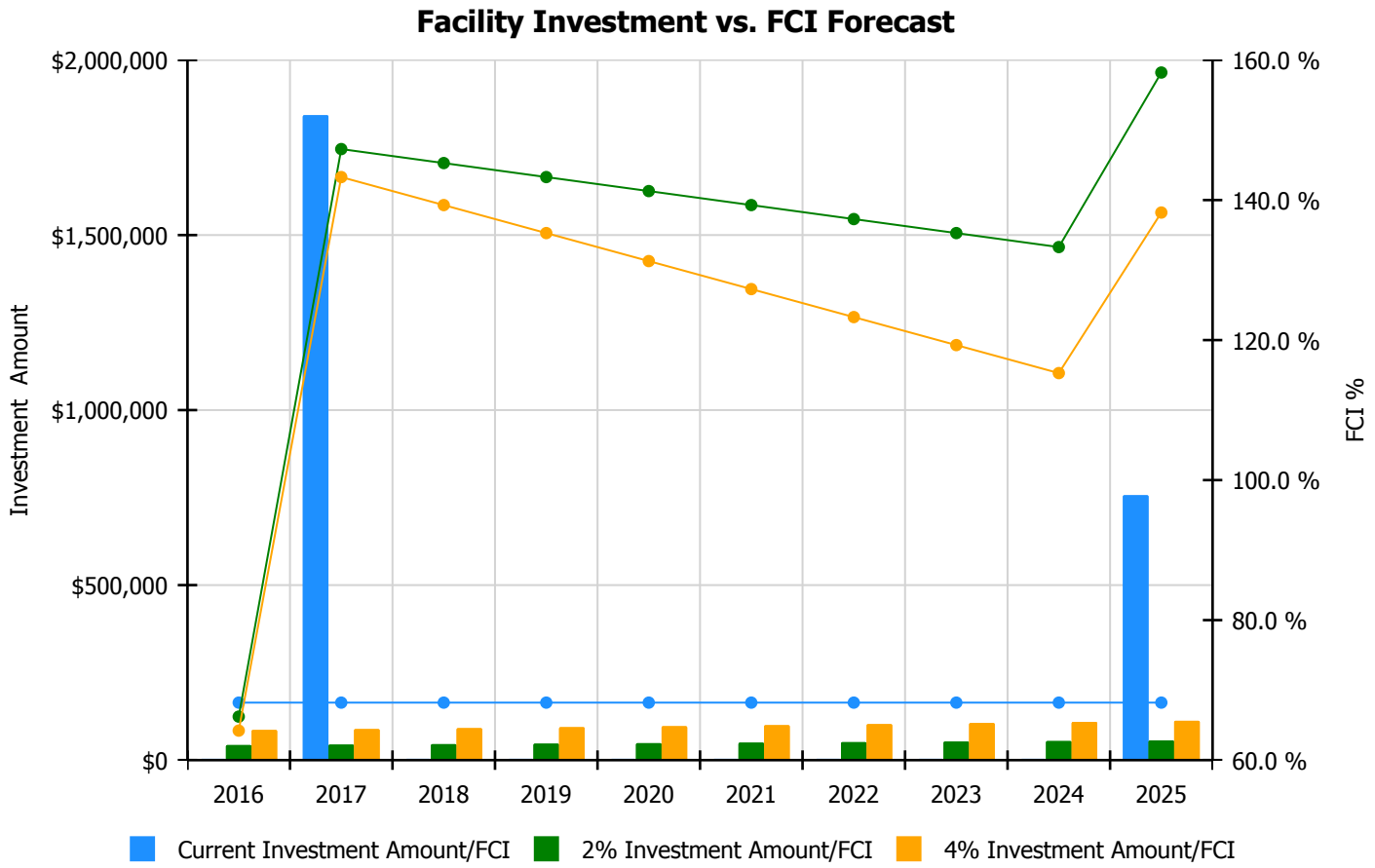
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

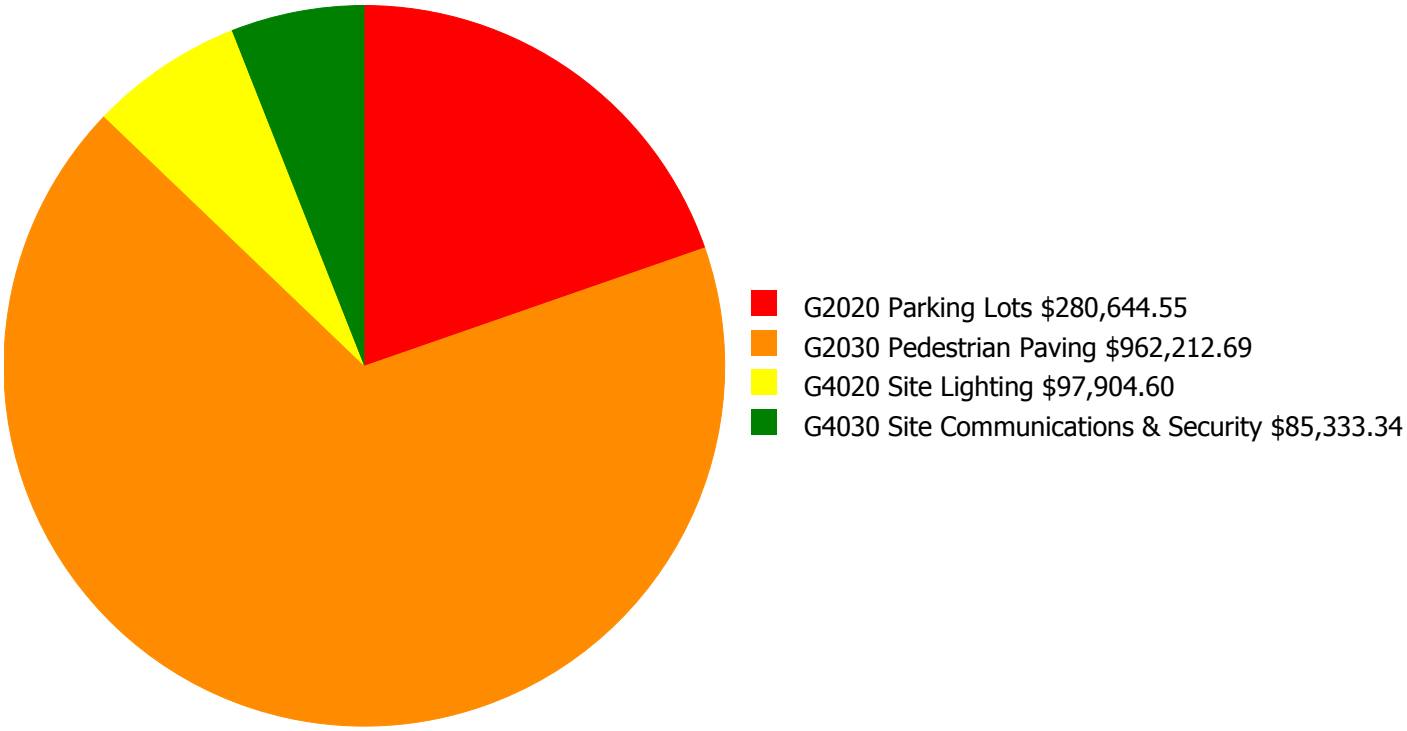
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 68.22%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$43,065.00	66.22 %	$86,131.00	64.22 %
2017	$1,842,320	$44,357.00	147.28 %	$88,715.00	143.28 %
2018	$0	$45,688.00	145.28 %	$91,376.00	139.28 %
2019	$0	$47,059.00	143.28 %	$94,118.00	135.28 %
2020	$0	$48,471.00	141.28 %	$96,941.00	131.28 %
2021	$0	$49,925.00	139.28 %	$99,849.00	127.28 %
2022	$0	$51,422.00	137.28 %	$102,845.00	123.28 %
2023	$0	$52,965.00	135.28 %	$105,930.00	119.28 %
2024	$0	$54,554.00	133.28 %	$109,108.00	115.28 %
2025	$756,692	$56,191.00	158.22 %	$112,381.00	138.22 %
Total:	**$2,599,012**	**$493,697.00**		**$987,394.00**	

Deficiency Summary by System

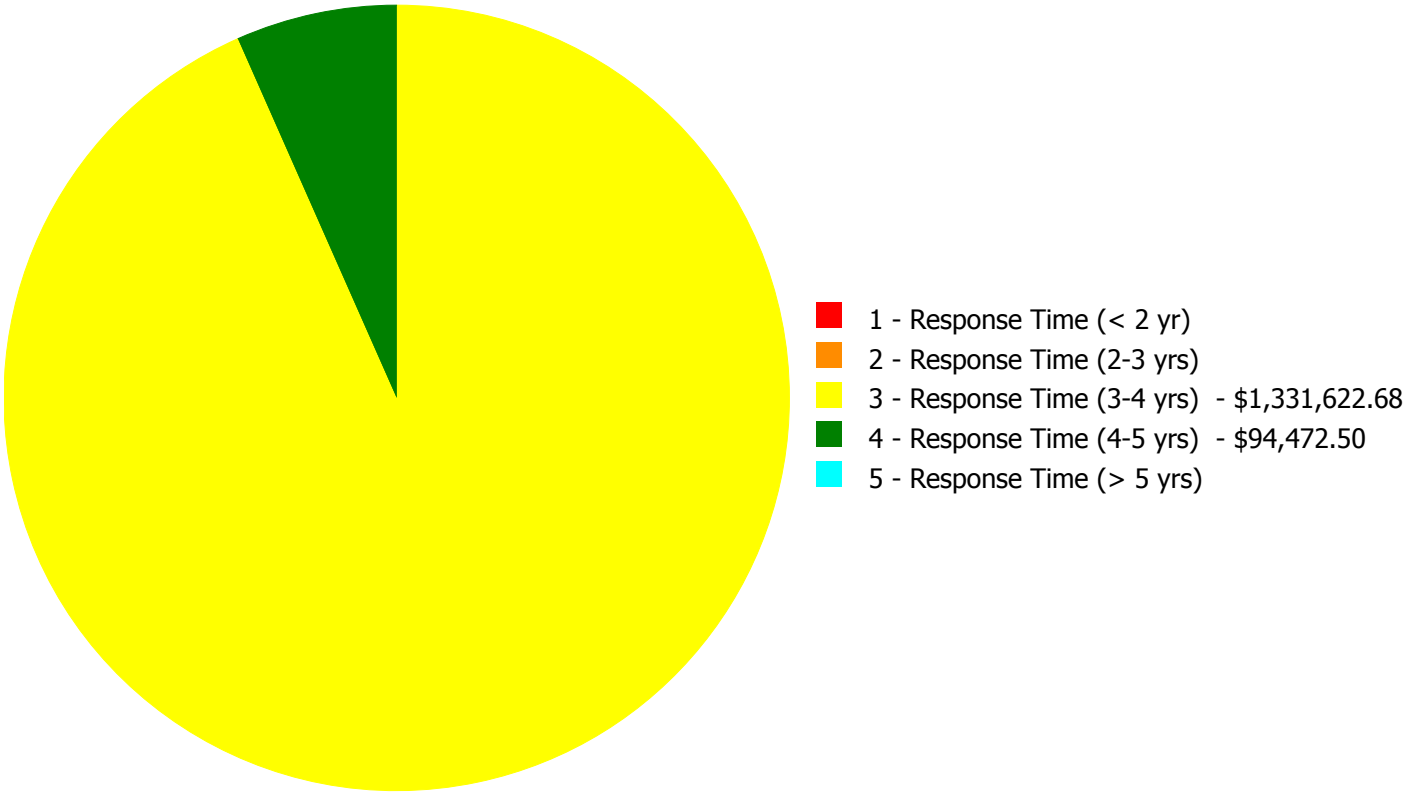
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $1,426,095.18

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: $1,426,095.18

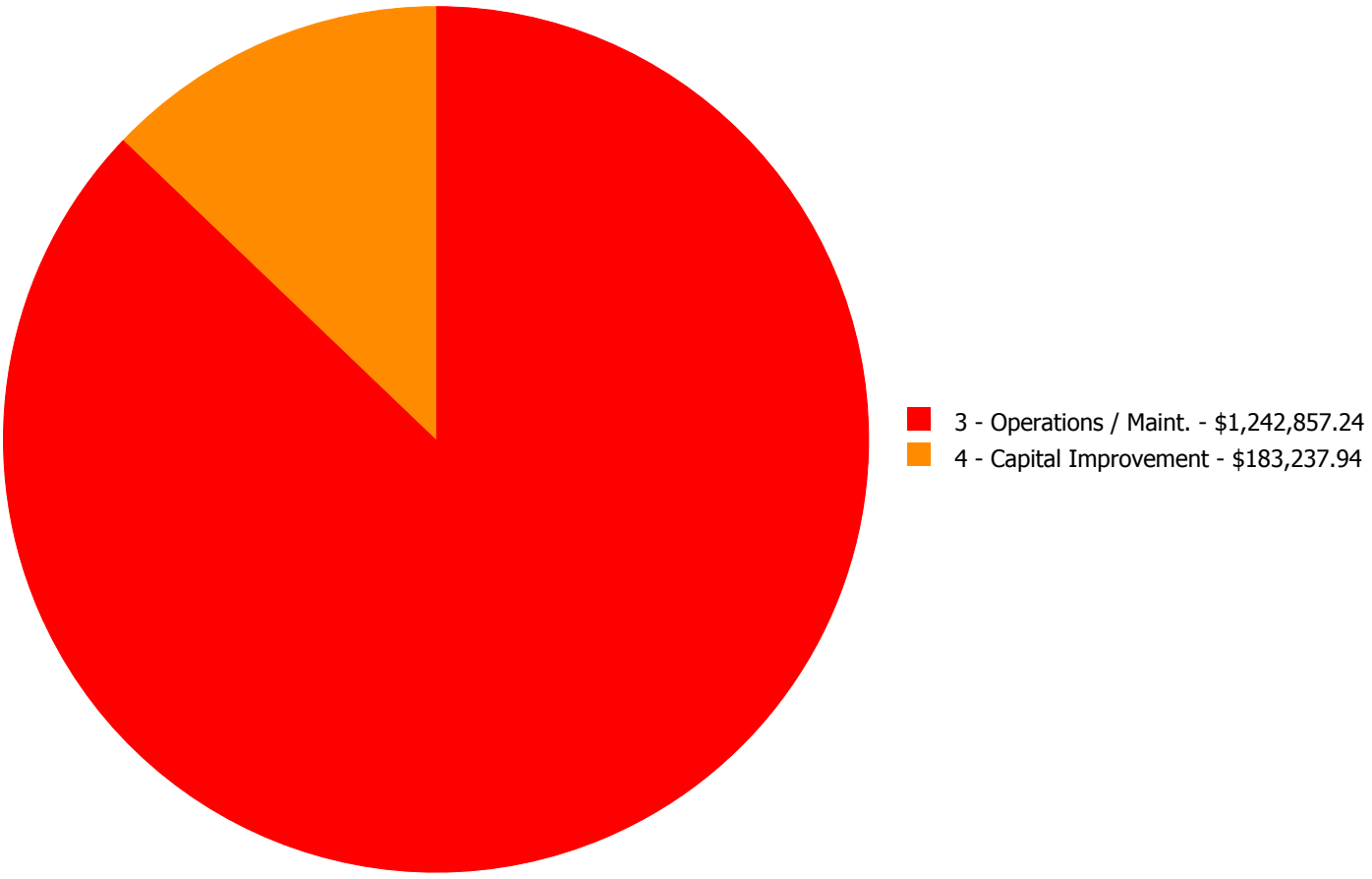
Deficiency By Priority Investment Table

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
G2020	Parking Lots	$0.00	$0.00	$271,505.39	$9,139.16	$0.00	$280,644.55
G2030	Pedestrian Paving	$0.00	$0.00	$962,212.69	$0.00	$0.00	$962,212.69
G4020	Site Lighting	$0.00	$0.00	$97,904.60	$0.00	$0.00	$97,904.60
G4030	Site Communications & Security	$0.00	$0.00	$0.00	$85,333.34	$0.00	$85,333.34
	Total:	$0.00	$0.00	$1,331,622.68	$94,472.50	$0.00	$1,426,095.18

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:



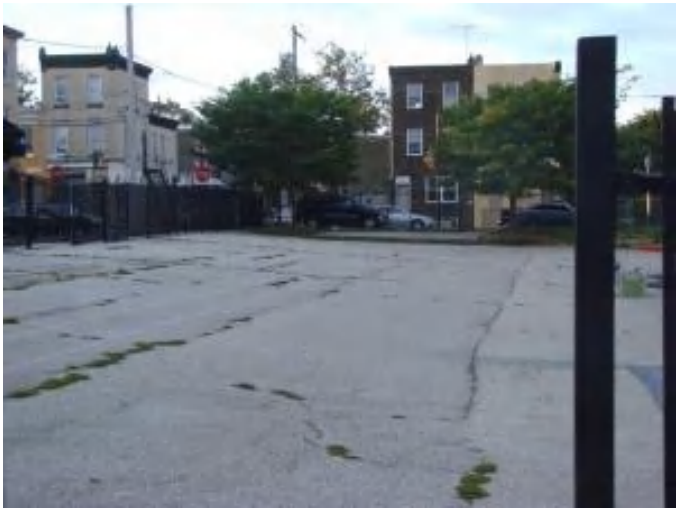
Budget Estimate Total: $1,426,095.18

Deficiency Details by Priority

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

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

System: G2020 - Parking Lots



Location: Grounds
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Remove and replace AC paving parking lot
Qty: 19,200.00
Unit of Measure: S.F.
Estimate: $271,505.39
Assessor Name: Wlodek Pieczonka
Date Created: 01/13/2016

Notes: Replace pavement in the parking lot

System: G2030 - Pedestrian Paving

Location: Grounds
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Remove and replace concrete sidewalk or concrete paving - 4" concrete thickness
Qty: 66,900.00
Unit of Measure: S.F.
Estimate: $962,212.69
Assessor Name: Wlodek Pieczonka
Date Created: 01/13/2016

Notes: Resurface damaged playground paving (30%). Provide engineered fill for sinking playground areas

System: G4020 - Site Lighting

Location: Grounds

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Site Lighting - pole mounted - select the proper light and pole

Qty: 1.00

Unit of Measure: Ea.

Estimate: $97,904.60

Assessor Name: Wlodek Pieczonka

Date Created: 12/16/2015

Notes: Install additional outdoor lighting for the grounds

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

System: G2020 - Parking Lots

Location: Grounds

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Stripe parking stalls, install parking bumpers, provide handicap symbol and handicap post mounted sign - insert proper quantities in estimate

Qty: 46.00

Unit of Measure: Ea.

Estimate: $9,139.16

Assessor Name: Wlodek Pieczonka

Date Created: 01/13/2016

Notes: Provide stall striping including accessible spaces and aisles

System: G4030 - Site Communications & Security

Location: Grounds

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Site Paging System

Qty: 0.00

Unit of Measure: Ea.

Estimate: $85,333.34

Assessor Name: Wlodek Pieczonka

Date Created: 12/16/2015

Notes: Install additional speakers for the grounds.

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