

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.

Locke School

Governance	DISTRICT	Report Type	Elementary/middle
Address	4550 Haverford Ave. Philadelphia, Pa 19139	Enrollment	460
Phone/Fax	215-823-8202 / 215-823-5721	Grade Range	'00-'08'
Website	Www.Philasd.Org/Schools/Locke	Admissions Category	Neighborhood
		Turnaround Model	N/A

Building/System FCI Tiers

Facility Condition Index (FCI) = $\frac{\text{Cost of Assessed Deficiencies}}{\text{Replacement Value}}$				
< 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	24.57%	\$11,358,168	\$46,218,987
Building	24.30 %	\$10,748,563	\$44,228,436
Grounds	30.62 %	\$609,605	\$1,990,551

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	87.21 %	\$1,622,948	\$1,861,064
Exterior Walls (Shows condition of the structural condition of the exterior facade)	02.18 %	\$52,309	\$2,403,940
Windows (Shows functionality of exterior windows)	00.00 %	\$0	\$1,049,510
Exterior Doors (Shows condition of exterior doors)	00.00 %	\$0	\$128,590
Interior Doors (Classroom doors)	99.91 %	\$289,267	\$289,520
Interior Walls (Paint and Finishes)	00.00 %	\$0	\$1,294,370
Plumbing Fixtures	08.06 %	\$195,922	\$2,431,660
Boilers	00.00 %	\$0	\$1,437,590
Chillers/Cooling Towers	00.00 %	\$0	\$1,884,960
Radiators/Unit Ventilators/HVAC	17.45 %	\$577,568	\$3,310,230
Heating/Cooling Controls	158.90 %	\$1,651,814	\$1,039,500
Electrical Service and Distribution	72.68 %	\$542,863	\$746,900
Lighting	22.18 %	\$592,357	\$2,670,360
Communications and Security (Cameras, Pa System and Fire Alarm)	41.51 %	\$415,150	\$1,000,230

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

S147001;Locke

Final

Site Assessment Report

January 30, 2017



Table of Contents

Site Executive Summary	4
Site Condition Summary	10
<u>B147001:Locke</u>	12
Executive Summary	12
Condition Summary	13
Condition Detail	14
System Listing	15
System Notes	17
Renewal Schedule	18
Forecasted Sustainment Requirement	21
Condition Index Forecast by Investment Scenario	22
Deficiency Summary By System	23
Deficiency Summary By Priority	24
Deficiency By Priority Investment	25
Deficiency Summary By Category	26
Deficiency Details By Priority	27
Equipment Inventory Detail	46
<u>G147001:Grounds</u>	47
Executive Summary	47
Condition Summary	48
Condition Detail	49
System Listing	50
System Notes	51
Renewal Schedule	52
Forecasted Sustainment Requirement	53
Condition Index Forecast by Investment Scenario	54
Deficiency Summary By System	55
Deficiency Summary By Priority	56
Deficiency By Priority Investment	57

Site Assessment Report

Deficiency Summary By Category	58
Deficiency Details By Priority	59
Equipment Inventory Detail	65
Glossary	66

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 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):	67,200
Year Built:	1966
Last Renovation:	2001
Replacement Value:	\$46,218,987
Repair Cost:	\$11,358,167.73
Total FCI:	24.57 %
Total RSLI:	62.72 %



Description:

Facility Assessment

October 30, 2015

School District of Philadelphia

Alain Locke Elementary School

4550 Haverford Avenue

Philadelphia, PA 19139

77,000 SF / 676 Students / LN 02

The Locke Elementary School building is located at 4500 Haverford Avenue in Philadelphia, PA. It is a 77,000 sq. ft., 3-story building with a partial level basement. The building was constructed in 1964. School capacity is 676 students with current enrollment of 466 serving Grades K-8.

Site Assessment Report - S147001;Locke

Mr. Will Singleton, Building Engineer, accompanied us on our tour of the school and provided us with detailed information on the building systems and maintenance history.

ARCHITECTURAL/STRUCTURAL

The building has an exposed concrete frame that bears on concrete spread footings and foundations. The openings in the frame are filled with CMU walls and basement walls that rest on continuous strip footings. The foundations are not showing signs of significant settlement or damage. The basement floor is slab on grade. The main structure of the three story portion consists of cast-in-place concrete columns, beams and concrete floor slabs. The roof structure consists of concrete slab supported by the main structural frame. The roof of the single story section is concrete plank supported by metal bar joists.

The building envelope is exposed structural elements with brick masonry over CMU that fill in the openings in the frame. The masonry walls are double wythe and have no cavity or insulation layer in the matrix. In general, masonry is in fair condition with repairs needed including pointing of failing masonry joints. The original windows and frames installed in 1964 were replaced in the early 2008 with extruded aluminum hopper windows double glazed panes but no insect screens. Exterior doors are typically hollow metal with glazing, in fair condition.

The roof is covered with a membrane of modified bituminous roll roofing built-up with bonded seams installed in approximately 1995. The roof is designed with a zero parapet height that allows overflow from failed roof drains. The roof is in poor condition with failing seams and flashings. Several leaks were reported by the maintenance staff and evidence of roof leaks was observed through damaged interior finishes. Fixed interior metal ladders and hatches are available to access the roof levels. Tree branches should be cut back clear of the perimeter of the roof edges.

Partition walls are painted CMU. Some classrooms have moveable wall panels. Interior classroom and office doors are solid core wood in hollow metal frames with glazed lites and knob operators. Classroom doors are not recessed and swing into the exit corridors. The doors to the exit stairs are hollow metal with closers, but do not have panic hardware.

Fittings include: toilet accessories in poor condition; plastic toilet partitions in the student restrooms and metal partitions in the staff restrooms are generally in fair condition; interior identifying signage is typically directly painted on wall or door surfaces and is inadequate.

Stair construction is generally metal pan with cast iron non-slip treads in fair condition. Handrails are aluminum and have extensions at landings, but do not meet modern codes for configuration with improper cross-section at rails and mounting height. Barrier rails at landings and stairs are also too low.

Generally, the building is not accessible per ADA requirements. Ramps are provided at building entries. The building has a passenger / service elevator with access to all floors. A single (unisex) accessible restroom for staff and accessible restrooms for boys and girls should be provided on the 1st, 2nd and 3rd Floors and at the Nurses room.

The interior walls are painted finish and generally in good condition. The corridor walls were painted in 2015. The auditorium has wood paneling on the back walls. The restrooms have painted concrete floors. Flooring in classrooms, the auditorium, the Lunchroom/Gym, kitchen, faculty dining and corridors is VAT. The VAT floor of the Medical 114 should be replaced due to damage. The main office, science classrooms, staff restrooms and 2nd Floor classrooms (201, 203, 205) have VCT tile, generally in good condition. The basement floors are painted concrete. The floor of the IMC is covered with carpet tile. Service areas have sealed concrete floors.

Classroom, corridor and office in the 3 story classroom building have painted concrete structure with the exception of a few spaces with 2x4 acoustical tile ceilings. Most of the 1st floor has 2x4 acoustical tile ceilings with the exception of the concealed spline ceiling in the Auditorium. The IMC, Faculty dining and several rooms in the main offices have 2x4 suspended acoustical ceiling that are in poor condition with some water damaged tiles and yellowing of the suspension system. The Auditorium has concealed spline ceiling. The ceilings in the stage, gym/lunchroom classrooms, corridors and services areas are painted exposed concrete structure. The ceiling of the restrooms on the 3rd Floor is wet and damaged by roof leaks.

Institutional and Commercial equipment includes: stage light bar; auditorium sound system; stage draperies; Smartboards/Promethean boards; basketball backstops are wall mounted in fair condition. Kitchen equipment is residential and in fair condition. The Auditorium is equipped with a full size projection screen that has been damaged.

Furnishings include: fixed casework in classrooms, corridors and library, generally in fair to poor condition; window shades, generally

Site Assessment Report - S147001;Locke

in good condition; window drapes at the auditorium; fixed auditorium seating is original wood with metal frame, generally in fair condition with some damaged/vandalized seats; fixed seating in the Faculty dining is plastic or laminate with metal frame, generally in good condition. The base cabinets and counter tops are damaged and should be replaced in Kindergarten classrooms 115 and 117.

MECHANICAL

Toilet room plumbing fixtures consist of wall hung vitreous china water closets, urinals, and lavatories. Age of fixtures varies from original 1965 to contemporary low flow models. Some flush valves are installed in pipe chases. Some lavatories have separate hot and cold spouts with momentary action valves, and others have single level operated faucets. Approximately 15% of the toilet fixtures need replacement due to age, appearance, leaks, etc. The school food service is provided from two rooms beside the gym. One room has an electric convection oven and refrigerators, and the other has a two basin, stainless steel, cabinet mounted, domestic kitchen sink of indeterminate age. There is no chemical injection, disposal, or grease trap. The kitchen sink is sufficient for hand washing. The science room on the second floor has 4 lab sinks, 1 for the instructor and 3 along the inside wall (formerly the closet). They appear to have been installed in the past 10 years but are in poor condition. Only one flows. Stainless steel basins are rusty. The instructor's sink does not drain. These should be repaired along with toilet room fixtures. Service sinks are floor level concrete with stainless steel rims and wall mounted faucets with vacuum breakers. They are located in janitor storage closets. They are slightly stained and in fair condition and can be expected to last 10 more years. There are no showers in the gym locker rooms. Drinking fountains are a mixture of styles and materials in the corridors, kindergarten rooms, and gym. They are non-accessible and have exceeded their life expectancy. Fountains should be replaced throughout the entire school.

Municipal water service enters the building in the basement crawlspace from Haverford Ave. and was not accessible for inspection. Makeup water for the boiler system has a backflow preventer. Domestic water distribution pipe is soldered copper. It is in fair condition over all. Water was originally heated by a shell-and-tube heat exchanger which is abandoned in place. There are two Paloma brand, gas fired, tankless water heaters. They were manufactured in 1985 and 1986 and have greatly exceeded their expected lifespan. They each have circulation pumps connecting to a storage tank. There is a vertical hot water storage tank installed in 2015 with a building circulation pump on it. The water heaters should be replaced due to age. There is no domestic water pressure booster system.

Sanitary drains are cast iron pipe with hub and spigot connections and threaded galvanized steel pipe. The sanitary drain pipes are visually in good condition, but they have surpassed their life expectancy and some sink drains flow poorly, so they should be inspected in detail and repaired as needed to prevent further failures. There is no sewage ejector.

Rain water drain pipes are threaded galvanized steel with cast iron roof strainers. The roof does not have overflow drains, however there is no parapet. There are two floor sumps in the boiler room with two pumps each. The sump by the boilers has one new pump installed. Both sumps drained quickly when the float switches were raised manually to trigger the pumps. Even with two sumps, there was still standing water on the floor in multiple areas of the boiler room, especially around the boilers.

The building is heated by hot water and ventilated and cooled by unit vents for the classrooms and four fan coil units for the gym and auditorium. The HVAC systems were largely renovated in 1999 or 2000.

Hot water is produced by 3 Buderus, model 605/12, cast iron boilers with 2,572 MBH (77 HP) gross output. Boilers were installed in 2000 and should have 20 years service life remaining. Boilers are equipped with Industrial Combustion brand dual fuel burners which operate on pressure atomized oil only, because the gas booster is not connected to the utility. A 6,000 gallon fuel oil tank is buried outside. The oil circulation pumps near the boilers were running during the inspection and sound good. There is a 1,000 liter (264 gallon) storage tank for the hydronic system manufactured in 1999. There are two hot water Armstrong model 4280 end suction pumps. The makeup water supply line has a backflow preventer.

Cooling for the building is provided by self contained refrigeration units in each unit ventilator. They have Copeland model ZR54K3-PFV-130, 5 ton capacity, R-22 refrigerant, scroll compressors manufactured in 1999. They are in good condition and have 5 – 10 years expectancy remaining. Total cooling capacity is estimated 190 tons. The gym and auditorium have no cooling generating equipment. Minimal cooling for those areas is provided by circulating the hydronic water through the classrooms and then to the air handler coils. An air conditioning system with 30 ton capacity should be installed for the gym and auditorium.

Two air handlers at the back of the auditorium heat and ventilate the auditorium via ceiling ducts with return grills at the front by the stage. Fresh air intake louvers are at the back of the auditorium, and exhaust hoods are on the roof above the stage. Two air handlers for the gym are located above the gym office and kitchen. Air handlers have approximately 4,000 CFM capacity each. They are equipped with pneumatic controls and have maintenance labels dated 1984, so they are most likely original equipment. They should be replaced due to age and lack of cooling coils when air conditioning is installed. The food service kitchen is located in a room adjacent to the gym. It has an electric convection oven. There is a domestic (not commercial) natural gas burning range in the food service sink room that does not have an exhaust hood. It should be removed or have an exhaust hood installed with fire suppression

Site Assessment Report - S147001;Locke

system. The hydronic pipe is a mix of soldered copper and threaded steel. It is in fair condition, and no problems were reported, so it should be expected to last 10 more years. There are two horizontal end suction pumps for hydronic water circulation in the boiler room with 7.5 HP motors. They were installed in 2000 and will work reliably until 2025.

Finned tube convection units provide supplemental heating in classrooms and are the sole heating units for smaller spaces like offices and toilet rooms. Forced draft convection units are located in hallways. Classroom units appear to have been replaced with the unit vents in 2000. Other locations have the original equipment which has exceeded its lifespan and is in poor condition. The principal and medical offices have window unit air conditioners since they lack unit vents.

Heating and ventilation controls were originally pneumatic, but they no longer work. Some thermostats have been replaced with digital electronic ones. There is an old air compressor abandoned in place in the boiler room, and the new one next to it is not operational. There is a refrigerated filter dryer for the air compressor. The principal complained about the lack of HVAC control. The entire control system should be replaced with a modern digital control system.

The building does not have stand pipes or sprinklers. A fire sprinkler system should be installed to increase occupant safety, including a fire pump if needed.

ELECTRICAL SYSTEMS

The electrical service for this facility is obtained via a CUTLER-HAMMER, 1600A, 120/208V service entrance switchboard which is located in the basement. The utility meter PECO 02 017457067 is wall mounted in the vicinity of the service entrance switchboard. The service entrance switchboard was installed in 1999 and is expected to provide 20 more years of useful service life. The service entrance switchboard will not have extra capacity for future Heating, Ventilation, Air Conditioning (HVAC) system, additional electrical service needs to be provided. The additional electrical service will be rated 500A, 480/277V and will be located in the basement.

In each floor, there are original, recessed, panel-boards for lighting and receptacles. The original panel-boards and associated wiring have exceeded the end of their useful life and they need to be replaced.

There number of receptacles in classrooms varies, approximately in 40% of the classrooms the quantity of receptacles are inadequate. The teacher's whiteboard wall and the opposite of it need to be provided with double compartment surface raceways, the other two walls with minimum two-duplex outlets each, when feasible.

Most of the classrooms are illuminated with pendant mounted, square fluorescent fixtures. The corridors and stairways are illuminated with recessed/surface fluorescent fixtures. The stairwells are illuminated with surface mounted fluorescent fixtures. The gymnasium/cafeteria is illuminated with pendant HID fixtures. The auditorium is illuminated with recessed HID downlight fixtures. The mechanical rooms are illuminated, with pendant mounted, industrial type fluorescent fixtures. Fluorescent fixtures in the corridors and remodeled classrooms are provided with T-8 lamps all other areas fluorescent fixtures are provided with T-12 lamps. T-12 lamps are becoming more expensive, consume more energy and are difficult to find, therefore replace all existing fluorescent fixtures with T-12 lamps with fluorescent fixtures with T-8 lamps.

The Fire Alarm system is manufactured by S.H. Couch Inc. The system is approximately 30 years old. The present Fire Alarm system does not meet current code and needs to be replaced. Fire alarm system is tested every day in the morning.

The present telephone system is adequate. During the assessment, randomly, we verified that each wall mounted handset is provided with a dial tone.

An independent and separate PA system does not exist, or is not working. School uses the telephone systems for public announcement. The system is working adequately for most part. The present clock control system is manufactured by Simplex Time Control Center. The system is old and difficult to find parts and repair. Replace clock system with wireless, battery operated, clock system. There is not television system.

The school security system consists of surveillance CCTV cameras. The first floor is provided with five surveillance CCTV cameras, the second floor is provided with two surveillance CCTV cameras, the third floor is not provided with surveillance CCTV cameras. Additional surveillance CCTV cameras are required for a complete coverage of the interior of the school.

The school does not have an emergency power system. For future emergency loads provide an outdoor, diesel powered generator. There is adequate UPS in the IT room. The emergency lighting is obtained with lighting fixtures with battery backup located along the exit corridors. Exit signs are located at each exit door and corridors. The school lightning protection system is accomplished with air terminals mounted on the chimney. A study needs to be conducted to verify the air terminals provide the proper coverage.

Site Assessment Report - S147001;Locke

The school is provided with one traction power elevator. The elevator motor is rated 25HP, 208V. Building Engineer indicated that the elevator has received a complete maintenance service 3 months ago. It appears that the elevator motor and controller can provide 5 more years of useful service life.

The auditorium is provided with two rows of theatrical down light fixtures controlled by local panel board. Modern school auditorium requires front, upstage, high side, back, theatrical lighting and to create different scenes theatrical lighting fixtures are controlled by a dimming system. Provide theatrical lighting and dimming control system. The auditorium sound system is obtained with a portable system. Provide a permanent installed sound system

The exterior of the school is illuminated with wall mounted lighting fixtures. Lighting fixtures are located on the north, south, and east façades, the west façade is not illuminated. Provide wall mounted fixtures on the west façade. There are three outdoor, surveillance CCTV cameras. Provide additional outdoor surveillance CCTV cameras along the building perimeter for a safer environment. There is a wall mounted loud speaker facing the playground area. There were no indication that additional loud speaker is required.

GROUNDS SYSTEMS

Parking for 54 faculty/staff vehicles is available on the east side of the school. A large asphalt play area is provided at the rear of the building on the south. Asphalt is in fair to poor condition with significant cracking present. Pedestrian paving is concrete, in serviceable condition with some mismatched replacement areas. Pedestrian stairs and entrance stoops are concrete with some evidence of repair. Accessible ramps are provided at the main entry on the north and the secondary entry on the east. Accessible stalls in the east lot are not properly stripped and have inadequate signage.

Metal picket fence that surrounds the site on the east and west is in good condition, but the chain link fence along the south property line is damaged and in poor condition. The masonry screen walls and retaining walls that occur on the west along N 46th Street are damaged and in poor condition. Site features include basketball backboards, bicycle racks and a flagpole. Site signage is inadequate.

Landscaping consists of lawn areas in front of the building on Haverford Avenue, on the east between the building and parking lot and the west side along N 46th Street. The site has trees along the fence line on the east and at the courtyards. Street trees are located in the sidewalks west and north of the building.

RECOMMENDATIONS:

- Repair failing mortar joints in 20% of the masonry exterior wall surfaces
- Replace failing roofing system including insulation, flashing, counter flashing, reglets and coping
- Provide a single (unisex) accessible restroom for staff on the 1st, 2nd and 3rd Floors and at the Nurses room.
- Replace interior classroom doors and provide recess to minimize swing into corridor.
- Replace the hollow metal doors to the exit stairs with new units that have panic hardware.
- Provide inadequate interior directional signage.
- Remove the VAT floors throughout the building.
- Replace damaged acoustical ceiling panels occurring throughout the building. Clean or paint existing grid.
- Provide a second code required exit for the boiler room and main electrical room on the basement level.
- Replace auditorium seating.
- Replace the damaged full size projection screen in the Auditorium.
- Replace the damaged base cabinets and counter tops in Kindergarten classrooms 115 and 117.
- Provide shelving in storage room 301A on the 3rd Floor to eliminate clutter and improve safety. (113)

MECHANICAL

- Replace water closets due to age
- Replace urinals due to age
- Replace lavatories due to age
- Replace failing flush valves
- Replace leaking faucets,
- Replace water fountains due to age and lack of accessibility, 5 pairs
- Replace tankless water heaters
- Inspect and repair sanitary drain piping due to age
- Provide air conditioning system with 30 ton capacity for auditorium and gymnasium
- Replace office, toilet, and corridor convection units due to age

Site Assessment Report - S147001;Locke

- Replace pneumatic HVAC control with digital
- Install fire protection sprinkler system, including fire pump if needed

ELECTRICAL

- Provide a new electrical service 480V/277V, 3 phase power, approximate 500 Amperes and will be located in the vicinity of the existing electrical service.
- Replace the entire distribution system with new panels and new wiring/conduits. Approximate (15) 208/120V panel boards.
- Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 205
- Replace 60% of the existing lighting fluorescent fixtures with fluorescent fixtures with T8 lamps. Approximate 600 fixtures
- Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 110 devices
- Provide wireless, synchronized, battery operated clock system. Approximate 50 clocks
- Provide indoor surveillance CCTV cameras for a complete coverage of the school interior. Approximate 10 CCTV cameras
- Provide 70 KW, outdoor, diesel powered generator.
- Prepare a study to determine if the air terminals on the chimney provide the proper protection to the school building.
- Provide the auditorium with theatrical lighting and dimming system.
- Provide the auditorium with a permanent installed sound system.
- Provide lighting fixtures along the west façade for a safer environment. Approximate 3 fixtures.
- Provide outdoor surveillance CCTV cameras. Approximate 8 CCTV cameras

GROUNDS

- Mill and overlay the asphalt surfaces of the playground areas.
- Replace the damaged chain link fence along the south property line.
- Replace damaged handrail at the main entry.
- Repair damaged screen walls and retaining walls.
- Mill and overlay the asphalt surfaces of the parking lot and provide adequate stripping and signage for the recommended number of accessible parking stalls in the east lot.
- Provide site directional signage.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 4 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S147001		

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.

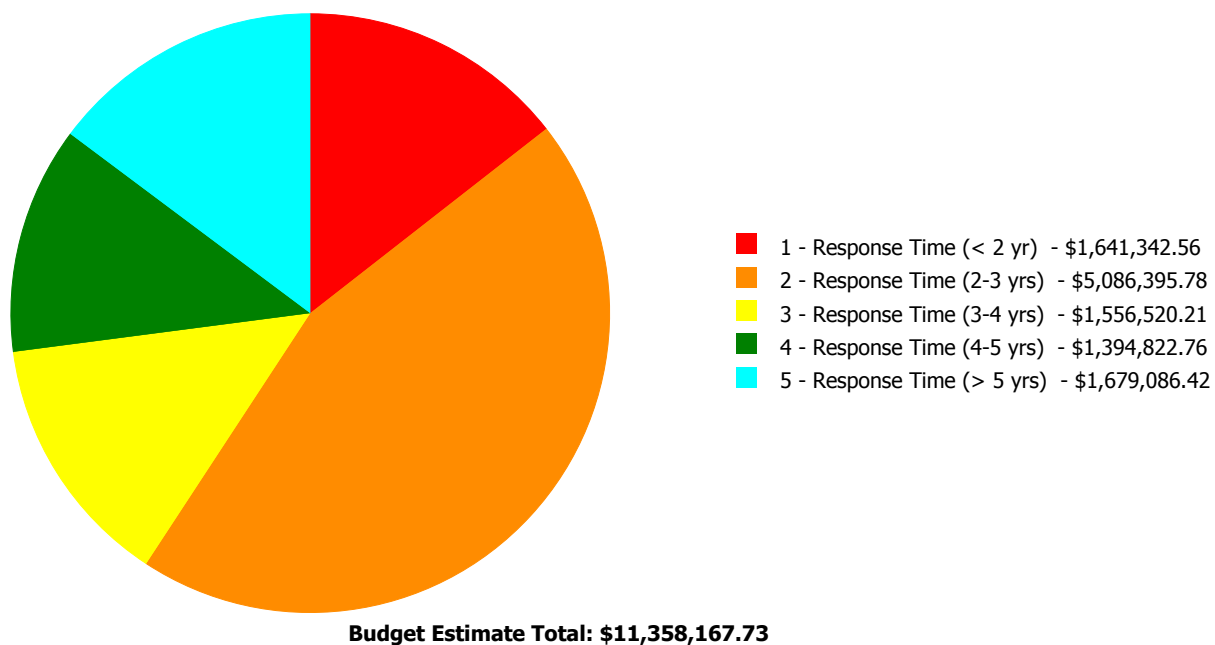
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	49.00 %	0.00 %	\$0.00
A20 - Basement Construction	49.00 %	0.00 %	\$0.00
B10 - Superstructure	49.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	58.92 %	1.46 %	\$52,308.93
B30 - Roofing	110.00 %	87.21 %	\$1,622,948.33
C10 - Interior Construction	32.07 %	33.04 %	\$580,323.25
C20 - Stairs	49.00 %	51.64 %	\$50,899.88
C30 - Interior Finishes	100.43 %	54.89 %	\$1,987,593.34
D10 - Conveying	14.29 %	0.00 %	\$0.00
D20 - Plumbing	33.36 %	18.64 %	\$583,753.86
D30 - HVAC	60.87 %	26.03 %	\$2,229,382.00
D40 - Fire Protection	105.71 %	158.77 %	\$1,101,517.95
D50 - Electrical	100.21 %	37.87 %	\$1,714,147.88
E10 - Equipment	57.90 %	34.40 %	\$421,633.78
E20 - Furnishings	105.00 %	246.36 %	\$404,053.67
G20 - Site Improvements	44.26 %	29.86 %	\$446,657.06
G40 - Site Electrical Utilities	46.31 %	32.95 %	\$162,947.80
Totals:	62.72 %	24.57 %	\$11,358,167.73

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)
B147001;Locke	77,000	24.30	\$1,629,801.41	\$4,904,841.43	\$1,155,456.68	\$1,379,376.93	\$1,679,086.42
G147001;Grounds	113,700	30.62	\$11,541.15	\$181,554.35	\$401,063.53	\$15,445.83	\$0.00
Total:		24.57	\$1,641,342.56	\$5,086,395.78	\$1,556,520.21	\$1,394,822.76	\$1,679,086.42

Deficiencies By Priority

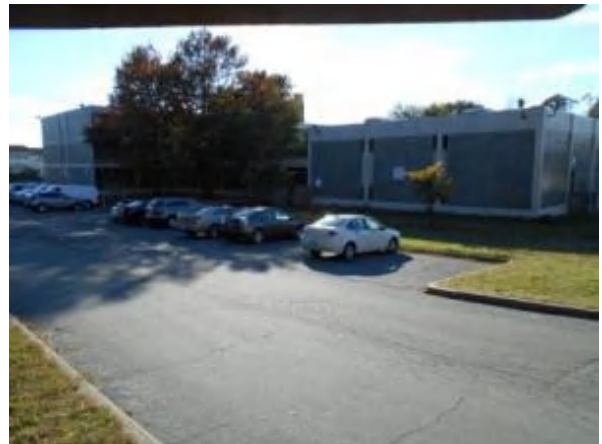


Executive Summary

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):	77,000
Year Built:	1964
Last Renovation:	
Replacement Value:	\$44,228,436
Repair Cost:	\$10,748,562.87
Total FCI:	24.30 %
Total RSLI:	63.53 %



Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B147001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S147001		

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	49.00 %	0.00 %	\$0.00
A20 - Basement Construction	49.00 %	0.00 %	\$0.00
B10 - Superstructure	49.00 %	0.00 %	\$0.00
B20 - Exterior Enclosure	58.92 %	1.46 %	\$52,308.93
B30 - Roofing	110.00 %	87.21 %	\$1,622,948.33
C10 - Interior Construction	32.07 %	33.04 %	\$580,323.25
C20 - Stairs	49.00 %	51.64 %	\$50,899.88
C30 - Interior Finishes	100.43 %	54.89 %	\$1,987,593.34
D10 - Conveying	14.29 %	0.00 %	\$0.00
D20 - Plumbing	33.36 %	18.64 %	\$583,753.86
D30 - HVAC	60.87 %	26.03 %	\$2,229,382.00
D40 - Fire Protection	105.71 %	158.77 %	\$1,101,517.95
D50 - Electrical	100.21 %	37.87 %	\$1,714,147.88
E10 - Equipment	57.90 %	34.40 %	\$421,633.78
E20 - Furnishings	105.00 %	246.36 %	\$404,053.67
Totals:	63.53 %	24.30 %	\$10,748,562.87

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	\$24.32	S.F.	77,000	100	1964	2064		49.00 %	0.00 %	49			\$1,872,640
A1030	Slab on Grade	\$15.51	S.F.	77,000	100	1964	2064		49.00 %	0.00 %	49			\$1,194,270
A2010	Basement Excavation	\$13.07	S.F.	77,000	100	1964	2064		49.00 %	0.00 %	49			\$1,006,390
A2020	Basement Walls	\$23.02	S.F.	77,000	100	1964	2064		49.00 %	0.00 %	49			\$1,772,540
B1010	Floor Construction	\$92.20	S.F.	77,000	100	1964	2064		49.00 %	0.00 %	49			\$7,099,400
B1020	Roof Construction	\$24.11	S.F.	77,000	100	1964	2064		49.00 %	0.00 %	49			\$1,856,470
B2010	Exterior Walls	\$31.22	S.F.	77,000	100	1964	2064		49.00 %	2.18 %	49		\$52,308.93	\$2,403,940
B2020	Exterior Windows	\$13.63	S.F.	77,000	40	2008	2048		82.50 %	0.00 %	33			\$1,049,510
B2030	Exterior Doors	\$1.67	S.F.	77,000	25	1964	1989	2028	52.00 %	0.00 %	13			\$128,590
B3010105	Built-Up	\$37.76	S.F.	47,900	20	2000	2020	2037	110.00 %	89.73 %	22		\$1,622,948.33	\$1,808,704
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.		20				0.00 %	0.00 %				\$0
B3020	Roof Openings	\$0.68	S.F.	77,000	20	1964	1984	2037	110.00 %	0.00 %	22			\$52,360
C1010	Partitions	\$14.93	S.F.	77,000	100	1964	2064		49.00 %	24.47 %	49		\$281,303.89	\$1,149,610
C1020	Interior Doors	\$3.76	S.F.	77,000	40	1964	2004		0.00 %	99.91 %	-11		\$289,266.51	\$289,520
C1030	Fittings	\$4.12	S.F.	77,000	40	1964	2004		0.00 %	3.07 %	-11		\$9,752.85	\$317,240
C2010	Stair Construction	\$1.28	S.F.	77,000	100	1964	2064		49.00 %	51.64 %	49		\$50,899.88	\$98,560

Site Assessment Report - B147001;Locke

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	\$15.63	S.F.	77,000	10	1964	1974	2024	90.00 %	0.00 %	9			\$1,203,510
C3010231	Vinyl Wall Covering	\$0.00	S.F.	77,000	15	1964	1979	2024	60.00 %	0.00 %	9			\$0
C3010232	Wall Tile	\$1.18	S.F.	77,000	30	1964	1994	2024	30.00 %	0.00 %	9			\$90,860
C3020411	Carpet	\$7.30	S.F.	1,337	10	1964	1974	2028	130.00 %	0.00 %	13			\$9,760
C3020412	Terrazzo & Tile	\$75.52	S.F.		50				0.00 %	0.00 %				\$0
C3020413	Vinyl Flooring	\$9.68	S.F.	72,188	20	1964	1984	2037	110.00 %	134.86 %	22		\$942,380.92	\$698,780
C3020414	Wood Flooring	\$22.27	S.F.		25				0.00 %	0.00 %				\$0
C3020415	Concrete Floor Finishes	\$0.97	S.F.	3,476	50	1964	2014	2028	26.00 %	0.00 %	13			\$3,372
C3030	Ceiling Finishes	\$20.97	S.F.	77,000	25	1964	1989	2042	108.00 %	64.73 %	27		\$1,045,212.42	\$1,614,690
D1010	Elevators and Lifts	\$2.61	S.F.	77,000	35	1985	2020		14.29 %	0.00 %	5			\$200,970
D2010	Plumbing Fixtures	\$31.58	S.F.	77,000	35	1964	1999	2025	28.57 %	8.06 %	10		\$195,922.37	\$2,431,660
D2020	Domestic Water Distribution	\$2.90	S.F.	77,000	25	1964	1989	2025	40.00 %	27.25 %	10		\$60,842.78	\$223,300
D2030	Sanitary Waste	\$2.90	S.F.	77,000	25	1964	1989	2030	60.00 %	146.43 %	15		\$326,988.71	\$223,300
D2040	Rain Water Drainage	\$3.29	S.F.	77,000	30	1964	1994	2030	50.00 %	0.00 %	15			\$253,330
D3020	Heat Generating Systems	\$18.67	S.F.	77,000	35	2000	2035		57.14 %	0.00 %	20			\$1,437,590
D3030	Cooling Generating Systems	\$24.48	S.F.	77,000	30	2000	2030		50.00 %	0.00 %	15			\$1,884,960
D3040	Distribution Systems	\$42.99	S.F.	77,000	25	1964	1989	2025	40.00 %	17.45 %	10		\$577,568.47	\$3,310,230
D3050	Terminal & Package Units	\$11.60	S.F.	77,000	20	1964	1984	2037	110.00 %	0.00 %	22			\$893,200
D3060	Controls & Instrumentation	\$13.50	S.F.	77,000	20	1964	1984	2037	110.00 %	158.90 %	22		\$1,651,813.53	\$1,039,500
D4010	Sprinklers	\$8.02	S.F.	77,000	35			2052	105.71 %	178.37 %	37		\$1,101,517.95	\$617,540
D4020	Standpipes	\$0.99	S.F.	77,000	35			2052	105.71 %	0.00 %	37			\$76,230
D5010	Electrical Service/Distribution	\$9.70	S.F.	77,000	30	1999	2029		46.67 %	72.68 %	14		\$542,863.00	\$746,900
D5020	Lighting and Branch Wiring	\$34.68	S.F.	77,000	20	1964	1984	2037	110.00 %	22.18 %	22		\$592,357.06	\$2,670,360
D5030	Communications and Security	\$12.99	S.F.	77,000	15	1964	1979	2032	113.33 %	41.51 %	17		\$415,150.10	\$1,000,230
D5090	Other Electrical Systems	\$1.41	S.F.	77,000	30	1964	1994	2047	106.67 %	150.85 %	32		\$163,777.72	\$108,570
E1020	Institutional Equipment	\$4.82	S.F.	77,000	35	1964	1999	2052	105.71 %	113.61 %	37		\$421,633.78	\$371,140
E1090	Other Equipment	\$11.10	S.F.	77,000	35	1964	1999	2028	37.14 %	0.00 %	13			\$854,700
E2010	Fixed Furnishings	\$2.13	S.F.	77,000	40	1964	2004	2057	105.00 %	246.36 %	42		\$404,053.67	\$164,010
Total									63.53 %	24.30 %			\$10,748,562.87	\$44,228,436

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 93%	
	Wood 2%	
	Tile 5%	

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:	\$10,748,563	\$0	\$0	\$0	\$0	\$256,277	\$0	\$0	\$0	\$1,857,745	\$8,818,388	\$21,680,974
* 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	\$52,309	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,309
B2020 - Exterior Windows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B2030 - Exterior Doors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B30 - Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010 - Roof Coverings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010105 - Built-Up	\$1,622,948	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,622,948
B3010120 - Single Ply Membrane	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010130 - Preformed Metal Roofing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3010140 - Shingle & Tile	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B3020 - Roof Openings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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	\$281,304	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$281,304

Site Assessment Report - B147001;Locke

C1020 - Interior Doors	\$289,267	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$289,267
C1030 - Fittings	\$9,753	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,753
C20 - Stairs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C2010 - Stair Construction	\$50,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,900
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	\$1,727,338	\$0	\$1,727,338
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	\$130,407	\$0	\$130,407
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	\$942,381	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$942,381
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	\$1,045,212	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,045,212
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	\$0	\$0	\$0	\$0	\$0	\$256,277	\$0	\$0	\$0	\$0	\$0	\$256,277
D20 - Plumbing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D2010 - Plumbing Fixtures	\$195,922	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,594,742	\$3,790,665
D2020 - Domestic Water Distribution	\$60,843	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$330,106	\$390,949
D2030 - Sanitary Waste	\$326,989	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$326,989
D2040 - Rain Water Drainage	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D30 - HVAC	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3020 - Heat Generating Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3030 - Cooling Generating Systems	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3040 - Distribution Systems	\$577,568	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,893,540	\$5,471,108
D3050 - Terminal & Package Units	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D3060 - Controls & Instrumentation	\$1,651,814	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,651,814
D40 - Fire Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D4010 - Sprinklers	\$1,101,518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,101,518
D4020 - Standpipes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

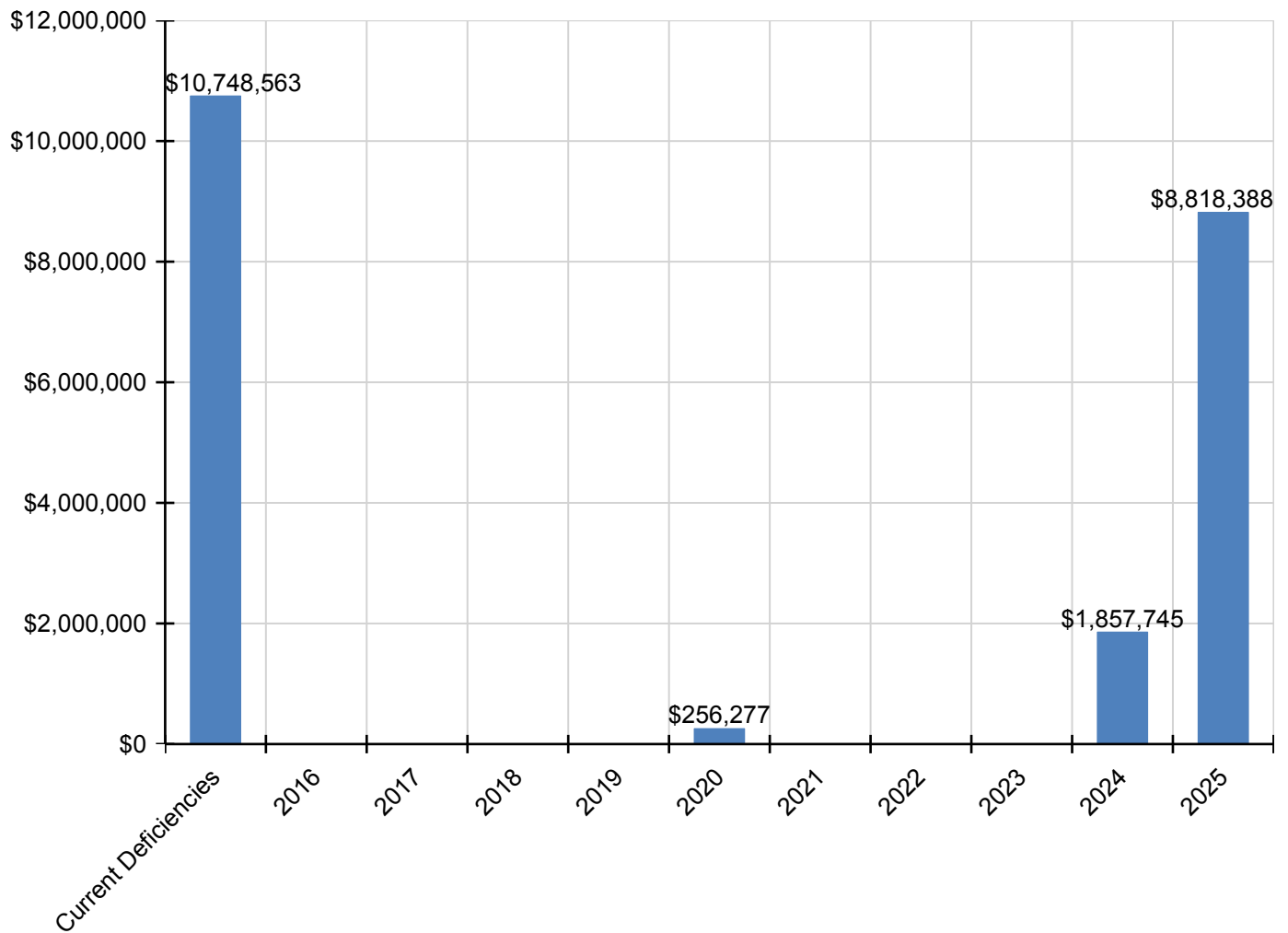
Site Assessment Report - B147001;Locke

D50 - Electrical	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
D5010 - Electrical Service/Distribution	\$542,863	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$542,863
D5020 - Lighting and Branch Wiring	\$592,357	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$592,357
D5030 - Communications and Security	\$415,150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$415,150
D5090 - Other Electrical Systems	\$163,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$163,778
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	\$421,634	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$421,634
E1090 - Other Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E20 - Furnishings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
E2010 - Fixed Furnishings	\$404,054	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$404,054

* Indicates non-renewable system

Forecasted Sustainment Requirement

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

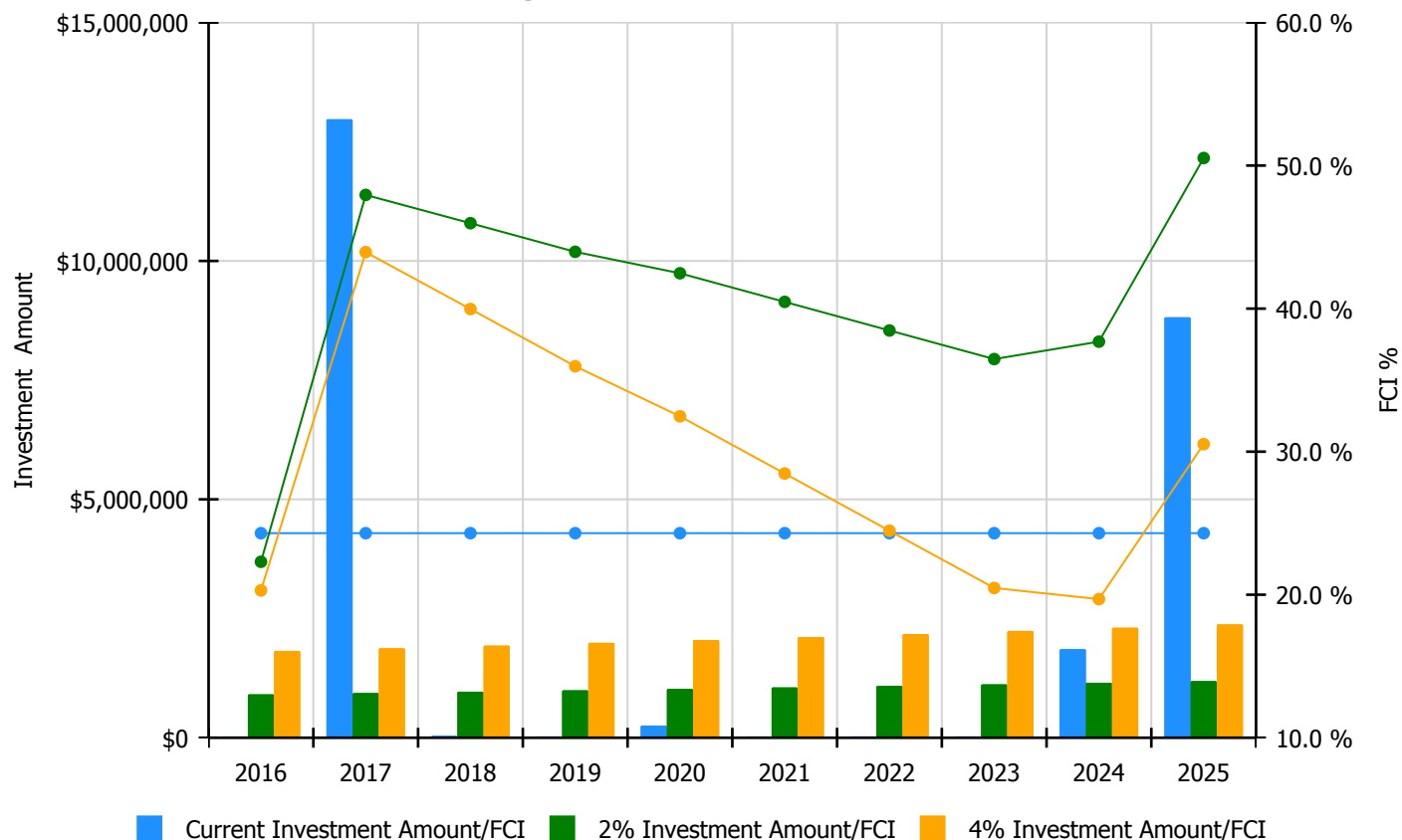


10 Year FCI Forecast by Investment Scenario

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

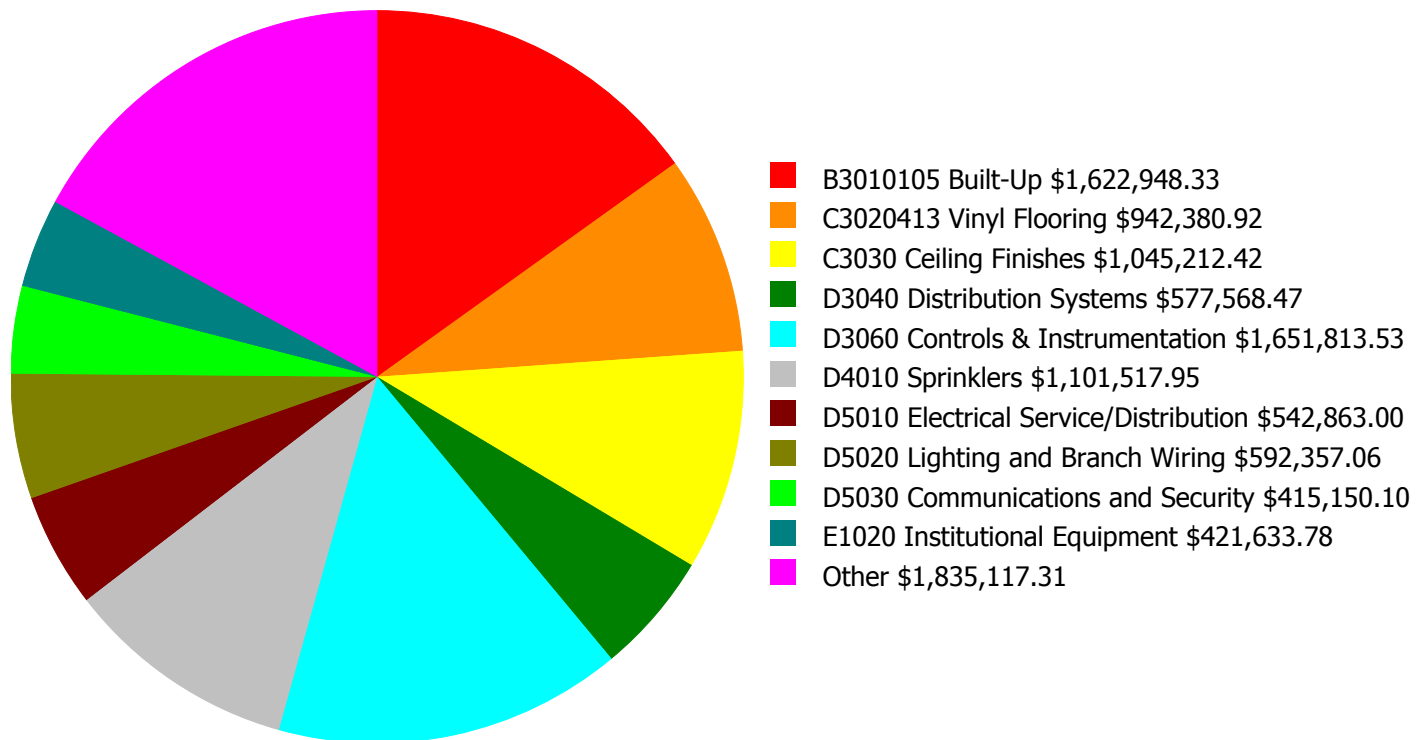
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 24.3%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	\$0	\$911,106.00	22.30 %	\$1,822,212.00	20.30 %
2017	\$12,971,460	\$938,439.00	47.95 %	\$1,876,878.00	43.95 %
2018	\$11,732	\$966,592.00	45.97 %	\$1,933,184.00	39.97 %
2019	\$0	\$995,590.00	43.97 %	\$1,991,180.00	35.97 %
2020	\$256,277	\$1,025,458.00	42.47 %	\$2,050,915.00	32.47 %
2021	\$0	\$1,056,221.00	40.47 %	\$2,112,443.00	28.47 %
2022	\$0	\$1,087,908.00	38.47 %	\$2,175,816.00	24.47 %
2023	\$0	\$1,120,545.00	36.47 %	\$2,241,090.00	20.47 %
2024	\$1,857,745	\$1,154,162.00	37.69 %	\$2,308,323.00	19.69 %
2025	\$8,818,388	\$1,188,786.00	50.53 %	\$2,377,573.00	30.53 %
Total:	\$23,915,602	\$10,444,807.00		\$20,889,614.00	

Deficiency Summary by System

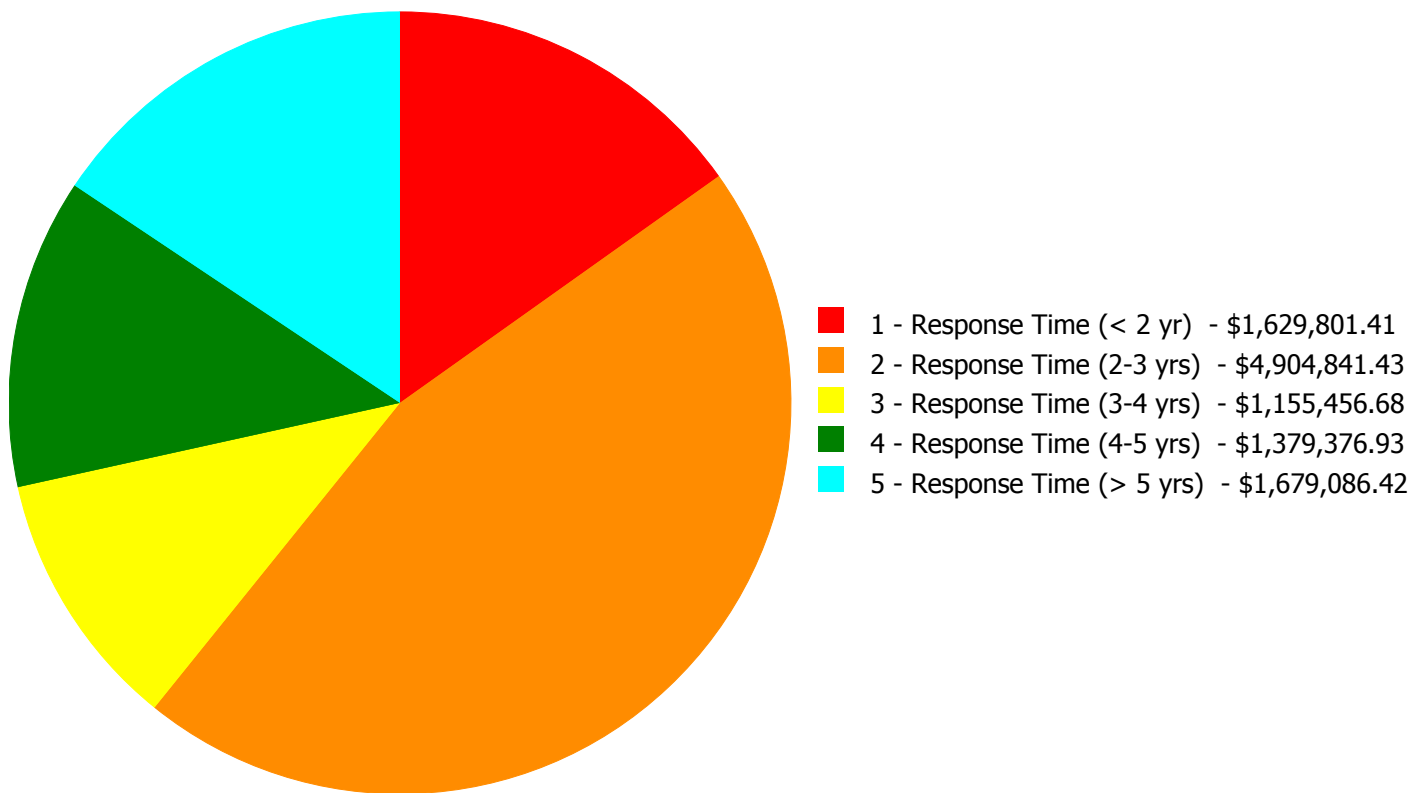
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: \$10,748,562.87

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: \$10,748,562.87

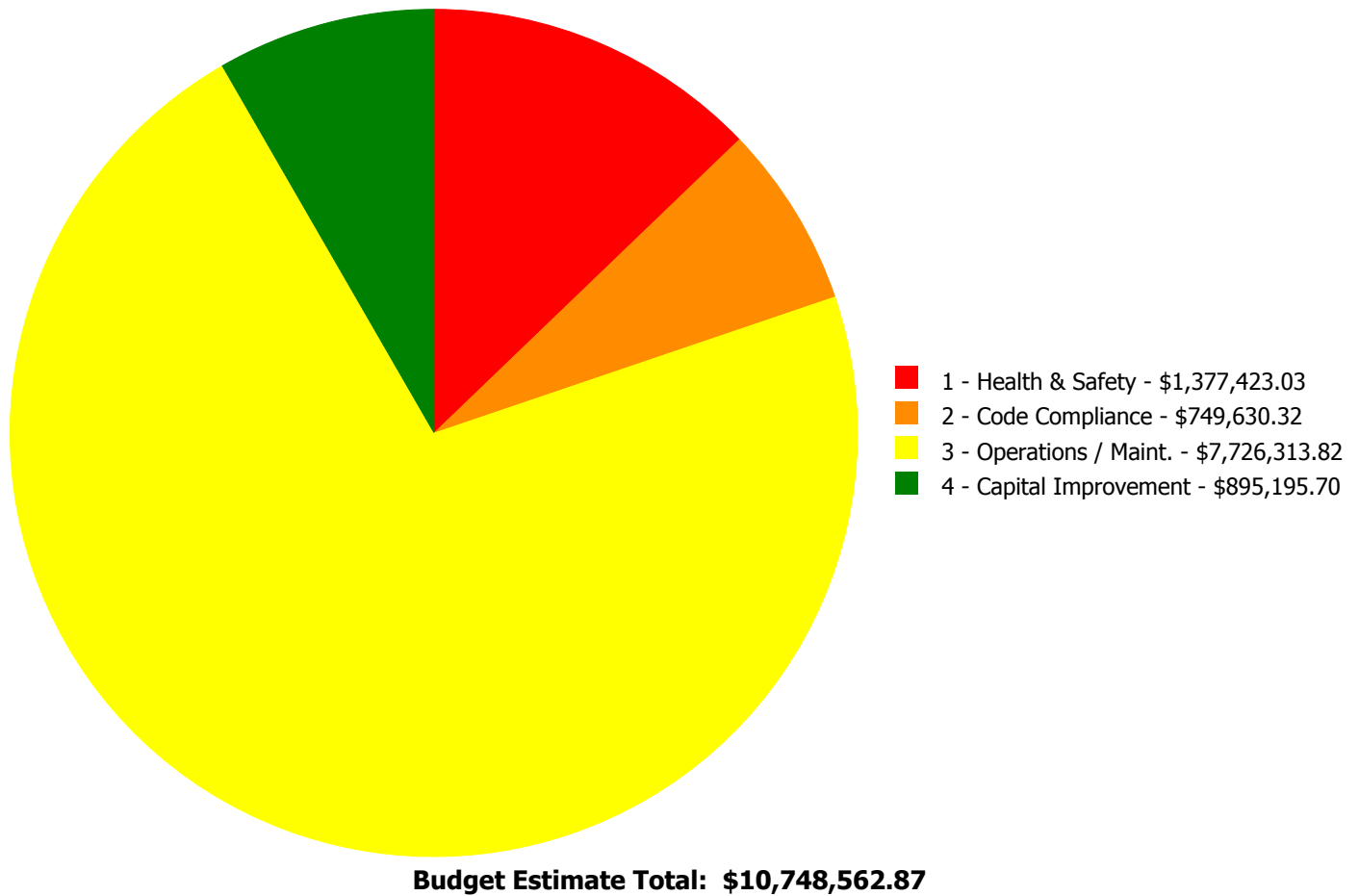
Deficiency By Priority Investment Table

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	\$52,308.93	\$0.00	\$0.00	\$0.00	\$52,308.93
B3010105	Built-Up	\$1,622,948.33	\$0.00	\$0.00	\$0.00	\$0.00	\$1,622,948.33
C1010	Partitions	\$0.00	\$281,303.89	\$0.00	\$0.00	\$0.00	\$281,303.89
C1020	Interior Doors	\$0.00	\$289,266.51	\$0.00	\$0.00	\$0.00	\$289,266.51
C1030	Fittings	\$0.00	\$9,752.85	\$0.00	\$0.00	\$0.00	\$9,752.85
C2010	Stair Construction	\$0.00	\$50,899.88	\$0.00	\$0.00	\$0.00	\$50,899.88
C3020413	Vinyl Flooring	\$0.00	\$942,380.92	\$0.00	\$0.00	\$0.00	\$942,380.92
C3030	Ceiling Finishes	\$0.00	\$1,045,212.42	\$0.00	\$0.00	\$0.00	\$1,045,212.42
D2010	Plumbing Fixtures	\$6,853.08	\$114,447.82	\$74,621.47	\$0.00	\$0.00	\$195,922.37
D2020	Domestic Water Distribution	\$0.00	\$0.00	\$0.00	\$60,842.78	\$0.00	\$60,842.78
D2030	Sanitary Waste	\$0.00	\$0.00	\$0.00	\$326,988.71	\$0.00	\$326,988.71
D3040	Distribution Systems	\$0.00	\$0.00	\$0.00	\$0.00	\$577,568.47	\$577,568.47
D3060	Controls & Instrumentation	\$0.00	\$1,651,813.53	\$0.00	\$0.00	\$0.00	\$1,651,813.53
D4010	Sprinklers	\$0.00	\$0.00	\$0.00	\$0.00	\$1,101,517.95	\$1,101,517.95
D5010	Electrical Service/Distribution	\$0.00	\$0.00	\$542,863.00	\$0.00	\$0.00	\$542,863.00
D5020	Lighting and Branch Wiring	\$0.00	\$0.00	\$75,253.46	\$517,103.60	\$0.00	\$592,357.06
D5030	Communications and Security	\$0.00	\$0.00	\$234,302.96	\$180,847.14	\$0.00	\$415,150.10
D5090	Other Electrical Systems	\$0.00	\$0.00	\$163,777.72	\$0.00	\$0.00	\$163,777.72
E1020	Institutional Equipment	\$0.00	\$63,401.01	\$64,638.07	\$293,594.70	\$0.00	\$421,633.78
E2010	Fixed Furnishings	\$0.00	\$404,053.67	\$0.00	\$0.00	\$0.00	\$404,053.67
Total:		\$1,629,801.41	\$4,904,841.43	\$1,155,456.68	\$1,379,376.93	\$1,679,086.42	\$10,748,562.87

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:



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: B3010105 - Built-Up



Location: Roof

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Remove and Replace Built Up Roof

Qty: 47,900.00

Unit of Measure: S.F.

Estimate: \$1,622,948.33

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace failing roofing system including insulation, flashing, counter flashing, reglets and coping

System: D2010 - Plumbing Fixtures



Location: Toilet rooms

Distress: Failing

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace flush valves (enter qty of WC or Urinals in estimate)

Qty: 10.00

Unit of Measure: Ea.

Estimate: \$6,853.08

Assessor Name: Craig Anding

Date Created: 02/04/2016

Notes: Replace failing flush valves

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

System: B2010 - Exterior Walls



Location: Exterior walls

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 1,620.00

Unit of Measure: S.F.

Estimate: \$52,308.93

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Repair failing mortar joints in 20% of the masonry exterior wall surfaces

System: C1010 - Partitions

This deficiency has no image.

Location: Each floor

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Build new single restroom to meet code requirements

Qty: 4.00

Unit of Measure: Ea.

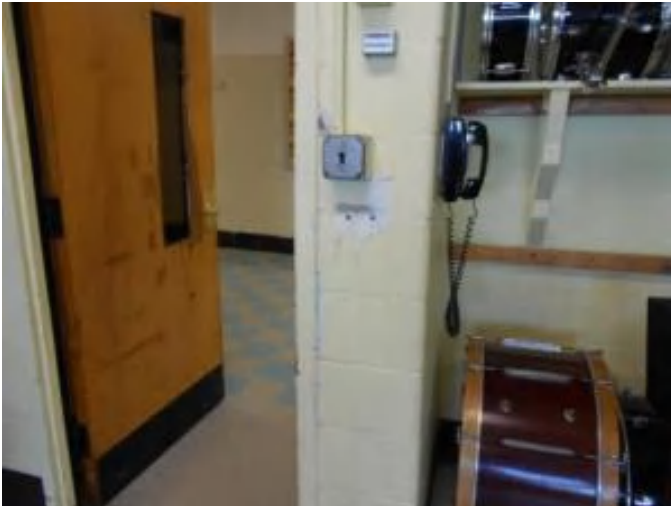
Estimate: \$281,303.89

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Provide a single (unisex) accessible restroom for staff on the 1st, 2nd and 3rd Floors and at the Nurses room. No photo.

System: C1020 - Interior Doors



Location: Throughout the building

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and replace interior doors - wood doors with wood frame - per leaf

Qty: 56.00

Unit of Measure: Ea.

Estimate: \$260,642.99

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace interior classroom doors and provide recess to minimize swing into corridor.

System: C1020 - Interior Doors



Location: Interior doors

Distress: Accessibility

Category: 2 - Code Compliance

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

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

Qty: 6.00

Unit of Measure: Ea.

Estimate: \$28,623.52

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace the hollow metal doors to the exit stairs with new units that have panic hardware.

System: C1030 - Fittings



Location: Throughout the building

Distress: Inadequate

Category: 2 - Code Compliance

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

Correction: Replace missing or damaged signage - insert the number of rooms

Qty: 36.00

Unit of Measure: Ea.

Estimate: \$9,752.85

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Provide inadequate interior directional signage

System: C2010 - Stair Construction

This deficiency has no image.

Location: Boiler room

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Add egress stairways from lower levels - per flight including below level concrete basement and doors - add for additional doors if required

Qty: 1.00

Unit of Measure: Flight

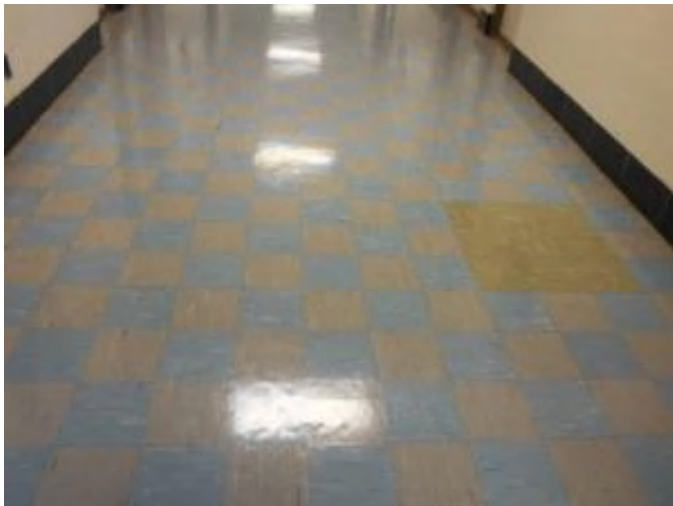
Estimate: \$50,899.88

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Provide a second code required exit for the boiler room and main electrical room on the basement level. No photo.

System: C3020413 - Vinyl Flooring



Location: Throughout the building

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 62,135.00

Unit of Measure: S.F.

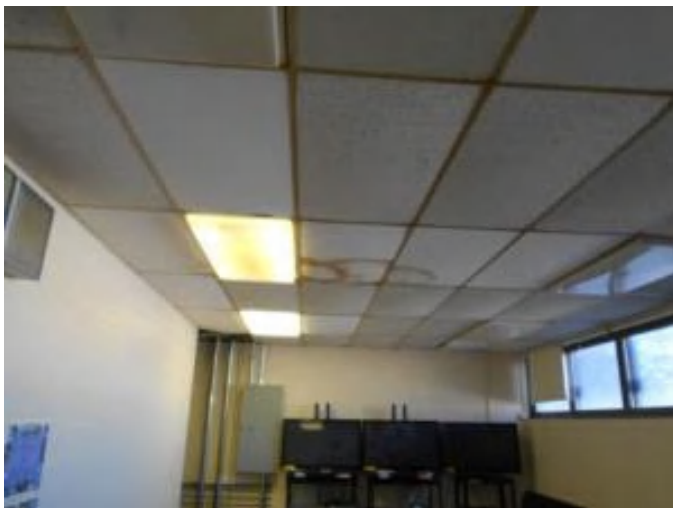
Estimate: \$942,380.92

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Remove the VAT floors throughout the building.

System: C3030 - Ceiling Finishes



Location: Throughout the building

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace suspended acoustic ceilings - lighting not included

Qty: 69,300.00

Unit of Measure: S.F.

Estimate: \$1,045,212.42

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace damaged acoustical ceiling panels occurring throughout the building. Clean or paint existing grid.

System: D2010 - Plumbing Fixtures



Location: Entire school

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Remove and replace water fountains to meet ADA - includes high and low fountains and new recessed alcove

Qty: 6.00

Unit of Measure: Ea.

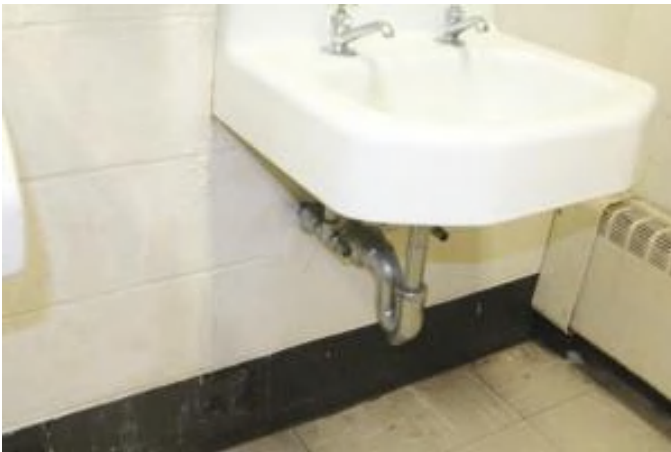
Estimate: \$94,157.37

Assessor Name: Craig Anding

Date Created: 02/04/2016

Notes: Replace water fountains due to age and lack of accessibility

System: D2010 - Plumbing Fixtures



Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace lavatory - quantify accessible if required

Qty: 4.00

Unit of Measure: Ea.

Estimate: \$18,436.06

Assessor Name: Craig Anding

Date Created: 02/04/2016

Notes: Replace lavatories due to age

System: D2010 - Plumbing Fixtures



Location: Toilet rooms

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace lavatory faucet

Qty: 7.00

Unit of Measure: Ea.

Estimate: \$1,854.39

Assessor Name: Craig Anding

Date Created: 02/04/2016

Notes: Replace leaking faucets

System: D3060 - Controls & Instrumentation



Location: Entire building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 77,000.00

Unit of Measure: S.F.

Estimate: \$1,651,813.53

Assessor Name: Craig Anding

Date Created: 02/06/2016

Notes: Replace pneumatic HVAC control with digital

System: E1020 - Institutional Equipment



Location: Room 301A

Distress: Inadequate

Category: 3 - Operations / Maint.

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

Correction: Remove and replace library shelving

Qty: 50.00

Unit of Measure: L.F.

Estimate: \$63,401.01

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Provide shelving in storage room 301A on the 3rd Floor to eliminate clutter and improve safety.

System: E2010 - Fixed Furnishings



Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace auditorium seating - add tablet arms if required. Veneer seating is an option.

Qty: 448.00

Unit of Measure: Ea.

Estimate: \$404,053.67

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace auditorium seating

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

System: D2010 - Plumbing Fixtures



Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace water closet - quantify additional units

Qty: 7.00

Unit of Measure: Ea.

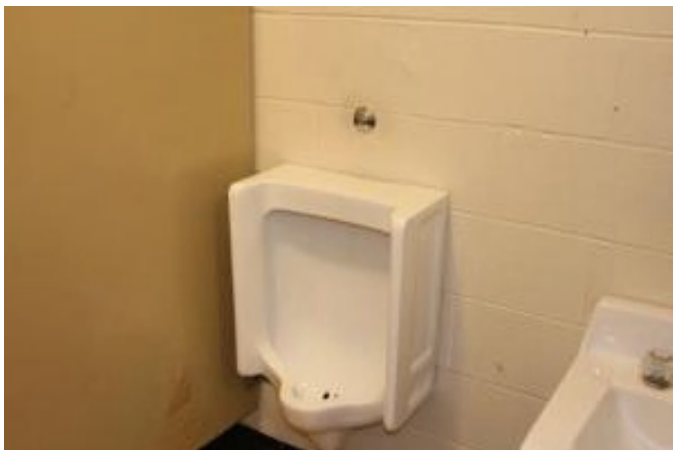
Estimate: \$52,235.03

Assessor Name: Craig Anding

Date Created: 02/04/2016

Notes: Replace water closets due to age

System: D2010 - Plumbing Fixtures



Location: Toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace water closet - quantify additional units

Qty: 3.00

Unit of Measure: Ea.

Estimate: \$22,386.44

Assessor Name: Craig Anding

Date Created: 02/04/2016

Notes: Replace urinals due to age

System: D5010 - Electrical Service/Distribution



Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Electrical Distribution System (U)

Qty: 1.00

Unit of Measure: Ea.

Estimate: \$406,423.91

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Approximate (15) 208/120V panel boards.

System: D5010 - Electrical Service/Distribution



Location: Basement

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: \$136,439.09

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide a new electrical service 480V/277V, 3 phase power, approximate 500 Amperes and will be located in the vicinity of the existing electrical service.

System: D5020 - Lighting and Branch Wiring



Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add wiring device

Qty: 205.00

Unit of Measure: Ea.

Estimate: \$75,253.46

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide (2)25FT of surface raceways with 24" receptacles on center and two-duplex wall mount receptacles. Approximate 205

System: D5030 - Communications and Security



Location: Entire Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: \$234,302.96

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Replace old fire alarm system with addressable type with audio/visual devices at corridors and classrooms. Approximate 110 devices

System: D5090 - Other Electrical Systems

This deficiency has no image.

Location: Outdoor

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: \$139,527.90

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide 70 KW, outdoor, diesel powered generator.

System: D5090 - Other Electrical Systems



Location: Roof

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Repair Lightning Protection System

Qty: 1.00

Unit of Measure: Job

Estimate: \$24,249.82

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Prepare a study to determine if the air terminals on the chimney provide the proper protection to the school building

System: E1020 - Institutional Equipment



Location: Kindergarten rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace base cabinets and countertops

Qty: 60.00

Unit of Measure: L.F.

Estimate: \$49,869.91

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace the damaged base cabinets and counter tops in Kindergarten classrooms 115 and 117.

System: E1020 - Institutional Equipment



Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace motorized projection screen - heavy duty stage size

Qty: 1.00

Unit of Measure: Ea.

Estimate: \$14,768.16

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace the damaged full size projection screen in the Auditorium.

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

System: D2020 - Domestic Water Distribution



Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace instantaneous water heater

Qty: 2.00

Unit of Measure: Ea.

Estimate: \$60,842.78

Assessor Name: Craig Anding

Date Created: 02/04/2016

Notes: Replace tankless water heaters

System: D2030 - Sanitary Waste



Location: Entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 77,000.00

Unit of Measure: S.F.

Estimate: \$326,988.71

Assessor Name: Craig Anding

Date Created: 02/05/2016

Notes: Inspect and repair sanitary drain pipe due to age

System: D5020 - Lighting and Branch Wiring



Location: Entire Building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Add Lighting Fixtures

Qty: 600.00

Unit of Measure: Ea.

Estimate: \$517,103.60

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Replace 60% of the existing lighting fluorescent fixtures with fluorescent fixtures with T8 lamps. Approximate 600 fixtures

System: D5030 - Communications and Security



Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Clock System or Components

Qty: 50.00

Unit of Measure: Ea.

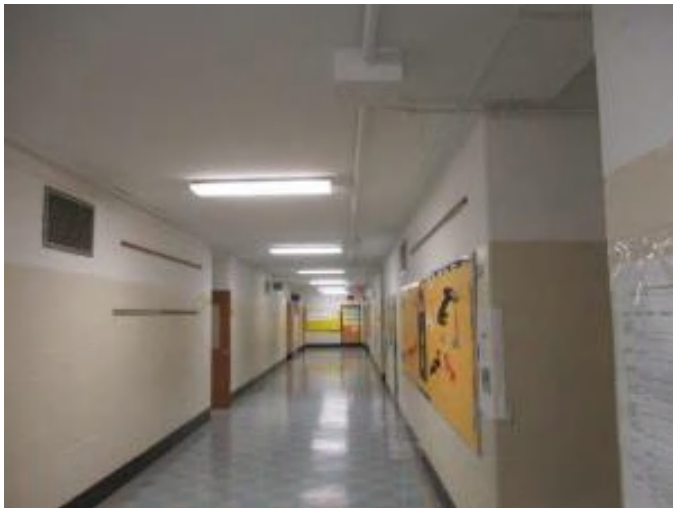
Estimate: \$112,560.22

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide wireless, synchronized, battery operated clock system. Approximate 50 clocks

System: D5030 - Communications and Security



Location: Entire Building

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add/Replace Video Surveillance System

Qty: 10.00

Unit of Measure: Ea.

Estimate: \$41,602.12

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide indoor surveillance CCTV cameras for a complete coverage of the school interior. Approximate 10 CCTV cameras

System: D5030 - Communications and Security



Location: Auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Add/Replace Sound System

Qty: 1.00

Unit of Measure: LS

Estimate: \$26,684.80

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide the auditorium with a permanent installed sound system.

System: E1020 - Institutional Equipment



Location: Auditorium

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Add/Replace Stage Theatrical Lighting System

Qty: 1.00

Unit of Measure: Ea.

Estimate: \$293,594.70

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide the auditorium with theatrical lighting and dimming system.

Priority 5 - Response Time (> 5 yrs):

System: D3040 - Distribution Systems



Location: Gym and auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 9,000.00

Unit of Measure: S.F.

Estimate: \$517,290.45

Assessor Name: Craig Anding

Date Created: 02/05/2016

Notes: Provide air conditioning system with 30 ton capacity for auditorium and gymnasium

System: D3040 - Distribution Systems



Location: Offices, toilets, corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace finned tube radiation terminals (per 100 LF)

Qty: 100.00

Unit of Measure: L.F.

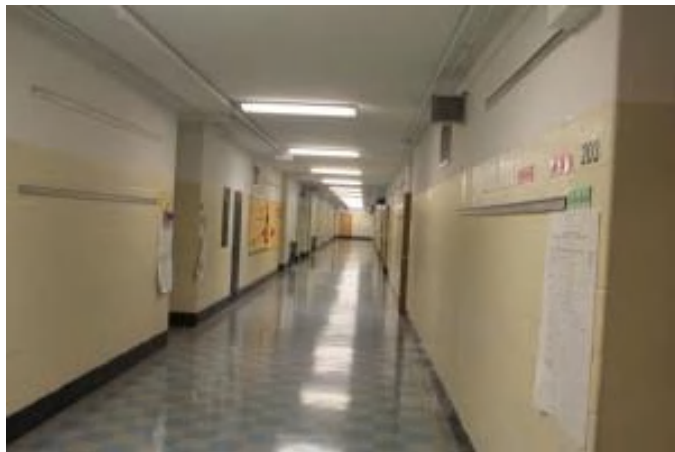
Estimate: \$60,278.02

Assessor Name: Craig Anding

Date Created: 02/06/2016

Notes: Replace office, toilet, and corridor convection units due to age

System: D4010 - Sprinklers



Location: Entire building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Install a fire protection sprinkler system

Qty: 77,000.00

Unit of Measure: S.F.

Estimate: \$1,101,517.95

Assessor Name: Craig Anding

Date Created: 02/06/2016

Notes: Install fire protection sprinkler system, including fire pump if needed

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	Electric traction residential elevators, cab type, 2 floor, 3 stop, custom model, max	1.00	Ea.	Roof- elevator machine room					35	1985	2020	\$63,562.00	\$69,918.20
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 2628 MBH, includes burners, controls and insulated jacket, packaged	3.00	Ea.	Boiler room					35	2000	2035	\$69,812.50	\$230,381.25
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 7-1/2 H.P., to 350 GPM, 4" size	2.00	Ea.	Boiler room					25	2000	2025	\$14,934.00	\$32,854.80
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 1600 amp, excl breakers	1.00	Ea.	Basement					30	1999	2029	\$7,358.85	\$8,094.74
												Total:	\$341,248.99

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): 113,700

Year Built: 1964

Last Renovation:

Replacement Value: \$1,990,551

Repair Cost: \$609,604.86

Total FCI: 30.62 %

Total RSLI: 44.77 %



Description:

Attributes:

General Attributes:

Bldg ID:	S147001	Site ID:	S147001
----------	---------	----------	---------

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	44.26 %	29.86 %	\$446,657.06
G40 - Site Electrical Utilities	46.31 %	32.95 %	\$162,947.80
Totals:	44.77 %	30.62 %	\$609,604.86

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.	13,200	30	1964	1994	2028	43.33 %	26.30 %	13		\$26,557.18	\$100,980
G2030	Pedestrian Paving	\$11.52	S.F.	67,100	40	1964	2004	2028	32.50 %	30.99 %	13		\$239,517.09	\$772,992
G2040	Site Development	\$4.36	S.F.	113,700	25	1964	1989	2028	52.00 %	36.43 %	13		\$180,582.79	\$495,732
G2050	Landscaping & Irrigation	\$3.78	S.F.	33,400	15	1964	1979	2028	86.67 %	0.00 %	13			\$126,252
G4020	Site Lighting	\$3.58	S.F.	113,700	30	1964	1994	2025	33.33 %	3.79 %	10		\$15,445.83	\$407,046
G4030	Site Communications & Security	\$0.77	S.F.	113,700	30	1964	1994	2047	106.67 %	168.48 %	32		\$147,501.97	\$87,549
Total									44.77 %	30.62 %			\$609,604.86	\$1,990,551

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.

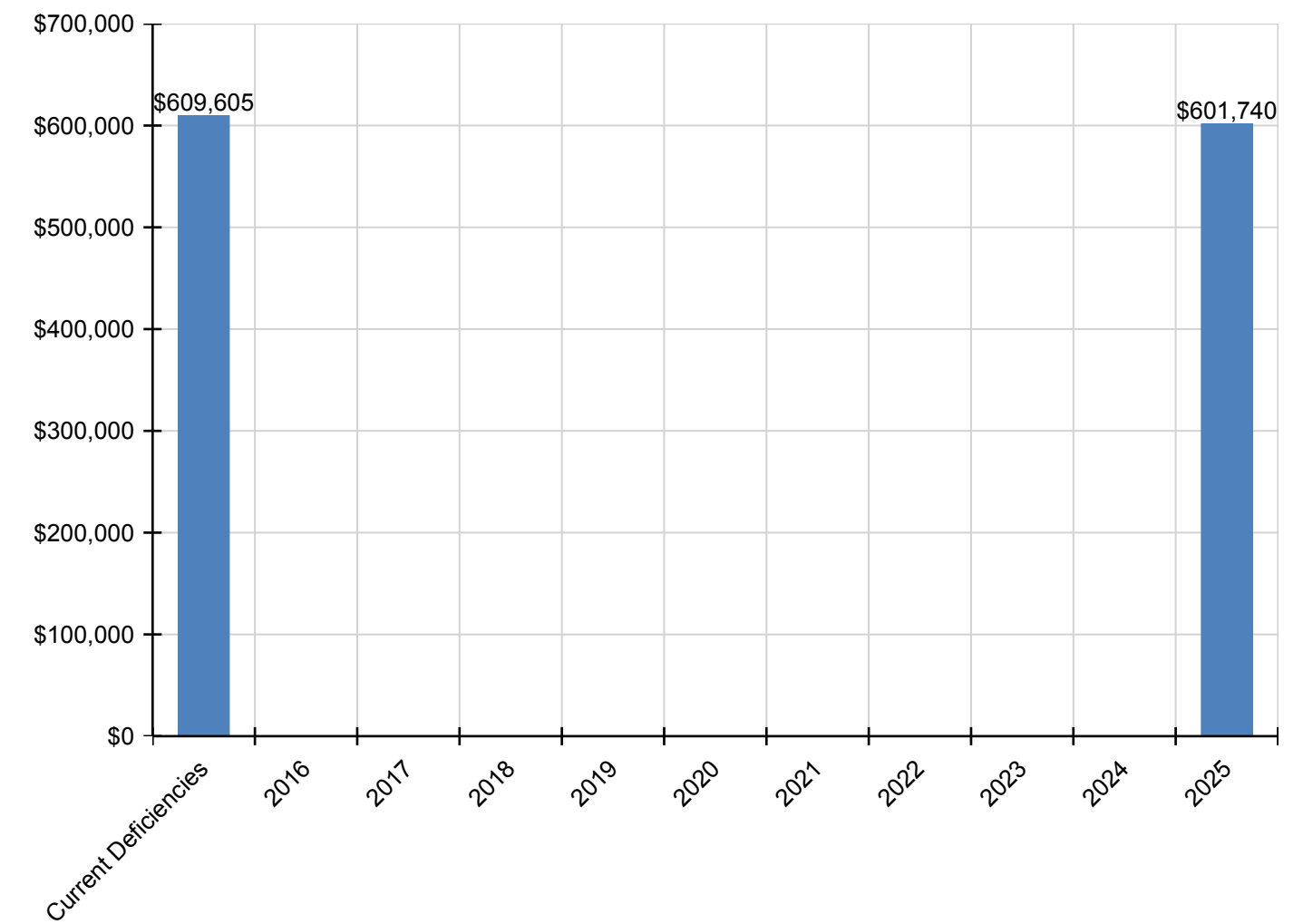
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	\$609,605	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$601,740	\$1,211,345
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	\$26,557	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26,557
G2030 - Pedestrian Paving	\$239,517	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$239,517
G2040 - Site Development	\$180,583	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180,583
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	\$15,446	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$601,740	\$617,186
G4030 - Site Communications & Security	\$147,502	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$147,502

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

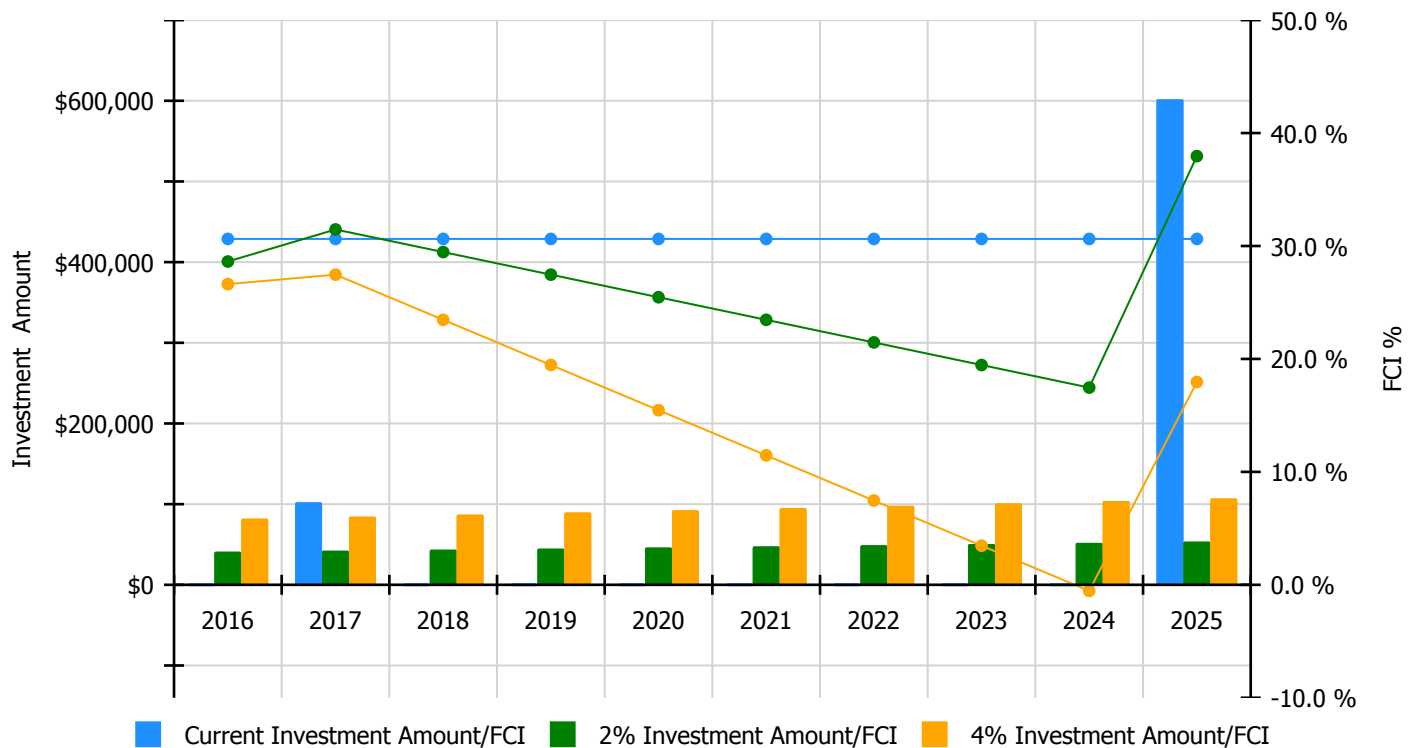


10 Year FCI Forecast by Investment Scenario

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

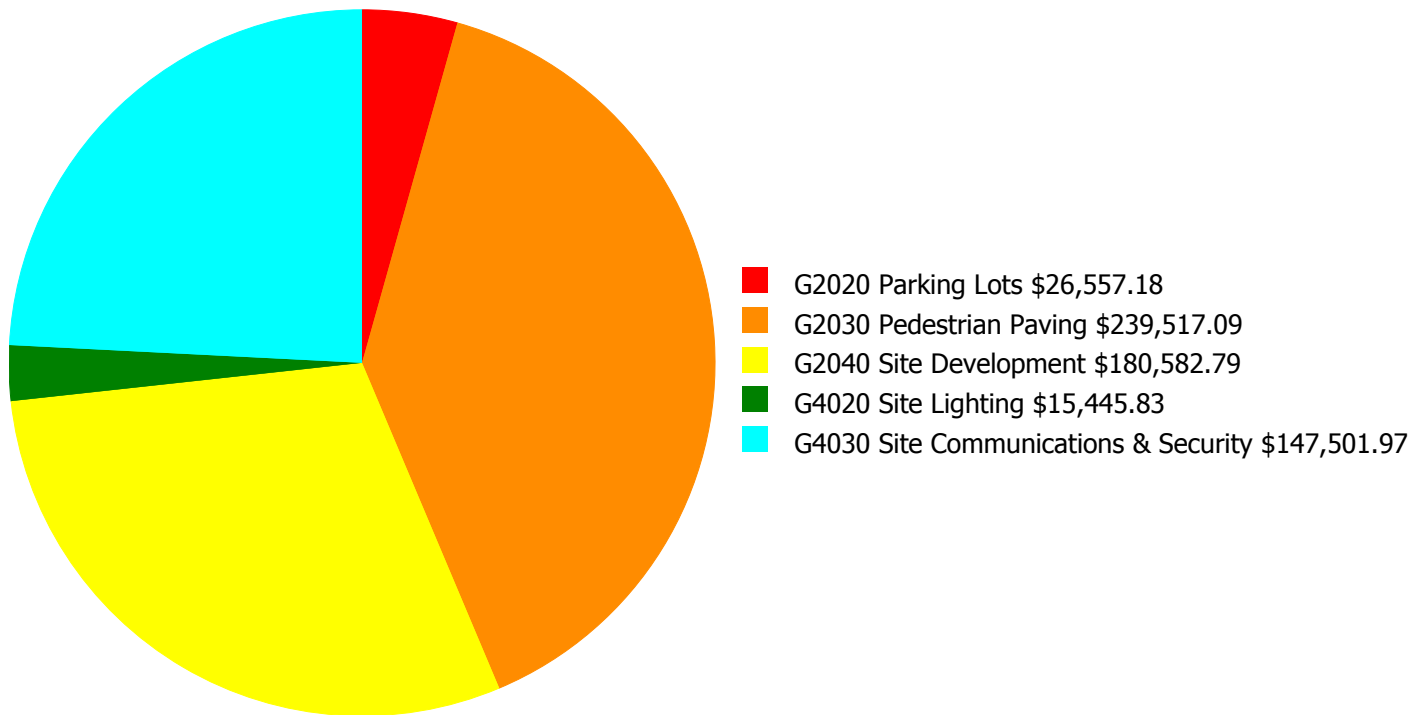
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 30.62%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	\$0	\$41,005.00	28.62 %	\$82,011.00	26.62 %
2017	\$102,169	\$42,236.00	31.46 %	\$84,471.00	27.46 %
2018	\$0	\$43,503.00	29.46 %	\$87,005.00	23.46 %
2019	\$0	\$44,808.00	27.46 %	\$89,615.00	19.46 %
2020	\$0	\$46,152.00	25.46 %	\$92,304.00	15.46 %
2021	\$0	\$47,536.00	23.46 %	\$95,073.00	11.46 %
2022	\$0	\$48,963.00	21.46 %	\$97,925.00	7.46 %
2023	\$0	\$50,431.00	19.46 %	\$100,863.00	3.46 %
2024	\$0	\$51,944.00	17.46 %	\$103,889.00	-0.54 %
2025	\$601,740	\$53,503.00	37.96 %	\$107,005.00	17.96 %
Total:	\$703,909	\$470,081.00		\$940,161.00	

Deficiency Summary by System

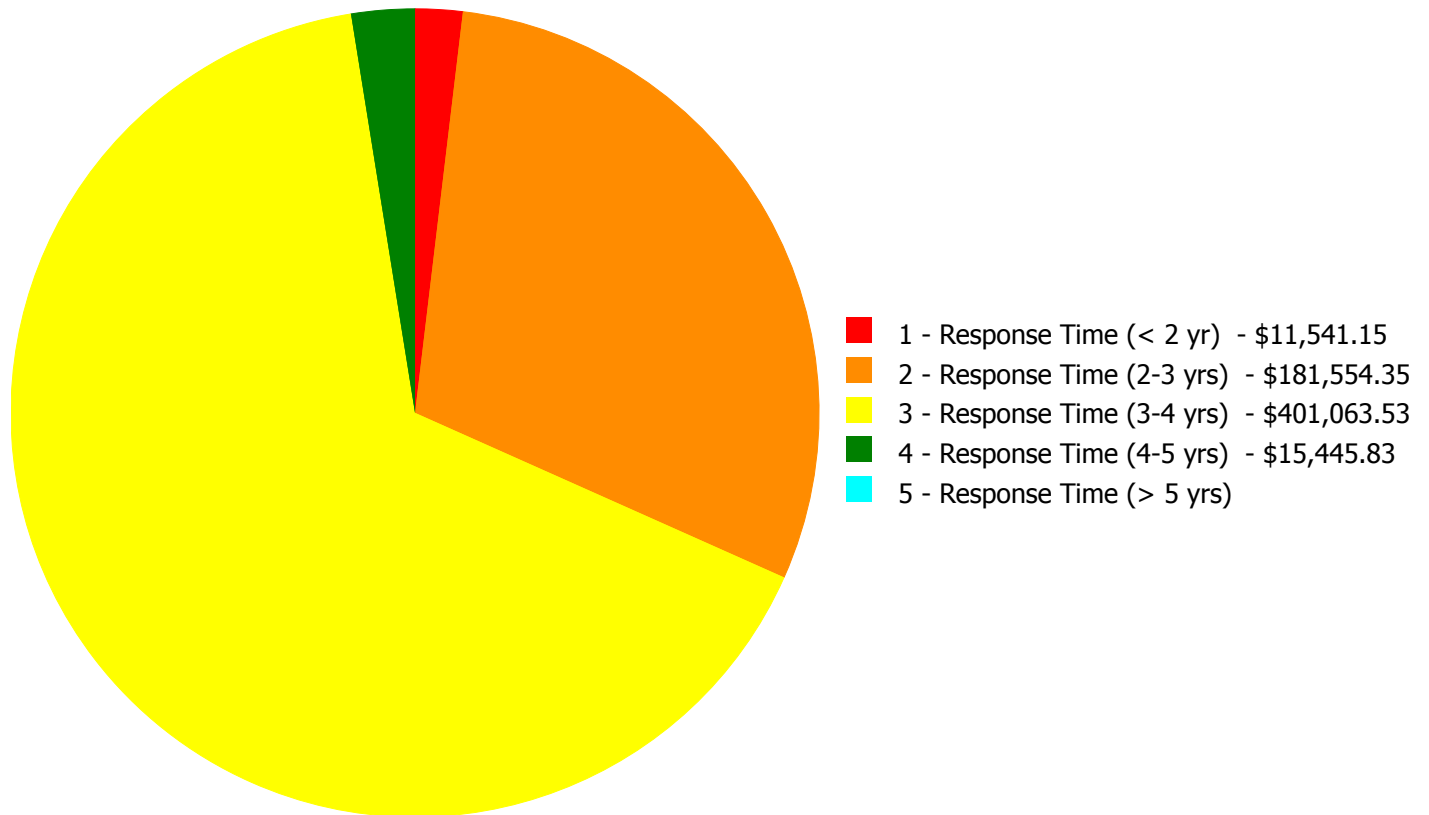
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: \$609,604.86

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: \$609,604.86

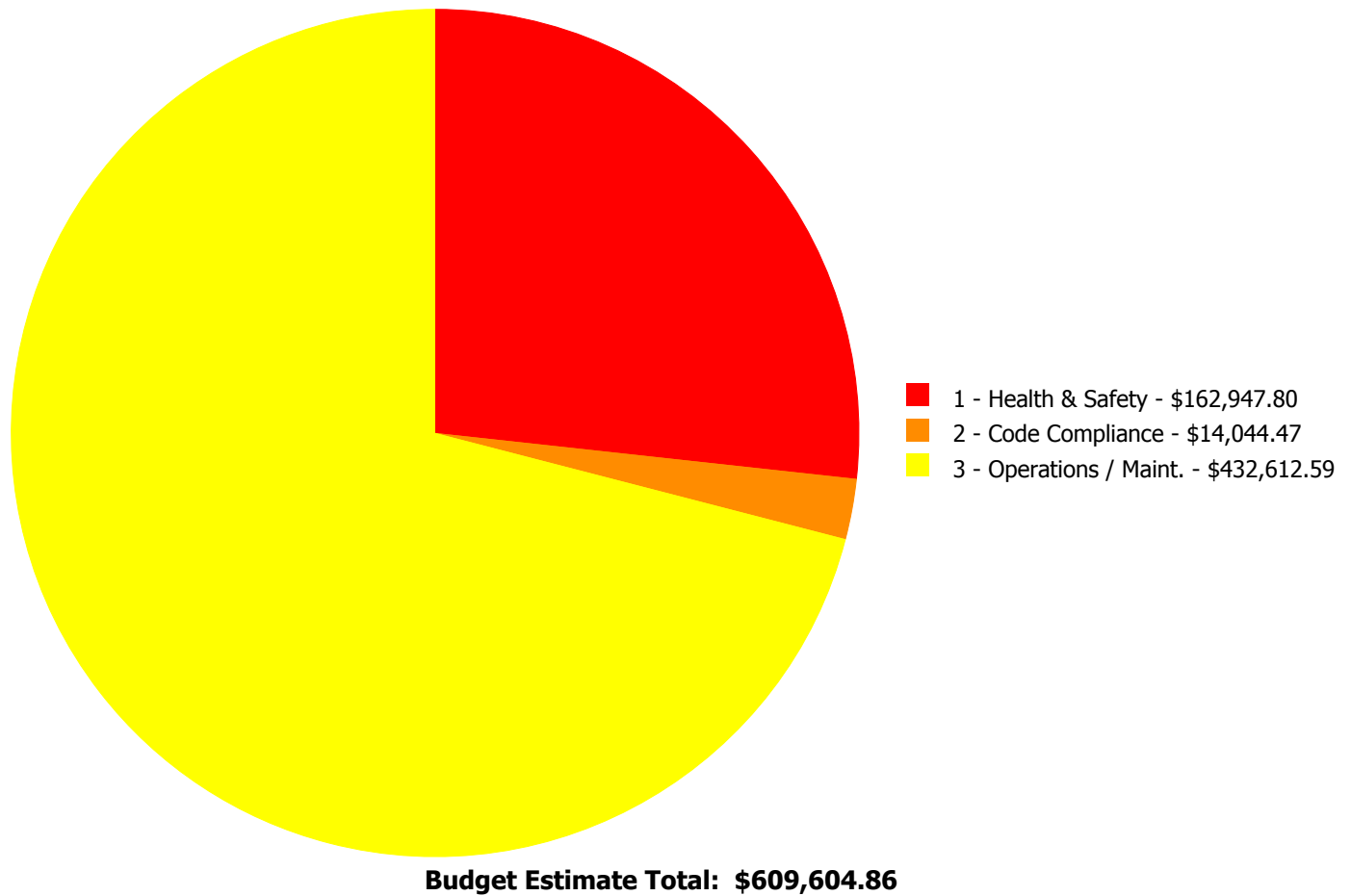
Deficiency By Priority Investment Table

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	\$26,557.18	\$0.00	\$0.00	\$0.00	\$26,557.18
G2030	Pedestrian Paving	\$0.00	\$0.00	\$239,517.09	\$0.00	\$0.00	\$239,517.09
G2040	Site Development	\$11,541.15	\$154,997.17	\$14,044.47	\$0.00	\$0.00	\$180,582.79
G4020	Site Lighting	\$0.00	\$0.00	\$0.00	\$15,445.83	\$0.00	\$15,445.83
G4030	Site Communications & Security	\$0.00	\$0.00	\$147,501.97	\$0.00	\$0.00	\$147,501.97
	Total:	\$11,541.15	\$181,554.35	\$401,063.53	\$15,445.83	\$0.00	\$609,604.86

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:



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: G2040 - Site Development



Location: Main entry

Distress: Damaged

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace or install exterior guardrails

Qty: 60.00

Unit of Measure: L.F.

Estimate: \$11,541.15

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace damaged handrail at the main entry.

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

System: G2020 - Parking Lots



Location: Parking lot

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Fill pavement cracks and reseal parking lot - including striping - change the LF of crack repair if it is severe

Qty: 13,200.00

Unit of Measure: S.F.

Estimate: \$26,557.18

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Mill and overlay the asphalt surfaces of the parking lot (387, 389) and provide adequate striping and signage for the recommended number of accessible parking stalls in the east lot.

System: G2040 - Site Development



Location: Site

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair exterior brick retaining wall - per LF of wall - up to 4' tall

Qty: 60.00

Unit of Measure: L.F.

Estimate: \$96,539.54

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Repair damaged screen walls and retaining walls

System: G2040 - Site Development



Location: South property line

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace chain link fence - 8' high

Qty: 522.00

Unit of Measure: L.F.

Estimate: \$58,457.63

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Replace the damaged chain link fence along the south property line.

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

System: G2030 - Pedestrian Paving



Location: Playground

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Resurface AC pedestrian paving - grind and resurface

Qty: 67,100.00

Unit of Measure: S.F.

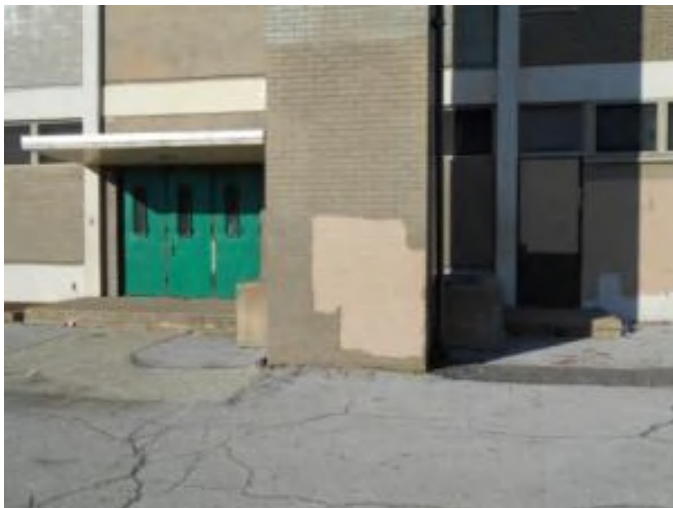
Estimate: \$239,517.09

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Mill and overlay the asphalt surfaces of the playground areas.

System: G2040 - Site Development



Location: Site

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Provide signage for site - insert the anticipated number of signs

Qty: 30.00

Unit of Measure: Ea.

Estimate: \$14,044.47

Assessor Name: Craig Anding

Date Created: 02/29/2016

Notes: Provide site directional signage

System: G4030 - Site Communications & Security



Location: Building Perimeter

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add Video Surveillance System

Qty: 8.00

Unit of Measure: Ea.

Estimate: \$147,501.97

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide outdoor surveillance CCTV cameras. Approximate 8 CCTV cameras

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

System: G4020 - Site Lighting



Location: Building Perimeter

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Add site lighting fixtures

Qty: 3.00

Unit of Measure: Ea.

Estimate: \$15,445.83

Assessor Name: Craig Anding

Date Created: 01/20/2016

Notes: Provide lighting fixtures along the west façade for a safer environment. Approximate 3 fixtures.

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

Site Assessment Report - S147001;Locke

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

Site Assessment Report - S147001;Locke

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

Site Assessment Report - S147001;Locke

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.

Site Assessment Report - S147001;Locke

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

Site Assessment Report - S147001;Locke

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

Site Assessment Report - S147001;Locke

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.

Site Assessment Report - S147001;Locke

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	Photovoltaic system

Site Assessment Report - S147001;Locke

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

Site Assessment Report - S147001;Locke

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

Site Assessment Report - S147001;Locke

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