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.

Heston School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	1621 N. 54Th St.	Enrollment	537
	Philadelphia, Pa 19131	Grade Range	'00-08'
Phone/Fax	215-581-5514 / 215-581-5724	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Heston	Turnaround Model	N/A

Building/System FCI Tiers

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

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

Building and Grounds

	FCI	Repair Costs	Replacement Cost
Overall	**32.47%**	**$14,155,935**	**$43,597,331**
Building	33.43 %	$13,760,728	$41,168,503
Grounds	16.27 %	$395,207	$2,428,828

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	00.00 %	$0	$1,571,169
Exterior Walls (Shows condition of the structural condition of the exterior facade)	05.62 %	$169,290	$3,013,332
Windows (Shows functionality of exterior windows)	00.00 %	$0	$1,470,336
Exterior Doors (Shows condition of exterior doors)	129.94 %	$153,826	$118,378
Interior Doors (Classroom doors)	67.89 %	$194,542	$286,556
Interior Walls (Paint and Finishes)	42.18 %	$677,388	$1,605,859
Plumbing Fixtures	17.90 %	$197,531	$1,103,773
Boilers	51.62 %	$786,845	$1,524,219
Chillers/Cooling Towers	33.17 %	$662,897	$1,998,547
Radiators/Unit Ventilators/HVAC	94.87 %	$3,329,811	$3,509,704
Heating/Cooling Controls	158.90 %	$1,751,346	$1,102,140
Electrical Service and Distribution	108.77 %	$861,329	$791,908
Lighting	27.51 %	$778,752	$2,831,275
Communications and Security (Cameras, Pa System and Fire Alarm)	26.26 %	$278,450	$1,060,504

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

S430001;Heston

Final

Site Assessment Report

January 30, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	81,640
Year Built:	1970
Last Renovation:	
Replacement Value:	$43,597,331
Repair Cost:	$14,155,934.61
Total FCI:	32.47 %
Total RSLI:	74.51 %

Description:

Facility Assessment
October 2015

School District of Philadelphia
Edward Heston Elementary School
1621 N 54th Street
Philadelphia, PA 19131

81,640 SF / 636 Students / LN 02

General

The Edward Heston Elementary School building is located at 1621 N 54th Streetin Philadelphia, PA. The 4 story, 81,640 square foot building was originally constructed in 1970. There have been no additions. The building has a partial basement housing the boiler room and other utility spaces. There is a portable building on the site that is not included in the scope of this assessment. The science classroom on the third floor was renovated in 2006.

The school capacity is approximately 636 students with 2015/16 enrollment of 475 serving grades K-8.

The school plan is roughly triangular. Hi-bay gym and cafeteria/auditorium spaces are situated on the south side of the building.

Mr. Archie Admiral, Building Engineer and Mr. Rich Toohey, FAC, accompanied the team on its tour of the school and provided information on building systems and maintenance history. Ms. Angela Gaddie-Edwards, principal, provided input to the Parsons assessment team on current problems.

Architectural/Structural Systems

The building bears on concrete foundations and basement walls that are not showing signs of significant settlement or damage. The basement floor is slab on grade. The main structure is steel and concrete framing. The roof structure over the gym and auditorium is concrete plank on steel bar joists. There are large structural steel frames mounted on the roof with an unknown purpose. Exterior walls are jumbo brick masonry on CMU. Murals are painted and mosaic on the 1st floor exterior walls. In general, masonry is in good condition though some areas of repair were identified and caulk joints need to be replaced. Windows are single pane glass and acrylic glazing in aluminum frames. Operable units are single hung. There are fixed clerestory windows at the roof level that serve the interior IMC. Windows are in poor condition with difficult operation and discolored glazing. First floor windows and windows facing playgrounds have security grilles. Secondary interior security grilles are installed at one of the un-used kindergarten classrooms. Exterior doors are typically hollow metal in hollow metal frames with glazing, in fair to poor condition. The main entrance doors have been replaced with special anti-graffiti doors. Roofing is low slope built-up with a reflective coating at the cafeteria roof and several of the lower roofs. The upper roofs have a dark slag on the surface. Portions of the roof/exterior walls at stairwells and miscellaneous areas are finished with steep standing seam copper accents. Roofs are in poor condition with some patching evident; several leaks were reported and evidence of roof leaks was observed at the interior. The building engineer reported that a contract has been awarded for reroofing, however no work was underway at the time of assessment. Drainage is via interior roof drains with no overflow drains or scuppers. Roof access is via stairwell to the main roof, and doorway to the mechanical lower roof with ladder to the gym roof. Generally, the building is accessible per ADA requirements.

Partition walls are CMU in good condition. Walls at the third floor corridors have wired glazing in hollow metal frames overlooking the IMC. Some classrooms have fabric faced folding partitions. Partition configuration on the 3rd floor along the diagonal wall is awkward, with access to rooms along exterior walls requiring passage through classrooms accessed from the corridor. Interior classroom and office doors are generally original solid core wood veneer in hollow metal frames with slot lights and wood transom panels. Doors do not typically have ADA hardware, though some lever locksets were seen in the building. Doors are in generally functional condition. Doors leading to exit stairways are asbestos core with wood veneer in hollow metal frames in typically poor condition, and were missing at one stairwell entrance. Stairwell doors do not have panic hardware. Doors swing in the direction of exit; however classroom doors are not recessed and swing into the corridor.

Fittings include: toilet accessories in poor condition; toilet partitions are a mixture of baked enamel and plastic laminate in generally poor condition; marker boards are present in some classrooms; obsolete chalk are present in most classrooms; and bulletin boards are present in classrooms and corridors; lockers in poor condition in the kitchen staff area and locker rooms; interior identifying signage is typically large numbers on paper mounted on transoms above doors, and is inadequate.

Stair construction is concrete filled steel pans with steel nosings fair condition. Treads and landings are concrete. Handrails are painted rectangular steel. Handrails do not meet modern codes for configuration. The west central stair tower discharges into the main lobby rather than directly to an exit.

Interior wall finishes are paint in generally good condition. Flooring is mostly resilient with 12" VCT, occurring at 3rd floor classrooms, and the cafeteria, and is generally in good condition. There is also 9" VAT in some classrooms, corridors in the auditorium under seating, in the offices and miscellaneous spaces. Ramped aisles in the auditorium have textured resilient flooring in good condition. Carpeting is installed at the IMC, in good condition. The gym and stage have wood flooring in fair condition. Toilet and locker rooms and the kitchen have painted concrete floors in poor condition. Mechanical, storage, and other service rooms have sealed concrete floors. Ceilings are typically painted structure in classrooms and the gym. 2x4 suspended acoustical panels are installed in the IMC, corridors, cafeteria, and the auditorium. 2 x 4 tile is in poor condition with some missing and many stained/water damaged tiles seen. Grid is typically yellowed with age. The kitchen has 12" metal tiles.

The building has one passenger elevator.

Institutional Equipment includes: stage draperies in fair condition; stage lighting that is obsolete; a motorized projection screen at the stage that is not functional; approximately half of the classrooms have Smartboards installed; and wood library shelving that is adequate. Other equipment includes: kitchen equipment in fair condition; basketball backstops in the gym in poor condition; climbing

ropes in the gym; and dock bumpers.

Furnishings include: fixed wood and plastic laminate casework in classrooms, generally in poor condition; window roller shades, generally in fair condition; auditorium window drapes; and auditorium seating in poor condition.

Accessibility note: One accessible restroom has been renovated on the third floor of the building.

Plumbing

Plumbing fixtures throughout the building are a mixture of original and replacements of various ages. Fixtures in the restrooms on each floor consist of wall hung flush valve water closets, urinals and lavatories. Lever handle flush valves are installed in pipe chases. Lavatory faucets include mixing and separate spouts. Overall, toilet room fixtures are in good condition and will remain serviceable for another 10-15 years. Classrooms have cabinet mounted lavatories with fountains which are poor condition which need replacement. Life skills classroom has a two basin, stainless steel, rim mounted, residential kitchen sink with single lever operated mixing faucet and spray hose. The cafeteria kitchen has a 3 basin, 2 faucet, stainless steel, floor standing, commercial kitchen sink without sanitation chemical injection system, disposal, or grease trap. Service sinks are floor level concrete basins with stainless steel rims and wall mounted faucets located on each floor in janitor closets. All these sinks are in serviceable condition and should have 10-15 year useful life remaining. There is a clothes washing machine with separate hot and cold shutoff valves and air gap drain pipe in the life skills classroom. The boys' and girls' gym locker rooms have the original shower systems still existing, however they are in very poor condition and are not used. Both shower rooms should be completely renovated before being returned to use. Drinking fountains are wall mounted in hallways. They are non-accessible with integral refrigerated coolers. Their age is unknown. Classrooms also had fountains installed with cabinet mounted lavatories. They gym has a recessed porcelain fountain. Drinking fountains should be replaced with accessible fountains with integral coolers.

A 4" city water service enters the building in the basement along the west wall. There is a compound meter with bypass line and then a 4 inch backflow preventer. All the lines and fitting look very good with no signs of corrosion. They should be serviceable for 15-20 years. The domestic soldered copper hot and cold water distribution piping is possibly original however its age is unknown. The domestic water distribution piping should be serviceable for the next 15 years or more. In the boiler room, one 85 gallon, vertical tank, gas-fired, A.O. Smith water heater manufactured in 2004 supplies hot water for domestic use. There is no thermal expansion tank. The water heater is beyond its expected service life and should be replaced as a preventive measure. Hot water was available immediately in a 3rd floor toilet lavatory, but the 2nd floor IMC sink did not get hot within 15 seconds, so the circulation system should be examined when the heater is replaced.

The sanitary sewer piping is cast iron with hub and spigot fittings and threaded galvanized steel. It appears to be the original pipe for the building. It is in fair condition with little rust evident and should remain serviceable for 10-15 years. The building does not have a sewage ejector.

Rain water drainage is threaded galvanized steel pipe. It runs from the roof inside the building with no evidence or reports of leakage. The roof does not have overflow drains. There is one sump in the basement for ground water collection with two vertical turbine pumps. The pump system ran well during the inspection. Rain water drain pipes should have 10 years or more lifespan remaining.

HVAC

The building was originally constructed with unit ventilators for the classrooms and air handlers for gymnasium, auditorium, etc.

Hot water is generated for the building by 2 Weil-McLain, 15 section, model 94, cast iron boilers. One boiler is needed to heat the school. Each boiler has a capacity of 2,539 MBH (106 HP) burning natural gas only in Gordon Piatt burners. They were all installed in 1976. Both boilers are operative. There is an 8 inch gas line without pressure booster. There is a water softener on the makeup water supply line which includes a backflow preventer. A chemical injection system is located next to the boilers. A hot water return tank is located next to the chiller in the boiler room. Boiler combustion makeup air enters the boiler room through automatically controlled louvers. The boilers are in fair condition but have exceeded their 35 year life expectancy by 5 years and should be replaced.

There is a hydronic cooling system for the entire building. A stainless steel, Evapco brand, single cell, forced draft, approximately 200 ton capacity, evaporative cooling tower is located on the lower roof between the gym and auditorium. It was installed in 1996 and has 10 years expected lifespan remaining. The cooling tower provides cooling water to a chiller in the basement boiler room. The chiller is a York model YTA1B1B1-CFDS, water cooled, centrifugal compressor, liquid chiller manufactured in 1988. It uses R-11 ($CFCl_3$) refrigerant which is obsolete. The 30 year lifespan of the chiller ends in 2018, so the district should budget to replace the chiller and

could recover the refrigerant for reuse at other locations. The cooling water circulation pump is located in the boiler room. It is a base mounted, horizontal end suction pump with a 15 HP motor. The motor, bearing section, and pump housing are painted 3 different colors, so the pump must have been repaired multiple times. There is no coupler guard. No manufacturer date markings were visible, but the pump was probably installed with the chiller in 1988. It has a Y2K compliant sticker, so it is at least 16 years old. The cooling water circulation pump should be replaced with the chiller.

There are three air handlers located in a mechanical room between the upper parts of the gym and the auditorium. Two have 5 HP fan motors (gym and auditorium) and one has a 10 HP motor (IMC and interior of the building including hallways). Estimated air flow is 7,500 CFM and 15,000 CFM respectively. They all have belt guards for the fan motors. They are original equipment, but now use disposable air filters instead of the metal mesh filters. The air handlers have exceeded their useful life by 15 years and should be replaced. Classrooms still have the original unit ventilators which have exceeded their useful life as well and should also be replaced. Roof exhaust fans were replaced in 2006. These fans are generally in good condition and should last at least 10 more years, but one has a misaligned motor that shreds fan belts and should be repaired or replaced. Hydronic pipe is threaded steel. The building has a 2 pipe system and the hot and cold water use the same pipe. Areas of the pipe in the second floor mechanical room are missing insulation and develop rust from condensate forming. Insulation should be installed to prevent further damage. The hydronic pipe should otherwise last 10 more years. There are two primary hydronic circulation pumps with 20 HP motors installed in 2015. There are also two 1.5 HP recirculation pumps with failing flange gaskets. These pumps should be reinstalled with new gaskets to eliminate the leakage. The kitchen has an old exhaust system without fire suppression for a fuel burning appliance which has been removed. The gas line is capped off and an electric convection over is presently installed so the exhaust system is sufficient.

There is one split unit air conditioner for a computer equipment room. Classrooms have hydronic convection units beside the unit ventilators below the windows. Convectors are the same age as the unit ventilators and should be replaced with them.

The building is equipped with pneumatic controls including day and night thermostats. The controls are inoperative according to the building engineer. The system is obsolete and should be replaced with a digital control system when other HVAC equipment is replaced. A duplex air compressor is in the boiler and it is fully operational.

Fire Protection

The school building has standpipes. There is a sprinkler system for the second and third floor corridors around the IMC. The sprinklers heads are lightly rusted and corroded, so they are probably the original nozzles. There are 4 manual valves in a store room beside the cafeteria that can block the flow of fire water to either second or third floor and east or west sides. These valves are sealed open. There is no fire pump. Sprinklers should be installed for the entire building with a fire pump if needed.

Electrical Systems

There are two unit substations serving this facility. They are rated 500KVA, 13.2KV-120/208V, and 225KVA, 13.2KV- 480/277V, both unit substations are located in the basement. The unit substations are composed of 15KV load interrupter switch, meter/current transformer section, transformer section, main circuit breaker section and a feeder distribution section. The utility meter is wall mounted No PECO 908MUC. The SORGEL Electric Corporation, 500KVA unit substation is original installation and has already exceeded its 30 years of useful service life, the SQUARE D, 225KVA unit substation is approximately 10 years old and is expected to provide 20 more years of useful service life. Replace existing 500KVA, 13.2KV-120/208V unit substation with new 750KVA, 13.2KV-480/277V unit substation and 300KVA, 480-120/208V step down transformer. The 225KVA unit substation will remain as is. The unit substations will feed HVAC equipment and large motor loads and the 300 KVA, 480V-120/208V step down transformer will feed receptacles, lighting and small motor loads.

There are panel-boards new and original in each floor for lighting and receptacles. The original panelboards are recessed mounted and have exceeded their useful life. They need to be replaced.

The number of receptacles in 70% of the classrooms is inadequate. Teachers use extension cords. 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, corridors are illuminated with recessed mounted fluorescent fixtures, stairways are illuminated with pendant mounted fluorescent fixtures, the IMC is illuminated with pendant HID cylinders and recessed fluorescent fixtures with parabolic louvers, auditorium/cafeteria is illuminated with recessed HID downlight. Corridors and stairways fluorescent fixtures are provided with T-8 lamps, classrooms fluorescent fixtures are provided with T-12 lamps.T-12 lamps are becoming more expensive, consume more energy and are difficult to find. Lighting fixtures with T-12 lamps must be replaced which represent, approximately 70% of the fluorescent fixtures in this facility.

The fire alarm system is manufactured by General Electric EST. The present fire alarm system does not provide audio/visual devices in classrooms. Modify existing fire alarm control panel to add audio/visual devices in the classrooms.

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. The school uses the telephone systems for public announcement. The system is working adequately for most part.

The present clock control system is manufactured by Standard. Most of the clocks are inoperative. Provide a new clock system, wireless, synchronized, battery operated.

There is not a television system.

The security system consists of surveillance CCTV cameras. Each floor is provided with (4) surveillance CCTV cameras. The system is approximately 5 years old and is expected to provide 10 more years of useful service life. Additional surveillance CCTV cameras are required to provide complete coverage of the interior of the school.

The emergency power system consists of a gas powered generator, manufactured by ONAN Power Systems, 10KW (estimated), 120/208V. The gas powered generator is approximately 40 years old and has exceeded its useful service life. Provide a new outdoor, diesel powered generator.

During the assessment we did not have access to the IT room but the School District standard is to provide adequate UPS to the IT equipment.

The emergency lighting is obtained with dedicated fixtures connected to the emergency generator. Exit signs are located at each exit door and corridors and are connected to the school emergency system.

The school building is not provided with lightning protection system. A study needs to be conducted to determine if lightning protection system is required.

The school has a hydraulic elevator rated 20HP at 208V. The elevator controller is microprocessor type. Since the hydraulic elevator is not connected to the emergency power, elevator is provided with a battery lowering device. Elevator was installed in year 2010 and is expected to provide 20 more years of useful service life.

The stage theatrical lighting is composed of one row of pendant mounted theatrical lighting and one row of floodlights in front of the stage. Theatrical lighting are original installation and are controlled from a 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 stage sound system is portable type. Provide a permanent installed sound system.

The school perimeter is illuminated using wall mounted HID lighting fixtures. There is no indication that additional lighting fixtures are required

Grounds Systems

The asphalt parking lot is located at the south end of the site with access from 54th Street. Striping is in place. There are no parking bumpers, signage, or designated handicap parking. The asphalt is in fair condition with alligatoring, and worn areas in the asphalt. Asphalt playgrounds take up most of the rest of the site. Asphalt is in fair condition. Pedestrian paving is concrete along city streets with many replaced sections. An access ramp is constructed at the front door. An area of brick pavers on the front of the building had several missing and loose bricks. Handrails at the dock are in poor condition. A grade separation from upper to lower playgrounds has mortared boulders topped with fencing, with a staircase next to the building. Site stairs are generally in need of minor repairs.

Site features include a flag pole, wooden benches, playground equipment on a soft surface, and concrete benches with damaged mosaic tile decorations. Chain link fence in fair condition surrounds the site from building corner to building corner.

Landscaping consists of mature trees on the perimeter of the site, a few trees in grass islands in the playground, and limited grass areas in front of the building. There is no irrigation system.

There are (3) outdoor, surveillance CCTV cameras around the building perimeter. Provide additional surveillance CCTV cameras for complete coverage of the building perimeter.

There is one wall mounted loud speaker facing the play area. There is no indication that an additional loud speaker is required.

Recommendations:

- Replace roofing
- Repair exterior walls – repoint mortar joints, replace caulking
- Replace exterior windows
- Replace exterior doors, except the front doors
- Renovate locker/shower rooms
- Replace interior door hardware
- Replace exit stairwell doors
- Replace stairwell handrails
- Replace/install interior signage
- Provide white boards in lieu of chalk boards in classrooms
- Repaint interiors
- Replace 2 x 4 acoustical tile ceilings where they occur throughout
- Replace 9" VAT with VCT
- Refinish painted concrete floors
- Replace classroom cabinetry
- Replace projection screen at auditorium
- Replace auditorium drapes
- Replace auditorium seating
- Replace classroom lavatories with cabinets due to age and condition, 27
- Renovate gym shower rooms
- Replace fountains due to non-accessibility, 5
- Replace water heater due to age
- Replace hydronic boilers due to age (otherwise in fair condition)
- Replace chiller due to age and obsolete refrigerant (R-11 CFC)
- Replace cooling water circulation pump due to age, 1
- Replace gym AHU due to age, approx. 7,500 CFM / 5 HP
- Replace IMC AHU due to age, approx. 15,000 CFM / 10 HP
- Replace classroom unit ventilators due to age, 35
- Repair or replace roof top exhaust fan with misaligned motor
- Install insulation on hydronic pipe to prevent condensation
- Replace leaking flange gaskets on hot water recirculation pumps
- Replace hydronic convection units due to age, 70
- Convert pneumatic HVAC control system to DDC
- Install fire sprinkler system for entire building including fire pump if needed
- Provide a 750KVA unit substation and 300KVA step-down transformer
- Replace original panelboards and associated feeders. Approximately (8) 208/120V panel boards
- Provide (2)25FT of surface raceways with receptacles spaced 24" on center and 4 wall mount receptacles per classroom. Approximately 340 receptacles
- Replace 70% of the existing fluorescent fixtures. Approximately 760 fixtures
- Modify existing fire alarm control panel to add Audio/visual devices in the classrooms. Approximately 50 devices
- Provide wireless, synchronized, battery operated clock system. Approximately 50
- Provide additional surveillance CCTV cameras for a complete coverage of the interior of the school. Approximately 6
- Provide an outdoor 90KW diesel powered generator
- Prepare a study to determine if lightning protection system is required
- Replace the auditorium theatrical lighting with new theatrical lighting and dimming system
- Replace the auditorium portable sound system with permanent installed sound system
- Provide additional outdoor surveillance CCTV cameras. Approximately 5
- Crack fill and surface seal asphalt parking lot / playground
- Repair exterior steps and handrails
- Install brick pavers with mortar

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 4 / Tm 3
Status:	Accepted by SDP	Team:	Tm 3
Site ID:	S430001		

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.

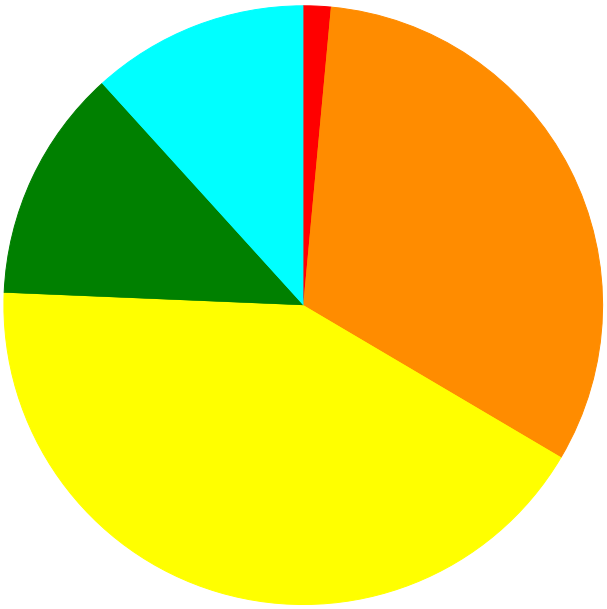
Current Investment Requirement and Condition by Uniformat Classification

UNIFORMAT Classification	RSLI%	FCI %	Current Repair
A10 - Foundations	55.00 %	0.00 %	$0.00
A20 - Basement Construction	55.00 %	0.00 %	$0.00
B10 - Superstructure	55.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	54.77 %	7.02 %	$323,115.45
B30 - Roofing	130.35 %	0.00 %	$0.00
C10 - Interior Construction	60.64 %	42.40 %	$849,493.92
C20 - Stairs	55.00 %	146.43 %	$168,562.64
C30 - Interior Finishes	110.17 %	42.78 %	$1,755,502.99
D10 - Conveying	85.71 %	0.00 %	$0.00
D20 - Plumbing	47.51 %	15.20 %	$253,338.54
D30 - HVAC	79.55 %	71.91 %	$6,530,899.60
D40 - Fire Protection	105.71 %	160.88 %	$1,058,601.61
D50 - Electrical	110.11 %	44.47 %	$2,133,878.28
E10 - Equipment	61.89 %	6.32 %	$82,084.62
E20 - Furnishings	105.00 %	348.06 %	$605,250.44
G20 - Site Improvements	40.61 %	17.34 %	$303,017.79
G40 - Site Electrical Utilities	41.68 %	13.54 %	$92,188.73
Totals:	**74.51 %**	**32.47 %**	**$14,155,934.61**

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)
B430001;Heston	81,640	33.43	$208,694.67	$4,461,474.42	$5,645,900.65	$1,785,218.04	$1,659,440.31
G430001;Grounds	117,200	16.27	$0.00	$70,314.16	$324,892.36	$0.00	$0.00
Total:		**32.47**	**$208,694.67**	**$4,531,788.58**	**$5,970,793.01**	**$1,785,218.04**	**$1,659,440.31**

Deficiencies By Priority



Budget Estimate Total: $14,155,934.61

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.

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Function:	Elementary School
Gross Area (SF):	81,640
Year Built:	1970
Last Renovation:	
Replacement Value:	$41,168,503
Repair Cost:	$13,760,728.09
Total FCI:	33.43 %
Total RSLI:	76.49 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B430001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S430001		

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	55.00 %	0.00 %	$0.00
A20 - Basement Construction	55.00 %	0.00 %	$0.00
B10 - Superstructure	55.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	54.77 %	7.02 %	$323,115.45
B30 - Roofing	130.35 %	0.00 %	$0.00
C10 - Interior Construction	60.64 %	42.40 %	$849,493.92
C20 - Stairs	55.00 %	146.43 %	$168,562.64
C30 - Interior Finishes	110.17 %	42.78 %	$1,755,502.99
D10 - Conveying	85.71 %	0.00 %	$0.00
D20 - Plumbing	47.51 %	15.20 %	$253,338.54
D30 - HVAC	79.55 %	71.91 %	$6,530,899.60
D40 - Fire Protection	105.71 %	160.88 %	$1,058,601.61
D50 - Electrical	110.11 %	44.47 %	$2,133,878.28
E10 - Equipment	61.89 %	6.32 %	$82,084.62
E20 - Furnishings	105.00 %	348.06 %	$605,250.44
Totals:	**76.49 %**	**33.43 %**	**$13,760,728.09**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$18.40	S.F.	81,640	100	1970	2070	2070	55.00 %	0.00 %	55			$1,502,176
A1030	Slab on Grade	$7.73	S.F.	81,640	100	1970	2070	2070	55.00 %	0.00 %	55			$631,077
A2010	Basement Excavation	$6.55	S.F.	81,640	100	1970	2070	2070	55.00 %	0.00 %	55			$534,742
A2020	Basement Walls	$12.70	S.F.	81,640	100	1970	2070	2070	55.00 %	0.00 %	55			$1,036,828
B1010	Floor Construction	$75.10	S.F.	81,640	100	1970	2070	2070	55.00 %	0.00 %	55			$6,131,164
B1020	Roof Construction	$13.88	S.F.	81,640	100	1970	2070	2070	55.00 %	0.00 %	55			$1,133,163
B2010	Exterior Walls	$36.91	S.F.	81,640	100	1970	2070	2070	55.00 %	5.62 %	55		$169,289.92	$3,013,332
B2020	Exterior Windows	$18.01	S.F.	81,640	40	1970	2010	2035	50.00 %	0.00 %	20			$1,470,336
B2030	Exterior Doors	$1.45	S.F.	81,640	25	1970	1995	2042	108.00 %	129.94 %	27		$153,825.53	$118,378
B3010105	Built-Up	$37.76	S.F.	39,220	20	1995	2015	2042	135.00 %	0.00 %	27			$1,480,947
B3010120	Single Ply Membrane	$38.73	S.F.		20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	1,664	50	1970	2020	2042	54.00 %	0.00 %	27			$90,222
B3010140	Shingle & Tile	$38.73	S.F.		25				0.00 %	0.00 %				$0
B3020	Roof Openings	$0.06	S.F.		20				0.00 %	0.00 %				$0
C1010	Partitions	$17.91	S.F.	81,640	100	1970	2070	2070	55.00 %	30.01 %	55		$438,757.14	$1,462,172
C1020	Interior Doors	$3.51	S.F.	81,640	40	1970	2010	2035	50.00 %	67.89 %	20		$194,541.66	$286,556
C1030	Fittings	$3.12	S.F.	81,640	40	1970	2010	2057	105.00 %	84.88 %	42		$216,195.12	$254,717
C2010	Stair Construction	$1.41	S.F.	81,640	100	1970	2070	2070	55.00 %	146.43 %	55		$168,562.64	$115,112

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System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$19.67	S.F.	81,640	10	2006	2016	2027	120.00 %	42.18 %	12		$677,387.70	$1,605,859
C3010231	Vinyl Wall Covering	$0.00	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$0.00	S.F.		30				0.00 %	0.00 %				$0
C3020411	Carpet	$7.30	S.F.	2,440	10	2006	2016	2025	100.00 %	0.00 %	10			$17,812
C3020412	Terrazzo & Tile	$75.52	S.F.		50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	65,400	20	2000	2020	2037	110.00 %	107.81 %	22		$682,500.06	$633,072
C3020414	Wood Flooring	$22.27	S.F.	5,700	25	1995	2020	2020	20.00 %	0.00 %	5			$126,939
C3020415	Concrete Floor Finishes	$0.97	S.F.	8,100	50	1970	2020	2050	70.00 %	332.13 %	35		$26,095.69	$7,857
C3030	Ceiling Finishes	$20.97	S.F.	81,640	25	1970	1995	2042	108.00 %	21.58 %	27		$369,519.54	$1,711,991
D1010	Elevators and Lifts	$1.53	S.F.	81,640	35	2010	2045	2045	85.71 %	0.00 %	30			$124,909
D2010	Plumbing Fixtures	$13.52	S.F.	81,640	35	1970	2005	2030	42.86 %	17.90 %	15		$197,531.11	$1,103,773
D2020	Domestic Water Distribution	$1.68	S.F.	81,640	25	1970	1995	2030	60.00 %	40.69 %	15		$55,807.43	$137,155
D2030	Sanitary Waste	$2.90	S.F.	81,640	25	1970	1995	2030	60.00 %	0.00 %	15			$236,756
D2040	Rain Water Drainage	$2.32	S.F.	81,640	30	1970	2000	2030	50.00 %	0.00 %	15			$189,405
D3020	Heat Generating Systems	$18.67	S.F.	81,640	35	1970	2005	2032	48.57 %	51.62 %	17		$786,845.44	$1,524,219
D3030	Cooling Generating Systems	$24.48	S.F.	81,640	30	1970	2000	2028	43.33 %	33.17 %	13		$662,896.85	$1,998,547
D3040	Distribution Systems	$42.99	S.F.	81,640	25	1970	1995	2042	108.00 %	94.87 %	27		$3,329,811.07	$3,509,704
D3050	Terminal & Package Units	$11.60	S.F.	81,640	20	1970	1990	2028	65.00 %	0.00 %	13			$947,024
D3060	Controls & Instrumentation	$13.50	S.F.	81,640	20	1970	1990	2037	110.00 %	158.90 %	22		$1,751,346.24	$1,102,140
D4010	Sprinklers	$7.05	S.F.	81,640	35			2052	105.71 %	183.92 %	37		$1,058,601.61	$575,562
D4020	Standpipes	$1.01	S.F.	81,640	35			2052	105.71 %	0.00 %	37			$82,456
D5010	Electrical Service/Distribution	$9.70	S.F.	81,640	30	1970	2000	2047	106.67 %	108.77 %	32		$861,329.05	$791,908
D5020	Lighting and Branch Wiring	$34.68	S.F.	81,640	20	1970	1990	2037	110.00 %	27.51 %	22		$778,752.05	$2,831,275
D5030	Communications and Security	$12.99	S.F.	81,640	15	1970	1985	2032	113.33 %	26.26 %	17		$278,449.59	$1,060,504
D5090	Other Electrical Systems	$1.41	S.F.	81,640	30	1970	2000	2047	106.67 %	187.08 %	32		$215,347.59	$115,112
E1020	Institutional Equipment	$4.82	S.F.	81,640	35	1970	2005	2052	105.71 %	20.86 %	37		$82,084.62	$393,505
E1090	Other Equipment	$11.10	S.F.	81,640	35	1995	2030	2030	42.86 %	0.00 %	15			$906,204
E2010	Fixed Furnishings	$2.13	S.F.	81,640	40	1970	2010	2057	105.00 %	348.06 %	42		$605,250.44	$173,893
								Total	**76.49 %**	**33.43 %**			**$13,760,728.09**	**$41,168,503**

System Notes

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

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

Note: Paint 100%

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

Note:
Carpet 3%
Vinyl80%
Wood 7%
Concrete10%

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

Note:

Paint	60%
2 x 4	30%
12"	1%
Unfinished	9%

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:	**$13,760,728**	**$0**	**$0**	**$0**	**$0**	**$161,873**	**$0**	**$0**	**$0**	**$0**	**$26,331**	**$13,948,932**
*** 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	$169,290	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$169,290**
B2020 - Exterior Windows	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
B2030 - Exterior Doors	$153,826	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$153,826**
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	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$438,757	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$438,757**

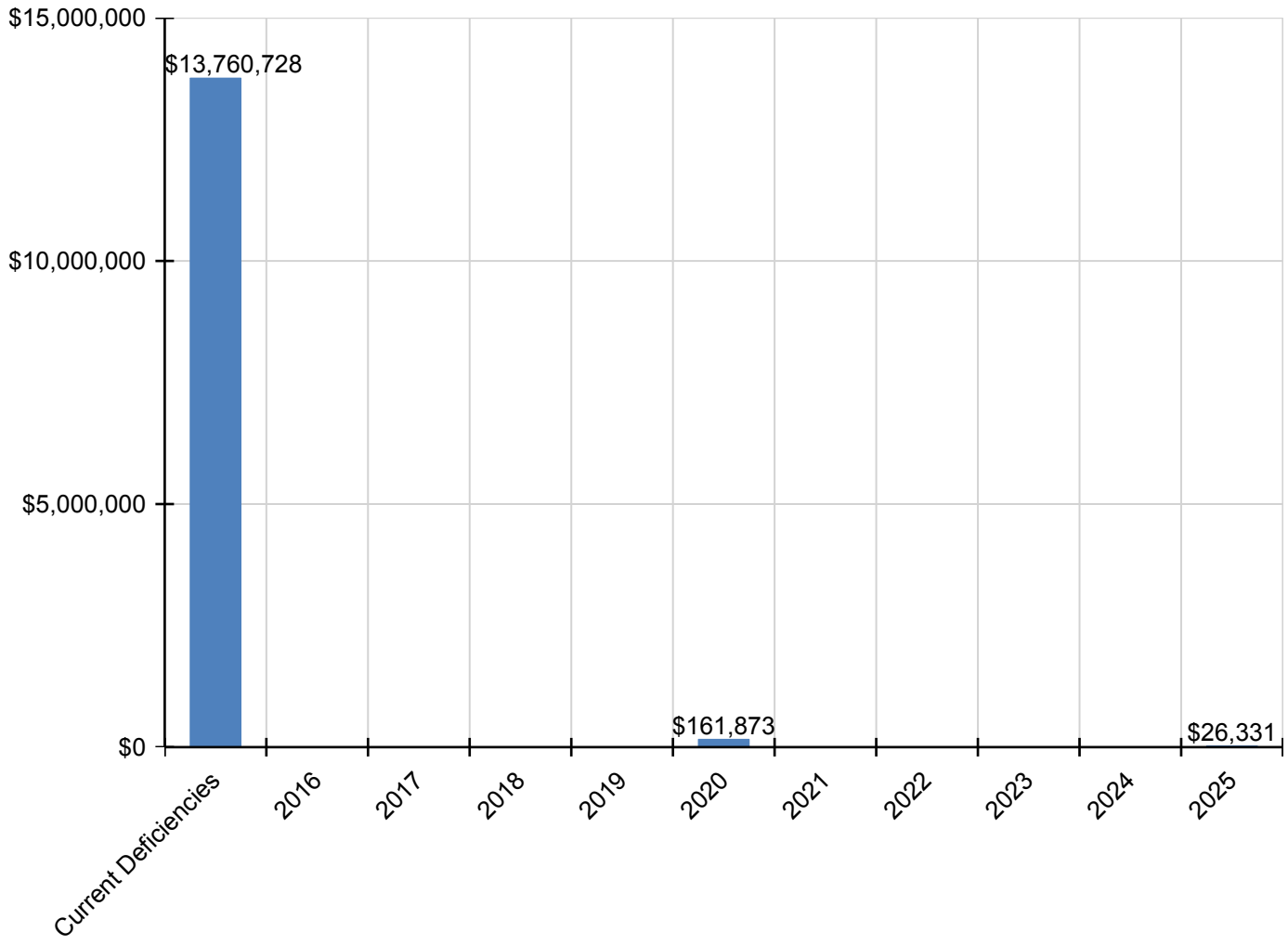
C1020 - Interior Doors	$194,542	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$194,542**
C1030 - Fittings	$216,195	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$216,195**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$168,563	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$168,563**
C30 - Interior Finishes	$0	$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	$677,388	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$677,388**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$26,331	**$26,331**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$682,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$682,500**
C3020414 - Wood Flooring	$0	$0	$0	$0	$0	$161,873	$0	$0	$0	$0	$0	**$161,873**
C3020415 - Concrete Floor Finishes	$26,096	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$26,096**
C3030 - Ceiling Finishes	$369,520	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$369,520**
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	$0	$0	$0	$0	$0	$0	**$0**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$197,531	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$197,531**
D2020 - Domestic Water Distribution	$55,807	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$55,807**
D2030 - Sanitary Waste	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
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	$786,845	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$786,845**
D3030 - Cooling Generating Systems	$662,897	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$662,897**
D3040 - Distribution Systems	$3,329,811	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,329,811**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,751,346	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,751,346**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$1,058,602	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,058,602**
D4020 - Standpipes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

D50 - Electrical	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D5010 - Electrical Service/Distribution	$861,329	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$861,329**
D5020 - Lighting and Branch Wiring	$778,752	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$778,752**
D5030 - Communications and Security	$278,450	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$278,450**
D5090 - Other Electrical Systems	$215,348	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$215,348**
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	$82,085	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$82,085**
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	$605,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$605,250**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

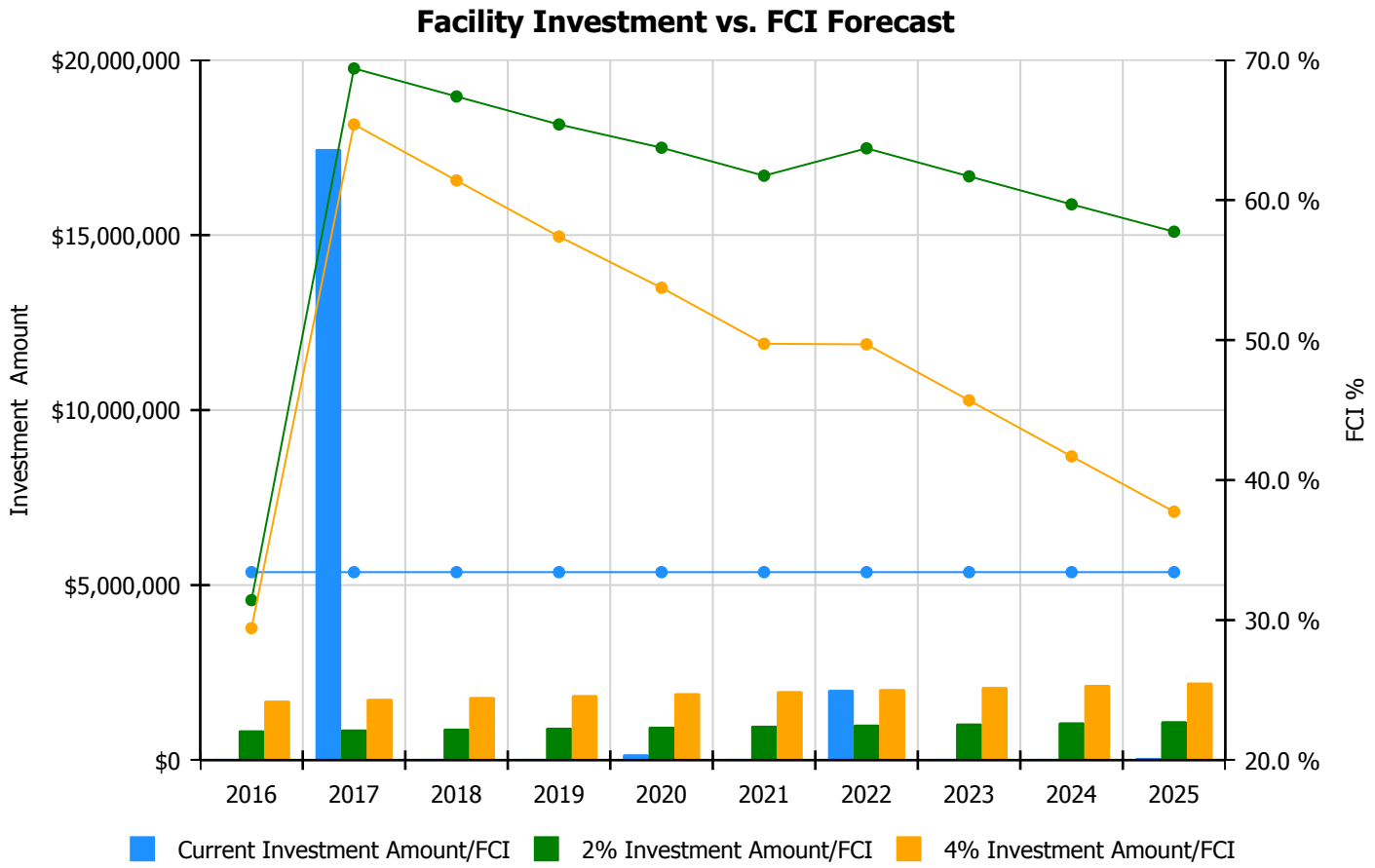
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

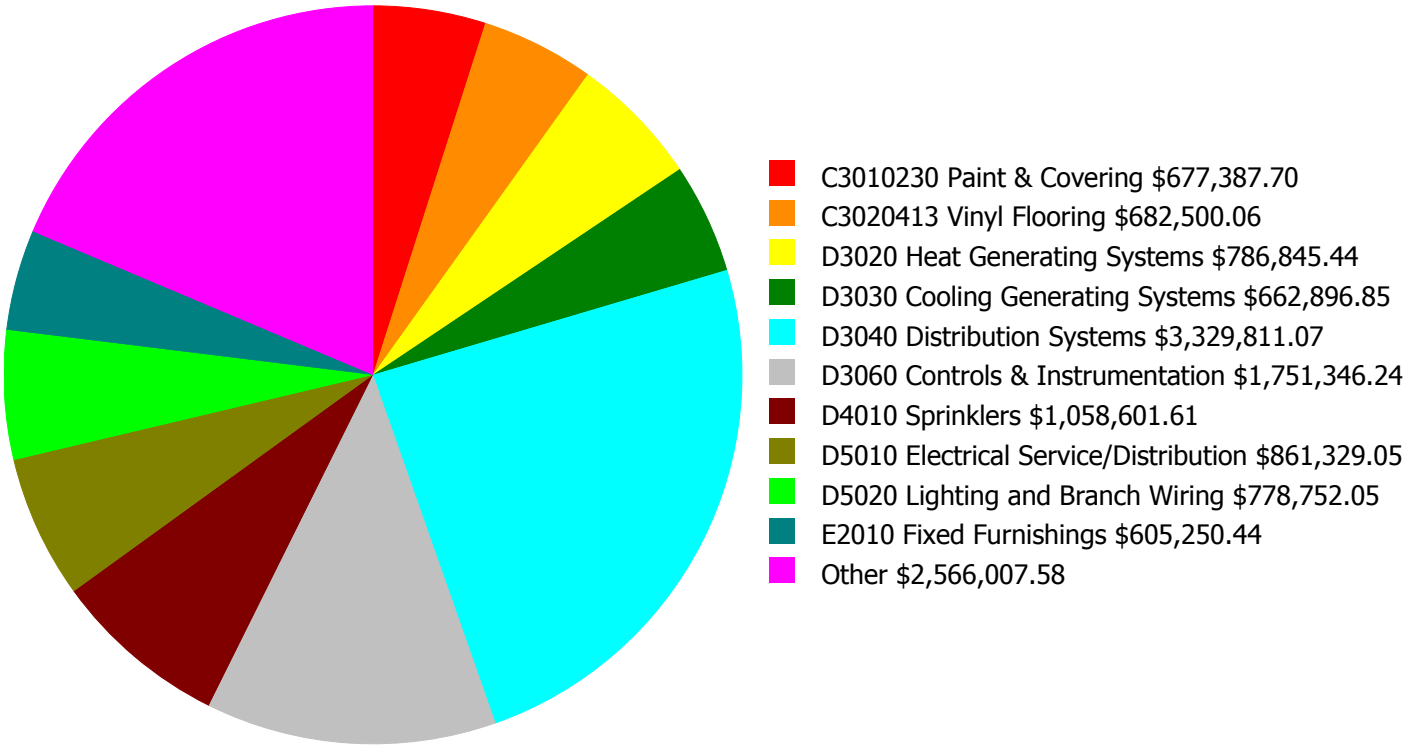
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 33.43%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$848,071.00	31.43 %	$1,696,142.00	29.43 %
2017	$17,458,260	$873,513.00	69.40 %	$1,747,027.00	65.40 %
2018	$0	$899,719.00	67.40 %	$1,799,437.00	61.40 %
2019	$0	$926,710.00	65.40 %	$1,853,421.00	57.40 %
2020	$161,873	$954,512.00	63.74 %	$1,909,023.00	53.74 %
2021	$0	$983,147.00	61.74 %	$1,966,294.00	49.74 %
2022	$2,003,516	$1,012,641.00	63.69 %	$2,025,283.00	49.69 %
2023	$0	$1,043,021.00	61.69 %	$2,086,041.00	45.69 %
2024	$0	$1,074,311.00	59.69 %	$2,148,622.00	41.69 %
2025	$26,331	$1,106,541.00	57.74 %	$2,213,081.00	37.74 %
Total:	**$19,649,980**	**$9,722,186.00**		**$19,444,371.00**	

Deficiency Summary by System

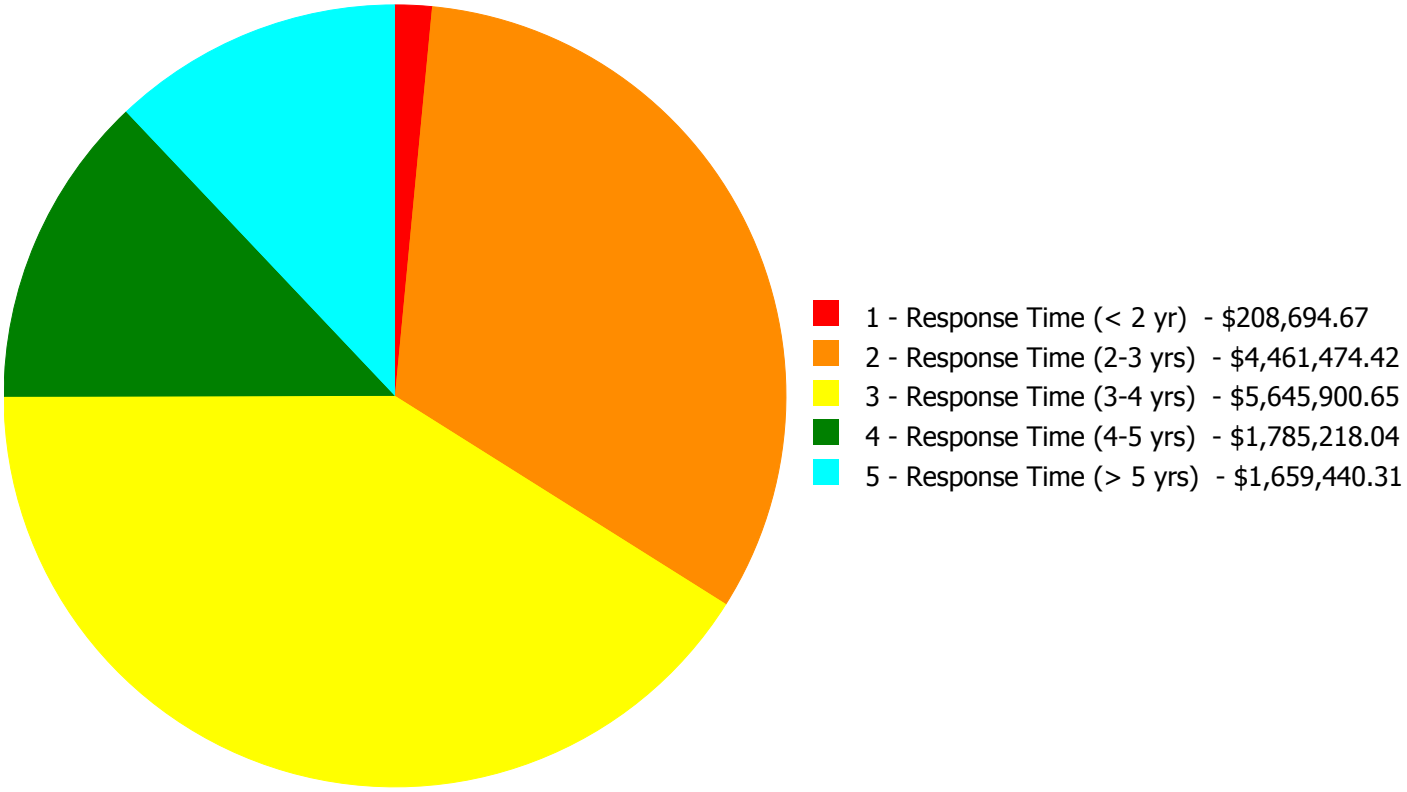
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $13,760,728.09

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: $13,760,728.09

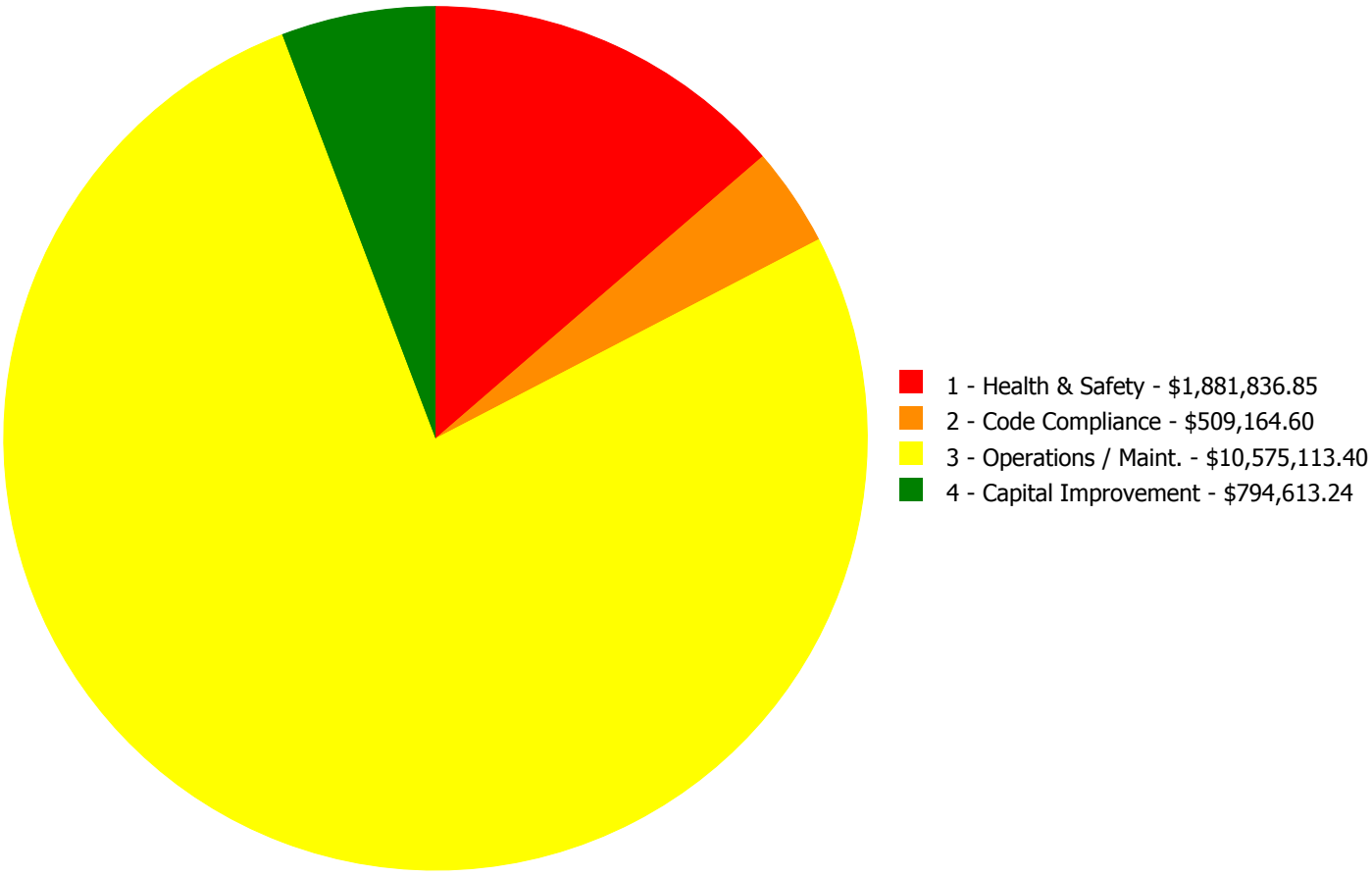
Deficiency By Priority Investment Table

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	$40,132.03	$129,157.89	$0.00	$0.00	$0.00	$169,289.92
B2030	Exterior Doors	$0.00	$153,825.53	$0.00	$0.00	$0.00	$153,825.53
C1010	Partitions	$0.00	$0.00	$0.00	$438,757.14	$0.00	$438,757.14
C1020	Interior Doors	$0.00	$194,541.66	$0.00	$0.00	$0.00	$194,541.66
C1030	Fittings	$0.00	$216,195.12	$0.00	$0.00	$0.00	$216,195.12
C2010	Stair Construction	$168,562.64	$0.00	$0.00	$0.00	$0.00	$168,562.64
C3010230	Paint & Covering	$0.00	$677,387.70	$0.00	$0.00	$0.00	$677,387.70
C3020413	Vinyl Flooring	$0.00	$682,500.06	$0.00	$0.00	$0.00	$682,500.06
C3020415	Concrete Floor Finishes	$0.00	$26,095.69	$0.00	$0.00	$0.00	$26,095.69
C3030	Ceiling Finishes	$0.00	$369,519.54	$0.00	$0.00	$0.00	$369,519.54
D2010	Plumbing Fixtures	$0.00	$197,531.11	$0.00	$0.00	$0.00	$197,531.11
D2020	Domestic Water Distribution	$0.00	$1,200.71	$54,606.72	$0.00	$0.00	$55,807.43
D3020	Heat Generating Systems	$0.00	$0.00	$655,796.89	$0.00	$131,048.55	$786,845.44
D3030	Cooling Generating Systems	$0.00	$0.00	$662,896.85	$0.00	$0.00	$662,896.85
D3040	Distribution Systems	$0.00	$17,457.06	$2,342,923.82	$499,640.04	$469,790.15	$3,329,811.07
D3060	Controls & Instrumentation	$0.00	$1,751,346.24	$0.00	$0.00	$0.00	$1,751,346.24
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$1,058,601.61	$1,058,601.61
D5010	Electrical Service/Distribution	$0.00	$0.00	$861,329.05	$0.00	$0.00	$861,329.05
D5020	Lighting and Branch Wiring	$0.00	$0.00	$123,754.16	$654,997.89	$0.00	$778,752.05
D5030	Communications and Security	$0.00	$0.00	$116,086.98	$162,362.61	$0.00	$278,449.59
D5090	Other Electrical Systems	$0.00	$0.00	$215,347.59	$0.00	$0.00	$215,347.59
E1020	Institutional Equipment	$0.00	$0.00	$52,624.26	$29,460.36	$0.00	$82,084.62
E2010	Fixed Furnishings	$0.00	$44,716.11	$560,534.33	$0.00	$0.00	$605,250.44
	Total:	$208,694.67	$4,461,474.42	$5,645,900.65	$1,785,218.04	$1,659,440.31	$13,760,728.09

Deficiency Summary by Category

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



Budget Estimate Total: $13,760,728.09

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: B2010 - Exterior Walls

Location: Exterior walls

Distress: Building Envelope Integrity

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 2,000.00

Unit of Measure: L.F.

Estimate: $40,132.03

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Recaulk exterior control joints and other caulked joints.

System: C2010 - Stair Construction

Location: Stairwells

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Replace inadequate or install proper stair railing - select appropriate material

Qty: 500.00

Unit of Measure: L.F.

Estimate: $168,562.64

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Replace exit stair handrails with code compliant types,

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

System: B2010 - Exterior Walls

Location: Exterior walls

Distress: Building Envelope Integrity

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: 4,000.00

Unit of Measure: S.F.

Estimate: $129,157.89

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Repair areas of damaged brick noted at 2nd floor mechanical roof, and miscellaneous areas around the building. Repair cracked block at gym exterior walls.

System: B2030 - Exterior Doors

Location: Exterior doors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace exterior doors - per leaf

Qty: 19.00

Unit of Measure: Ea.

Estimate: $153,825.53

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Replace exterior doors, except the front doors. Doors are in poor condition with rust, replacement hardware, and surface damage.

System: C1020 - Interior Doors

Location: Stairwells

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Remove and replace hollow metal frames and doors

Qty: 20.00

Unit of Measure: Ea.

Estimate: $147,233.26

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Replace stairwell exit doors that are well beyond service life. Incorporate necessary hardware for egress doors.

System: C1020 - Interior Doors

Location: Interiors

Distress: Accessibility

Category: 2 - Code Compliance

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

Correction: Replace door knobs with compliant lever type

Qty: 85.00

Unit of Measure: Ea.

Estimate: $47,308.40

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Upgrade interior door hardware to accessible lever locksets,

System: C1030 - Fittings

Location: Toilet rooms
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace toilet partitions
Qty: 30.00
Unit of Measure: Ea.
Estimate: $82,561.36
Assessor Name: Craig Anding
Date Created: 02/24/2016

Notes: Toilet partitions are in poor condition in student and faculty toilet rooms and locker rooms..

System: C1030 - Fittings

Location: Locker rooms
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace lockers - select size
Qty: 100.00
Unit of Measure: Ea.
Estimate: $65,465.32
Assessor Name: Craig Anding
Date Created: 02/24/2016

Notes: Replace rusty lockers.

System: C1030 - Fittings

Location: Interiors throughout

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 160.00

Unit of Measure: Ea.

Estimate: $43,346.00

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Replace/install interior signage.

System: C1030 - Fittings

Location: Classrooms

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace blackboards with marker boards - pick the appropriate size and insert the quantities

Qty: 20.00

Unit of Measure: Ea.

Estimate: $24,822.44

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Replace chalkboards with white marker boards

System: C3010230 - Paint & Covering

Location: Interiors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Repair and repaint all interior walls - SF of wall surface

Qty: 100,000.00

Unit of Measure: S.F.

Estimate: $677,387.70

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Repaint building interiors. Although most areas of the school are well maintained, it is expected that a re-fresh of wall finishes will be required within the time frame covered by this assessment.

System: C3020413 - Vinyl Flooring

Location: Corridors, classrooms, auditorium

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 45,000.00

Unit of Measure: S.F.

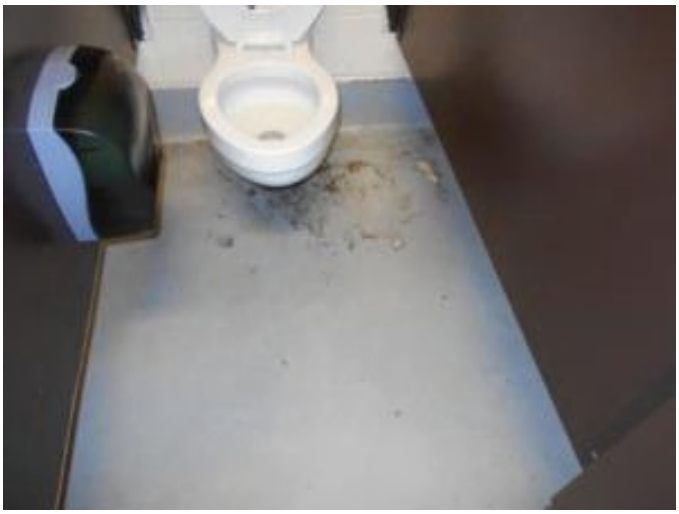
Estimate: $682,500.06

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Replace 9" VAT with 12" VCT where it occurs throughout the building.

System: C3020415 - Concrete Floor Finishes



Location: Toilet rooms, kitchen

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Prepare and repaint concrete floor

Qty: 4,500.00

Unit of Measure: S.F.

Estimate: $26,095.69

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Refinish concrete floors in toilet rooms and kitchen

System: C3030 - Ceiling Finishes

Location: Corridors, auditorium, etc.

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 24,500.00

Unit of Measure: S.F.

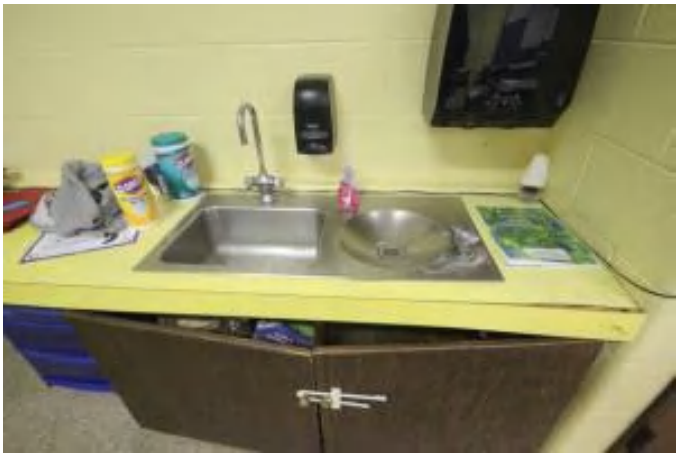
Estimate: $369,519.54

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Replace 2 x 4 acoustical tile ceilings where they occur throughout. Tiles are damaged/missing. Grid is yellowed.

System: D2010 - Plumbing Fixtures



Location: Classrooms

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 27.00

Unit of Measure: Ea.

Estimate: $119,066.63

Assessor Name: Craig Anding

Date Created: 01/27/2016

Notes: Replace classroom lavatories with cabinets due to age and condition

System: D2010 - Plumbing Fixtures

Location: Entire building

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: 5.00

Unit of Measure: Ea.

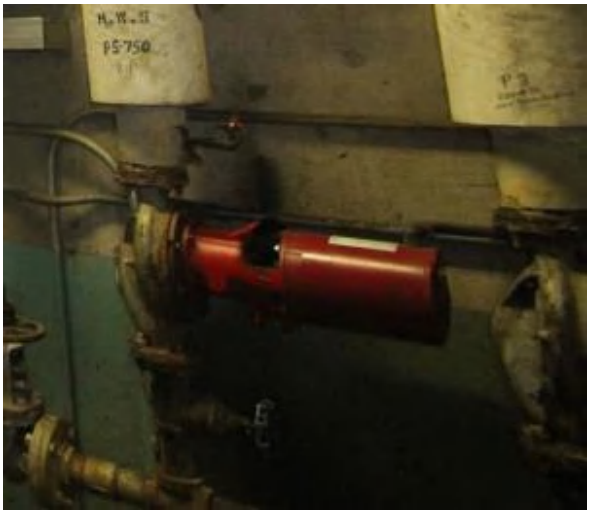
Estimate: $78,464.48

Assessor Name: Craig Anding

Date Created: 01/28/2016

Notes: Replace fountains due to non-accessibility and age

System: D2020 - Domestic Water Distribution



Location: Boiler room

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace pipe and fittings

Qty: 2.00

Unit of Measure: L.F.

Estimate: $1,200.71

Assessor Name: Craig Anding

Date Created: 01/29/2016

Notes: Replace leaking flange gaskets on hot water recirculation pumps

System: D3040 - Distribution Systems

Location: Boiler and mechanical rooms

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Replace hydronic distribution piping insulation - 100 LF of piping

Qty: 500.00

Unit of Measure: L.F.

Estimate: $17,457.06

Assessor Name: Craig Anding

Date Created: 01/29/2016

Notes: Install insulation on hydronic pipe to prevent condensation

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: 81,640.00

Unit of Measure: S.F.

Estimate: $1,751,346.24

Assessor Name: Craig Anding

Date Created: 01/29/2016

Notes: Convert pneumatic HVAC control system to DDC

System: E2010 - Fixed Furnishings

Location: Stage

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace stage curtain - insert the LF of track and SF of curtain

Qty: 2.00

Unit of Measure: Ea.

Estimate: $44,716.11

Assessor Name: Craig Anding

Date Created: 02/22/2016

Notes: Replace stage curtains that are beyond their expected service life and in worn condition.

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

System: D2020 - Domestic Water Distribution

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace vertical tank type gas-fired water heater (75 gal)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $54,606.72

Assessor Name: Craig Anding

Date Created: 01/28/2016

Notes: Replace water heater due to age

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 2.00

Unit of Measure: Ea.

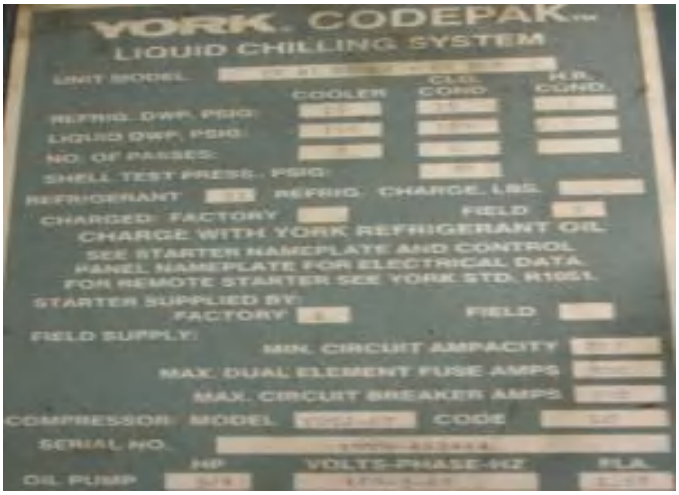
Estimate: $655,796.89

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Replace hydronic boilers due to age (otherwise in fair condition)

System: D3030 - Cooling Generating Systems



Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace chiller, air-cooled (200 tons)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $662,896.85

Assessor Name: Craig Anding

Date Created: 01/26/2016

Notes: Replace chiller due to age and obsolete refrigerant (R-11 CFC)

System: D3040 - Distribution Systems

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 35.00

Unit of Measure: Ea.

Estimate: $1,745,753.55

Assessor Name: Craig Anding

Date Created: 01/29/2016

Notes: Replace classroom unit ventilators due to age

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 894.00

Unit of Measure: Student

Estimate: $582,005.95

Assessor Name: Craig Anding

Date Created: 01/29/2016

Notes: Replace IMC AHU due to age, approx. 15,000 CFM / 10 HP

System: D3040 - Distribution Systems

Location: Roof top

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Replace power roof ventilator (24" dia.)

Qty: 0.50

Unit of Measure: Ea.

Estimate: $15,164.32

Assessor Name: Craig Anding

Date Created: 01/29/2016

Notes: Repair or replace roof top exhaust fan with misaligned motor

System: D5010 - Electrical Service/Distribution

Location: Basement

Distress: Inadequate

Category: 4 - Capital Improvement

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

Correction: Replace unit substation

Qty: 1.00

Unit of Measure: Ea.

Estimate: $645,704.89

Assessor Name: Craig Anding

Date Created: 01/19/2016

Notes: Provide a 750KVA unit substation and 300KVA step-down transformer.

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace Electrical Distribution System (U)

Qty: 8.00

Unit of Measure: Ea.

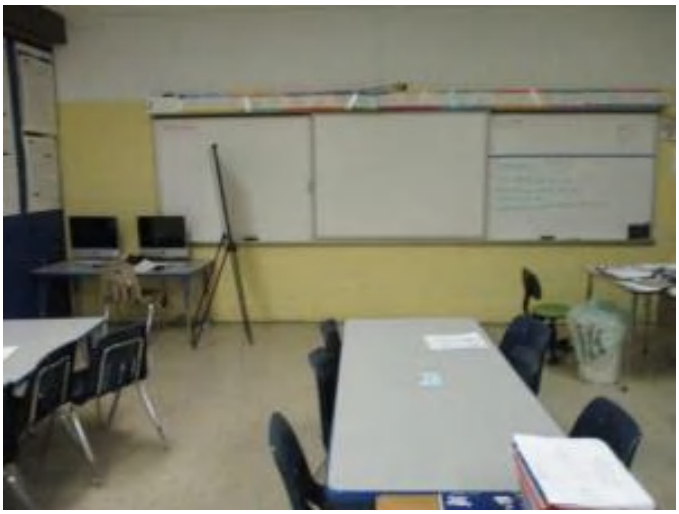
Estimate: $215,624.16

Assessor Name: Craig Anding

Date Created: 01/19/2016

Notes: Replace original panelboards and associated feeders. Approximate (8) 208/120V panel boards.

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: 340.00
Unit of Measure: Ea.
Estimate: $123,754.16
Assessor Name: Craig Anding
Date Created: 01/19/2016

Notes: Provide (2)25FT of surface raceways with receptacles spaced 24” on center and 4 wall mount receptacles per classroom. Approximate 340 receptacles

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: $116,086.98
Assessor Name: Craig Anding
Date Created: 01/19/2016

Notes: Modify existing fire alarm control panel to add Audio/visual devices in the classrooms. Approximate 50 devices.

System: D5090 - Other Electrical Systems

Location: Outdoor
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 3 - Response Time (3-4 yrs)
Correction: Add Standby Generator System
Qty: 1.00
Unit of Measure: Ea.
Estimate: $191,097.77
Assessor Name: Craig Anding
Date Created: 01/19/2016

Notes: Provide an outdoor 90KW 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: 01/19/2016

Notes: Prepare a study to determine if lightning protection system is required.

System: E1020 - Institutional Equipment

Location: Gym

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or install basketball backstop and hoop - pick the appropriate style of backstop

Qty: 6.00

Unit of Measure: Ea.

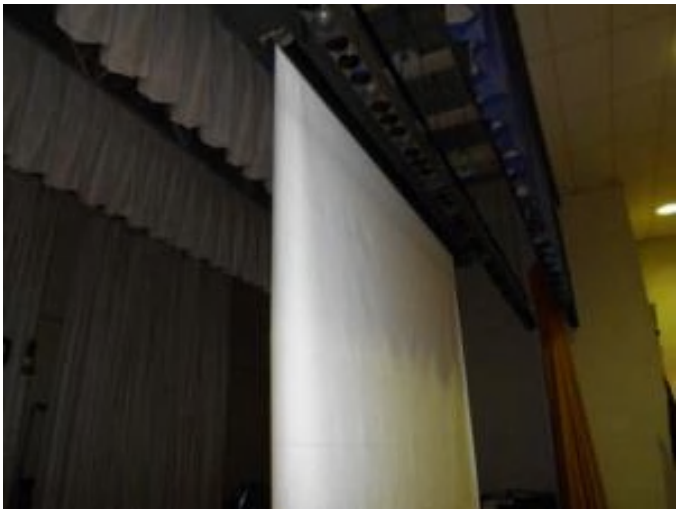
Estimate: $37,856.10

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Replace gym backstops on existing frames.

System: E1020 - Institutional Equipment



Location: Stage

Distress: Failing

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: 02/22/2016

Notes: Replace projection screen at auditorium stage.

System: E2010 - Fixed Furnishings

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 400.00

Unit of Measure: L.F.

Estimate: $419,837.07

Assessor Name: Craig Anding

Date Created: 02/23/2016

Notes: Classroom casework is in poor condition due to age. Laminates and veneers are damaged. Hardware is broken or missing.

System: E2010 - Fixed Furnishings

Location: Auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 156.00

Unit of Measure: Ea.

Estimate: $140,697.26

Assessor Name: Craig Anding

Date Created: 02/22/2016

Notes: Replace damaged auditorium seating. Parts are difficult to find as seating is obsolete.

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

System: C1010 - Partitions

Location: Showers

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Remodel and refurbish shower room - based on approximately 8 showers

Qty: 2.00

Unit of Measure: Ea.

Estimate: $438,757.14

Assessor Name: Craig Anding

Date Created: 01/28/2016

Notes: Renovate gym shower rooms

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 300.00

Unit of Measure: Seat

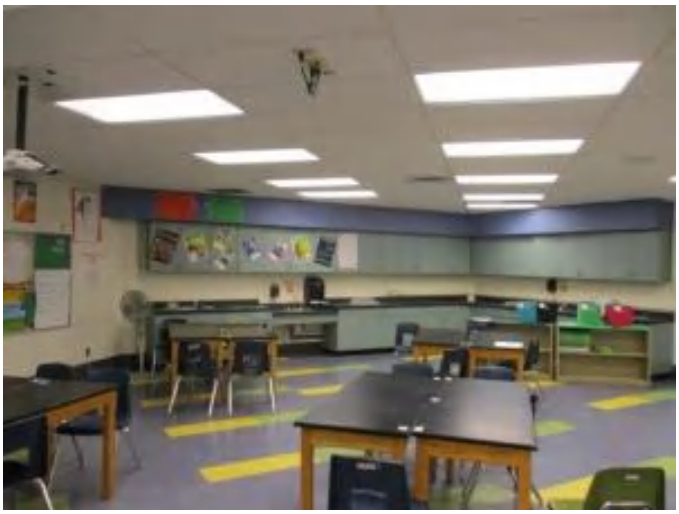
Estimate: $499,640.04

Assessor Name: Craig Anding

Date Created: 01/28/2016

Notes: Replace auditorium AHU due to age, approx. 7,500 CFM / 5 HP

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: 760.00
Unit of Measure: Ea.
Estimate: $654,997.89
Assessor Name: Craig Anding
Date Created: 01/19/2016

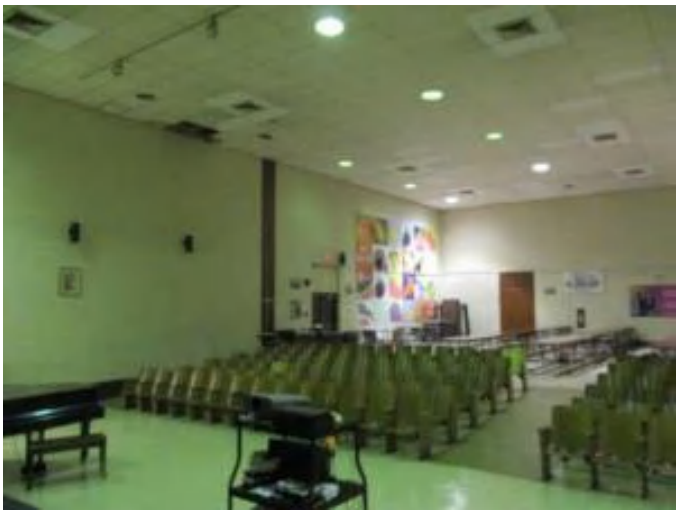
Notes: Replace 70% of the existing fluorescent fixtures. Approximate 760 fixtures.

System: D5030 - Communications and Security

Location: Entire Building
Distress: Obsolete
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: 01/19/2016

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

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: $25,154.19
Assessor Name: Craig Anding
Date Created: 01/19/2016

Notes: Replace the auditorium portable sound system with permanent installed sound system.

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: 1.00
Unit of Measure: Ea.
Estimate: $24,648.20
Assessor Name: Craig Anding
Date Created: 01/19/2016

Notes: Provide additional surveillance CCTV cameras for a complete coverage of the interior of the school. Approximate 6

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: $29,460.36

Assessor Name: Craig Anding

Date Created: 01/19/2016

Notes: Replace the auditorium theatrical lighting with new theatrical lighting and dimming system

Priority 5 - Response Time (> 5 yrs):

System: D3020 - Heat Generating Systems

Location: Boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace pump, base-mounted, end suction HHW (5" size, 15 HP, to 1000 GPM)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $131,048.55

Assessor Name: Craig Anding

Date Created: 01/28/2016

Notes: Replace cooling water circulation pump due to age

System: D3040 - Distribution Systems

Location: Mechanical room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 4,700.00

Unit of Measure: S.F.

Estimate: $270,137.97

Assessor Name: Craig Anding

Date Created: 01/28/2016

Notes: Replace gym AHU due to age, approx. 7,500 CFM / 5 HP

System: D3040 - Distribution Systems

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 700.00

Unit of Measure: L.F.

Estimate: $199,652.18

Assessor Name: Craig Anding

Date Created: 01/29/2016

Notes: Replace hydronic 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: 74,000.00

Unit of Measure: S.F.

Estimate: $1,058,601.61

Assessor Name: Craig Anding

Date Created: 01/27/2016

Notes: Install fire sprinkler system for entire building 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	Hydraulic passenger elevators, base unit, standard finish, 1500 lb, 100 fpm, 2 stop	1.00	Ea.	Basement elevator machine room					35	2010	2045	$61,999.00	$68,198.90
D3020 Heat Generating Systems	Boiler, gas fired, natural or propane, cast iron, hot water, gross output, 3808 MBH, includes standard controls and insulated jacket, packaged	2.00	Ea.	Boiler room					35	1976	2052	$62,552.00	$137,614.40
D3030 Cooling Generating Systems	Chiller, centrifugal, water cooled, packaged hermetic, standard controls, 200 ton	1.00	Ea.	Boiler room					30	1988	2045	$152,640.80	$167,904.88
D3030 Cooling Generating Systems	Cooling tower, galvanized steel, packaged unit, draw thru, 300 ton	1.00	Ea.	Lower roof					30	1996	2026	$75,868.80	$83,455.68
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 15 H.P., to 1000 GPM, 5" size	1.00	Ea.	Boiler room					25	1988	2040	$21,432.00	$23,575.20
D3040 Distribution Systems	Pump, circulating, cast iron, base mounted, coupling guard, bronze impeller, flanged joints, 20 H.P., to 1350 GPM, 6" size	2.00	Ea.	Boiler room					25	2015	2040	$23,598.00	$51,915.60
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 300 kVA & below, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	Basement					30	1970	2047	$42,600.60	$46,860.66
D5010 Electrical Service/Distribution	Load interrupter switch, 2 position, 300 kVA & below, 13.8 kV, 600 amp w/CLF fuses, NEMA 1	1.00	Ea.	Basement					30	2005	2035	$42,600.60	$46,860.66
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, 4 W, 120/208 or 277/480 V, 1200 amp, excl breakers	1.00	Ea.	Basement					30	1970	2047	$6,551.55	$7,206.71
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, subfeed lug-rated, 400 amp, excl breakers	1.00	Ea.	Basement					30	2005	2035	$3,167.10	$3,483.81
D5010 Electrical Service/Distribution	Transformer, liquid-filled, 5 kV or 15 kV primary, 277/480 V secondary, 3 phase, 225 kVA, pad mounted	1.00	Ea.	Basement					30	2005	2035	$22,728.60	$25,001.46
D5010 Electrical Service/Distribution	Transformer, liquid-filled, 5 kV or 15 kV primary, 277/480 V secondary, 3 phase, 500 kVA, pad mounted	1.00	Ea.	Basement					30	1970	2047	$33,534.00	$36,887.40
												Total:	**$698,965.36**

Executive Summary

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

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

Function:	
Gross Area (SF):	117,200
Year Built:	1970
Last Renovation:	
Replacement Value:	$2,428,828
Repair Cost:	$395,206.52
Total FCI:	16.27 %
Total RSLI:	40.91 %

Description:

Attributes:

General Attributes:

Bldg ID:	S430001	Site ID:	S430001

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	40.61 %	17.34 %	$303,017.79
G40 - Site Electrical Utilities	41.68 %	13.54 %	$92,188.73
Totals:	**40.91 %**	**16.27 %**	**$395,206.52**

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	$8.50	S.F.	17,500	30	1970	2000	2028	43.33 %	23.93 %	13		$35,597.56	$148,750
G2030	Pedestrian Paving	$12.30	S.F.	82,300	40	1970	2010	2028	32.50 %	26.42 %	13		$267,420.23	$1,012,290
G2040	Site Development	$4.36	S.F.	117,200	25	1970	1995	2028	52.00 %	0.00 %	13			$510,992
G2050	Landscaping & Irrigation	$4.36	S.F.	17,400	15	1970	1985	2025	66.67 %	0.00 %	10			$75,864
G4020	Site Lighting	$4.84	S.F.	117,200	30	1970	2000	2025	33.33 %	0.00 %	10			$567,248
G4030	Site Communications & Security	$0.97	S.F.	117,200	30	1970	2000	2040	83.33 %	81.09 %	25		$92,188.73	$113,684
								Total	**40.91 %**	**16.27 %**			**$395,206.52**	**$2,428,828**

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.

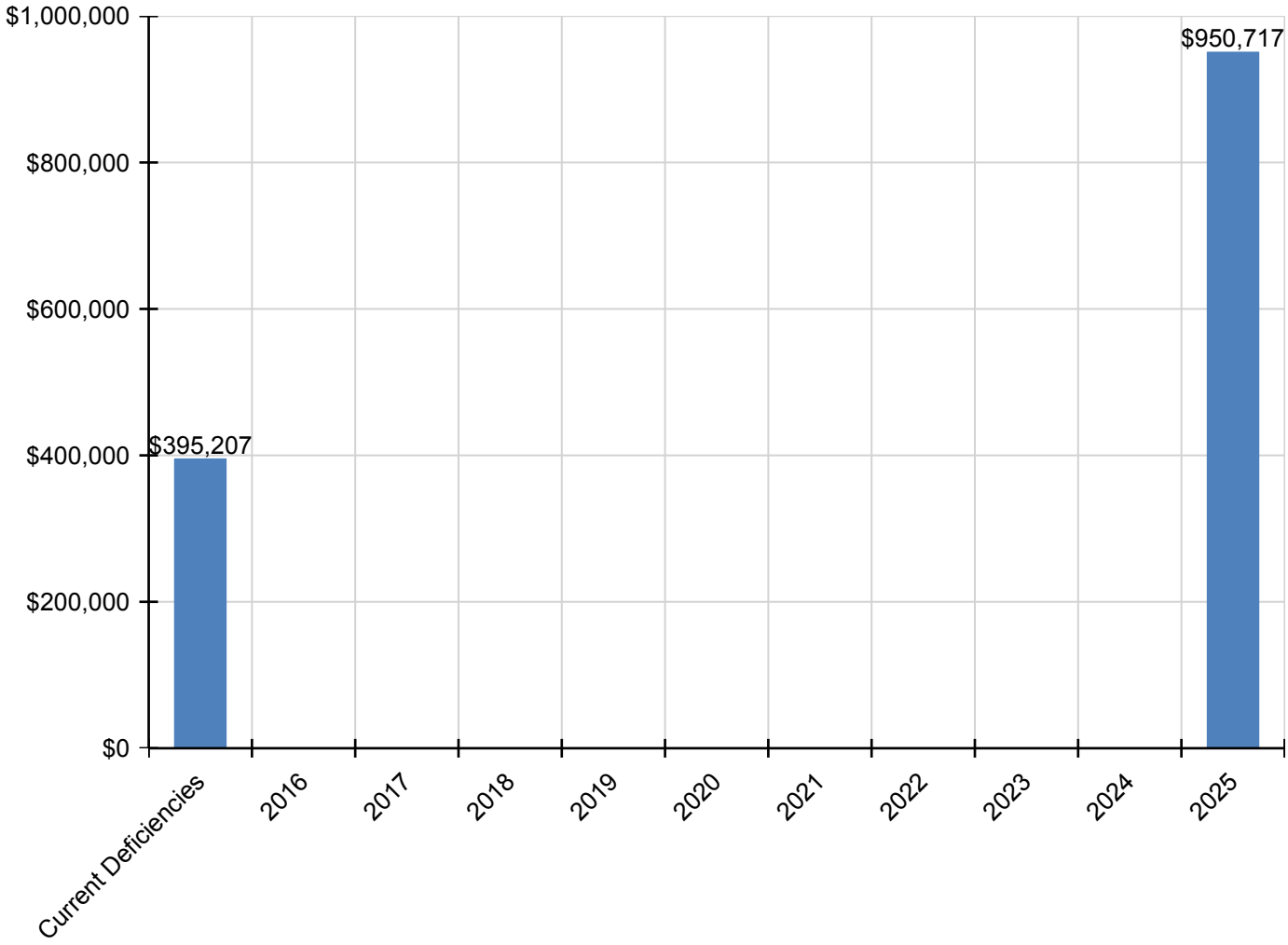
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$395,207**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$950,717**	**$1,345,924**
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	$35,598	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$35,598**
G2030 - Pedestrian Paving	$267,420	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$267,420**
G2040 - Site Development	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$112,150	**$112,150**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$838,568	**$838,568**
G4030 - Site Communications & Security	$92,189	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$92,189**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

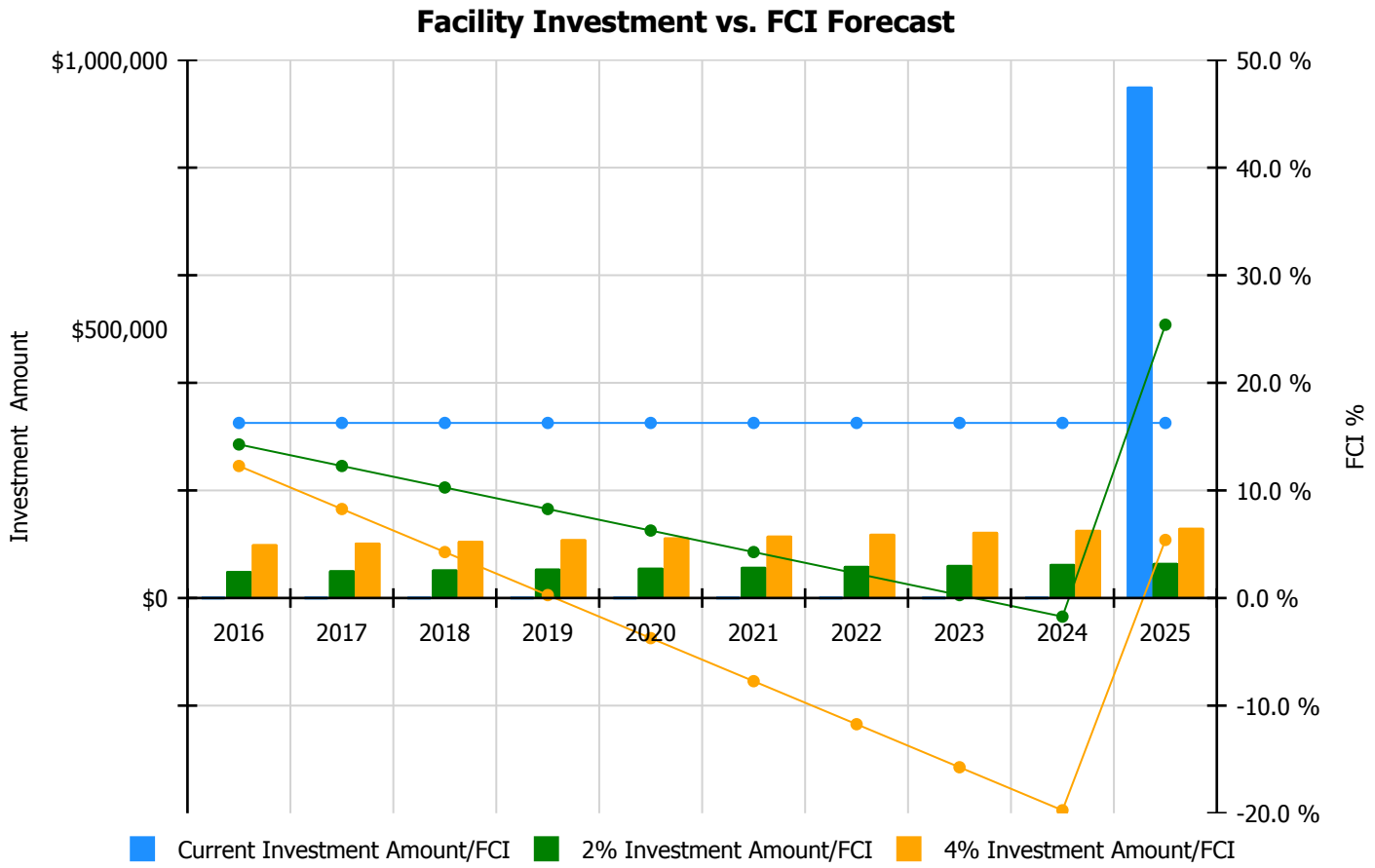
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

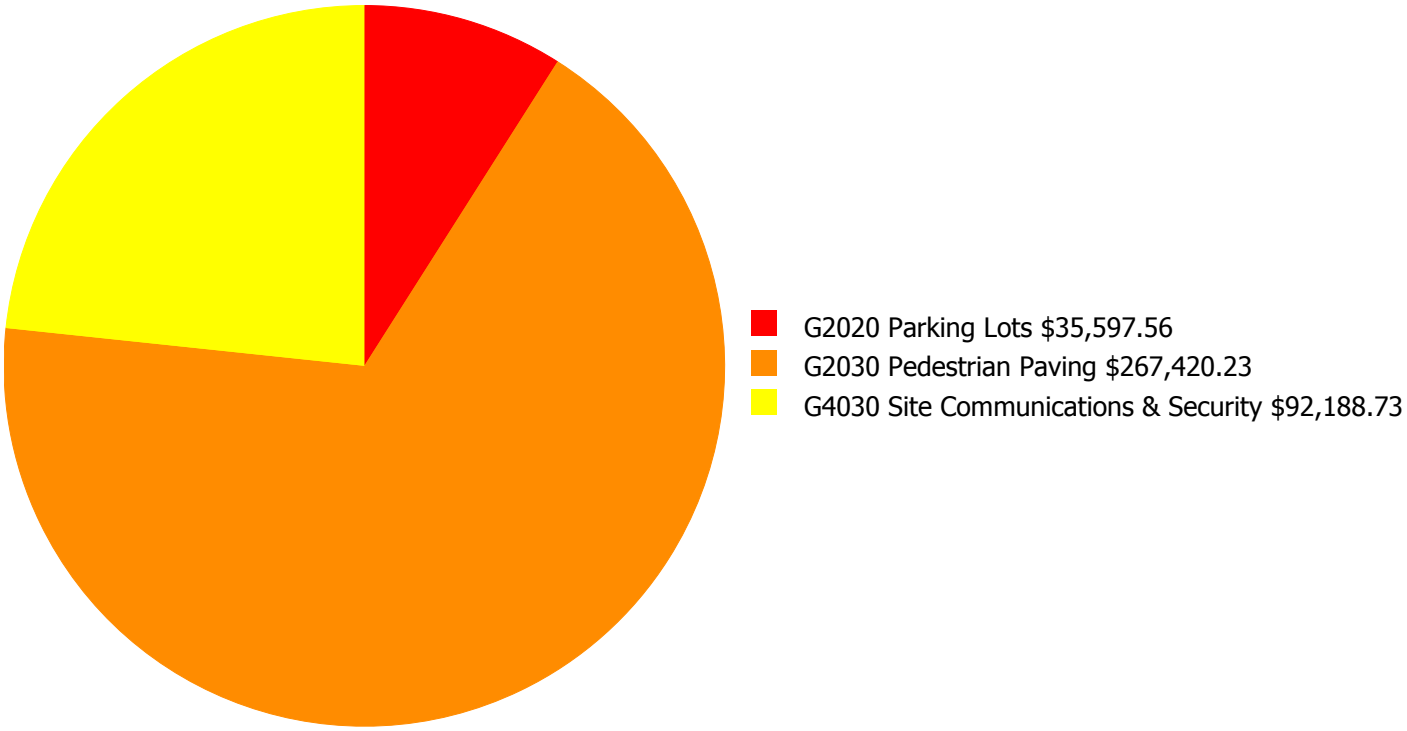
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 16.27%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$50,034.00	14.27 %	$100,068.00	12.27 %
2017	$0	$51,535.00	12.27 %	$103,070.00	8.27 %
2018	$0	$53,081.00	10.27 %	$106,162.00	4.27 %
2019	$0	$54,673.00	8.27 %	$109,347.00	0.27 %
2020	$0	$56,314.00	6.27 %	$112,627.00	-3.73 %
2021	$0	$58,003.00	4.27 %	$116,006.00	-7.73 %
2022	$0	$59,743.00	2.27 %	$119,486.00	-11.73 %
2023	$0	$61,535.00	0.27 %	$123,071.00	-15.73 %
2024	$0	$63,381.00	-1.73 %	$126,763.00	-19.73 %
2025	$950,717	$65,283.00	25.40 %	$130,566.00	5.40 %
Total:	**$950,717**	**$573,582.00**		**$1,147,166.00**	

Deficiency Summary by System

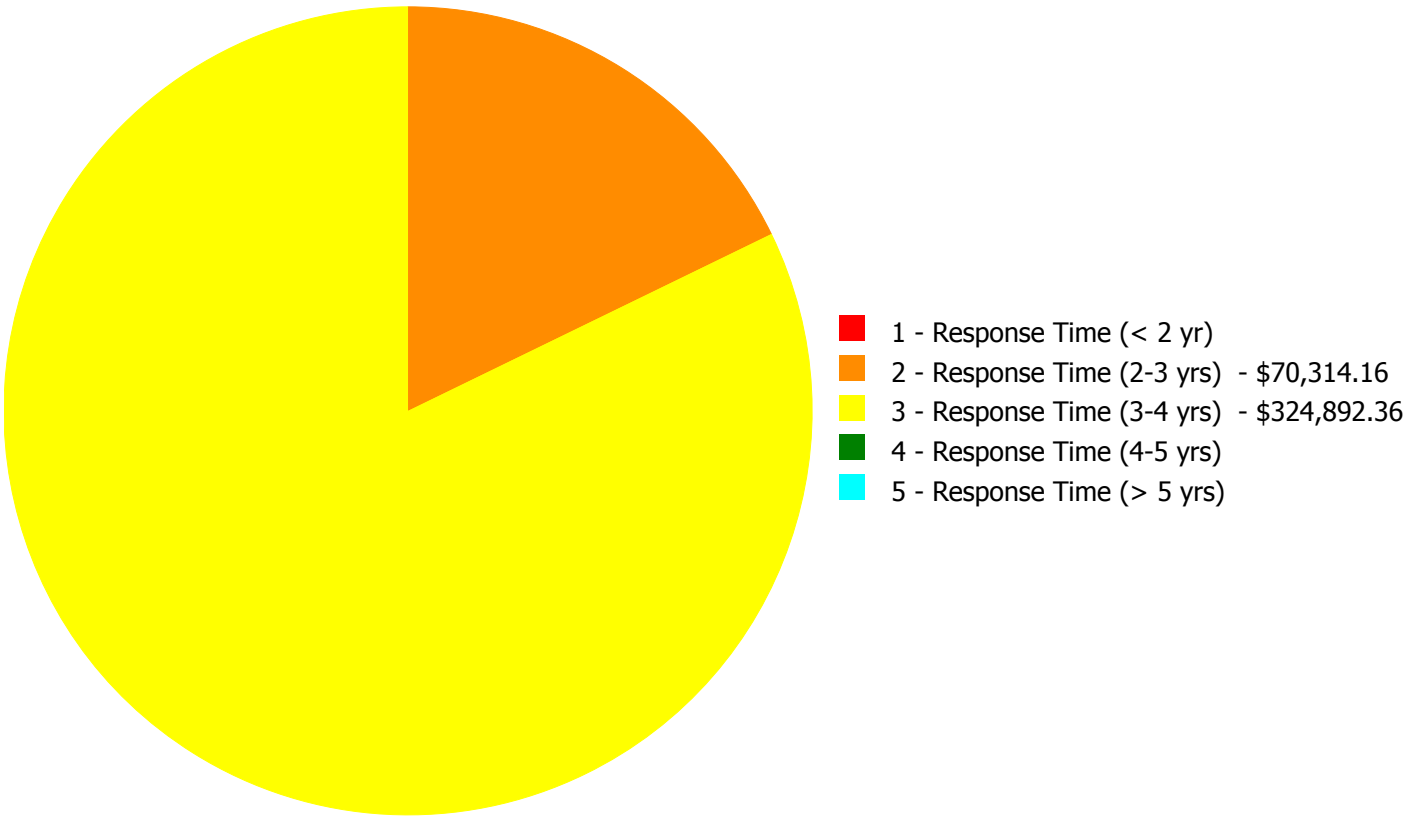
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $395,206.52

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: $395,206.52

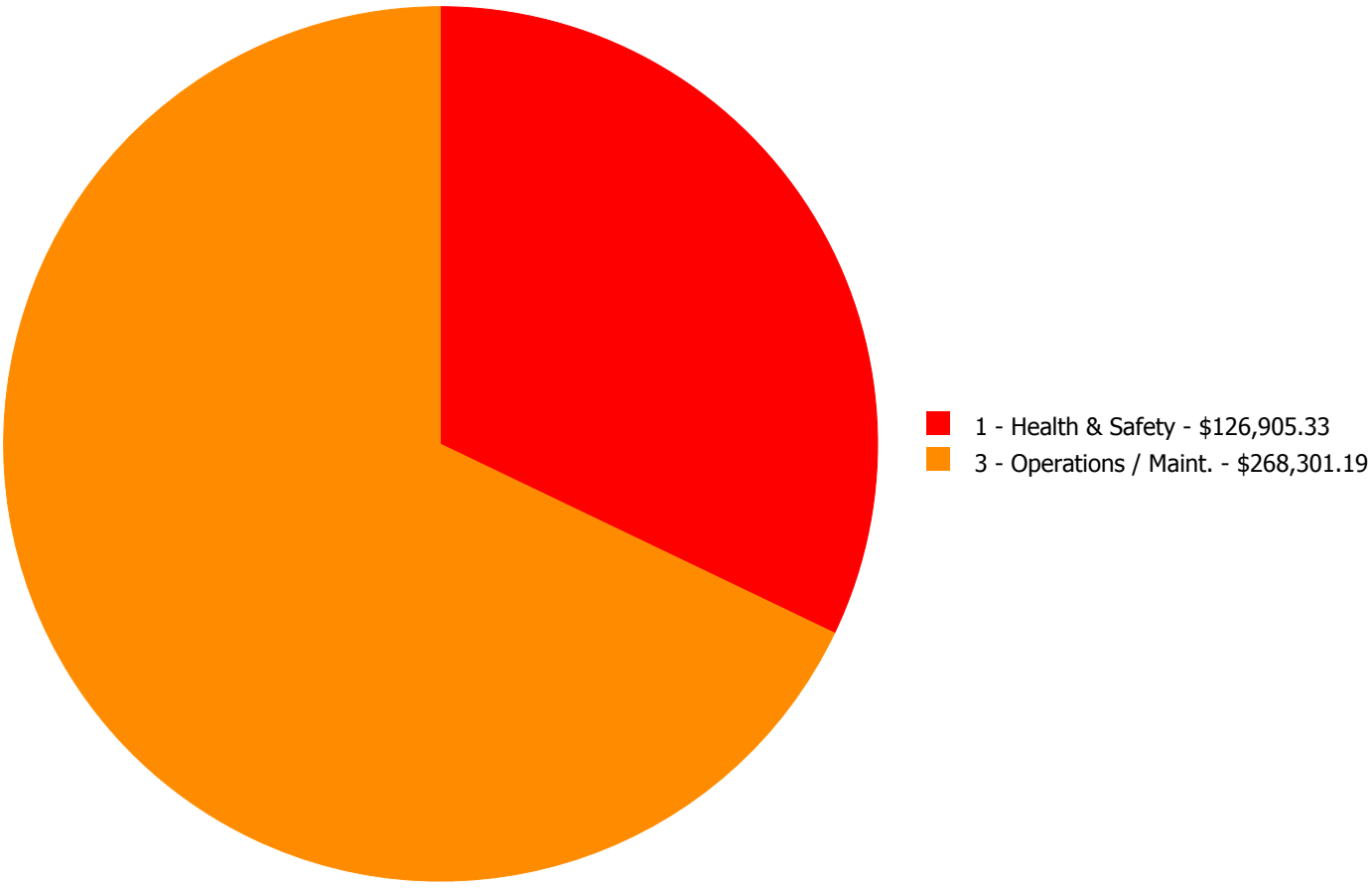
Deficiency By Priority Investment Table

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	$35,597.56	$0.00	$0.00	$0.00	$35,597.56
G2030	Pedestrian Paving	$0.00	$34,716.60	$232,703.63	$0.00	$0.00	$267,420.23
G4030	Site Communications & Security	$0.00	$0.00	$92,188.73	$0.00	$0.00	$92,188.73
	Total:	$0.00	$70,314.16	$324,892.36	$0.00	$0.00	$395,206.52

Deficiency Summary by Category

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



Budget Estimate Total: $395,206.52

Deficiency Details by Priority

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

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

System: G2020 - Parking Lots

Location: Parking lot

Distress: Maintenance Required

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: 17,500.00

Unit of Measure: S.F.

Estimate: $35,597.56

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Fill cracks and re-seal parking lots. Re-stripe including accessible spaces.

System: G2030 - Pedestrian Paving

Location: Exterior steps at dock and playground

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

Correction: Repair on grade concrete stairs - nosings and exposed rebar

Qty: 20.00

Unit of Measure: Riser

Estimate: $34,716.60

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Repair exterior steps and handrail at dock. Repair exterior steps at playground elevation change. Add second handrail.

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

System: G2030 - Pedestrian Paving

Location: Asphalt playgrounds

Distress: Maintenance Required

Category: 3 - Operations / Maint.

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

Correction: Resurface AC pedestrian paving - grind and resurface

Qty: 60,000.00

Unit of Measure: S.F.

Estimate: $214,173.26

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes:

System: G2030 - Pedestrian Paving

Location: Front plaza

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace brick paving system - pick the proper material and bedding

Qty: 500.00

Unit of Measure: S.F.

Estimate: $18,530.37

Assessor Name: Craig Anding

Date Created: 02/24/2016

Notes: Reinstall brick pavers near seating area in mortar to prevent vandalism/theft.

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: 5.00

Unit of Measure: Ea.

Estimate: $92,188.73

Assessor Name: Craig Anding

Date Created: 01/19/2016

Notes: Provide additional outdoor surveillance CCTV cameras. Approximate 5

Equipment Inventory

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

No data found for this asset

Glossary

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

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

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

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

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

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

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

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

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

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

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