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.

Sullivan School

Governance	DISTRICT	Report Type	Elementary
Address	5300 Ditman St.	Enrollment	758
	Philadelphia, Pa 19124	Grade Range	'00-05'
Phone/Fax	215-537-2524 / 215-537-2984	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Sullivan	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	**52.46%**	**$18,273,949**	**$34,833,034**
Building	54.14 %	$17,795,913	$32,871,954
Grounds	24.38 %	$478,035	$1,961,080

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	89.00 %	$724,205	$813,744
Exterior Walls (Shows condition of the structural condition of the exterior facade)	05.98 %	$143,408	$2,399,150
Windows (Shows functionality of exterior windows)	160.26 %	$1,876,062	$1,170,650
Exterior Doors (Shows condition of exterior doors)	59.31 %	$55,898	$94,250
Interior Doors (Classroom doors)	208.29 %	$475,223	$228,150
Interior Walls (Paint and Finishes)	20.31 %	$209,065	$1,029,600
Plumbing Fixtures	21.43 %	$188,315	$878,800
Boilers	108.10 %	$1,311,841	$1,213,550
Chillers/Cooling Towers	67.94 %	$1,081,057	$1,591,200
Radiators/Unit Ventilators/HVAC	167.81 %	$4,689,270	$2,794,350
Heating/Cooling Controls	132.68 %	$1,164,241	$877,500
Electrical Service and Distribution	150.92 %	$951,555	$630,500
Lighting	46.71 %	$1,052,847	$2,254,200
Communications and Security (Cameras, Pa System and Fire Alarm)	19.53 %	$164,875	$844,350

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

S743001;Sullivan

Final

Site Assessment Report

January 31, 2017

PARSONS

Table of Contents

Site Executive Summary

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

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

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

Gross Area (SF):	65,000
Year Built:	1930
Last Renovation:	
Replacement Value:	$34,833,034
Repair Cost:	$18,273,948.65
Total FCI:	52.46 %
Total RSLI:	73.17 %

Description:

Facility Condition Assessment
July 2015

School District of Philadelphia
James J. Sullivan Elementary School
5300 Ditman Street
Philadelphia, PA 19124

65,000sf / 636 students / LN 07

General

James J. Sullivan School is located at 5300 Ditman Street. The main entrance faces Harbison Avenue. The main building was constructed in 1930, has 65,000 square feet, and is 3 stories tall. There is a full basement. The James J. Sullivan School can be found on the National Historical Register, number 88002327 with the address of 5300 Ditman Street. Kevin McGuire, the Building Engineer accompanied the team during the building inspection.

Architectural/Structural

Foundations appear to be constructed of concrete and brick. Joints are in good condition with no major settlement cracks observed. Extensive peeling paint was observed on basement walls and ceilings, mainly due to high room moisture related to excessive steam released by the boilers and a lack of general maintenance of the space. Footings were not seen and their construction type or condition could not be ascertained. There is evidence of rusting on the steel lintels above most basement windows with some localized joint cracking extending beyond the lintels which can be seen from inside the basement and outside the building. Cracks of this nature can be sources of water infiltration from outside into the basement.

Floor slabs in the basement are in good condition although covered with dirt and in need of stripping, cleaning and repainting. Upper floor slabs are also constructed of cast-in-place concrete with cast-in-place concrete beams. Cracking and spalling of the concrete structure was not observed anywhere.

Roof construction over the main building is reinforced concrete beams and deck, bearing on masonry walls. The superstructure is constructed of reinforced concrete columns, beams, and floor slabs. The main building roof deck is flat with minimum overall slope; areas around roof drains are depressed for drainage. Roof access is via a door out of a masonry penthouse; a steep, narrow, dark stairway with very low headroom up from a 3rd floor stairway landing provides access to the roof penthouse. The roof over the auditorium is constructed of heavy timber trusses with wood decking. All appeared to be in good condition as observed in the attic space.

Exterior walls and are generally in good condition, however the lintels above most basement windows, some upper windows, and some doors are rusted with brick joint cracks extending from the lintels into the brick joints in the walls. Lintels should be replaced when windows are replaced. Many brick roof-structure walls and parapets have been repointed or caulked (not a good solution) and continue to show signs of cracking and joint failure. A more detailed inspection of masonry is required to repair all failing joints and ensure a minimum of leaks through the envelope.

Exterior windows were replaced in the 1990's with bronze anodized aluminum frame operable single hung units with single thickness clear plexiglass acrylic vision panel glazing. Windows are in poor condition with oxidized frames and severely scratched single-pane plexiglass vision panels. Operable units are difficult to operate up and down or do not stay open due to broken internal counterbalance weights, accidentally slamming closed in some cases – a potential safety hazard. Single pane plexiglas units do not meet today's energy code requirements and are large sources of heat loss. Basement level windows are at grade when viewed from the outside; galvanized steel security screens attached to basement windows, the lower section of 1st floor windows, and the auditorium windows are in good condition.

Exterior doors are painted steel framed flush hollow metal units with steel frames. The main entrance and secondary main entrance on Harbison Street have decorative Romanesque-style tile arches around door openings. They can be cleaned to highlight their style and artistic technique. Some doors have small glazing vision panels. Doors are in generally poor condition, have broken or non-functioning panic hardware, rusted dented panels and frames, and are not ADA compliant. There are no handicap entrances, no accessible ramps and no elevators. All exterior steel doors, frames, and hardware systems need to be replaced.

Roof covering on the main building flat roof is a ceramic granule impregnated, fully adhered rolled asphalt sheet system. Brick rooftop structures, brick parapets, and most ventilation fan structures are flashed with metal flashing with an asphaltic backing. Some fan structures lack flashing and are sealed only with caulking at the roofline. This is an unacceptable method of penetration closure; asphalt backed metal or rolled asphalt sheething is required to provide a longer-term protection of duct penetrations. The roof membrane is in poor condition with dried cracked asphalt seen along membrane joints. The membrane, flashing, and counterflashing embedded in brickwork covering the top of the flashing is weathered and is probably past its normal service life of 20 years. Roof openings include toilet room vents, ventilation ductwork, and roof drains. Flashing of the penetrations appears to be in poor condition and past its normal service life, although no leaks were reported at this time. Glazed terracotta coping joints have been recaulked with a heavy black sealant which appears to be lifting on the edges, possibly allowing water to penetrate underneath the sealant. Many joint cracks in the penthouse and chimney structures have been repointed or caulked (incorrect method of repair) and may be the source of water infiltration. There have been a few leaks onto exterior walls below but after recent repairs, there are now none reported by engineering. Copper counter flashing on brick rooftop structures and parapets have been repaired with excessive amounts of caulking which is now weathered, cracking, and the potential sources of future leaks. The auditorium is covered with lightweight "residential-type, 3-tab" asphalt roofing shingles sloping to pitched metal troughs on the two low sides of the roof. Leaks along the low flat roof intersection to the main building corridor have created large water-damaged/effloresced areas in plaster walls and ceilings and have been reportedly repaired, but this roof system is thin and appears to be at the end of its normal service life. Troughs have been recently recaulked as they have been previous sources of leaks, but like the roof shingles the troughs appear to be at the end of their useful life.

Partitions in basements are mostly constructed of brick masonry. The upper 3 floors of the building have plaster on wood lath partitions. There are wood framed clerestory glass panels located in walls above classroom doors in the corridors. These panels are in generally good condition being above the reach of anyone, but the glass is not wired or fire rated. Between some classrooms are manually operated full height wood folding partions.

Interior doors are either the original wood and plate glass (not fire rated or wired) raised panel doors with original hardware or replacement wood doors with narrow lite wired glass vision panels and replacement hardware at least 20 years of age. Most wood doors regardless of age or type are damaged, have broken glass, and broken hardware. Some interior basement doors and most interior stairway doors are hollow metal in hollow metal frames; many are rusted where coming in contact with floors. Doors are generally in poor condition throughout the building, are not ADA compliant, do not have ADA or proper locking hardware, and are not fire rated where required. Stairway doors do not positively latch as required of fire rated doors. Classroom doors do not have security locking feature from inside classrooms. All doors and hardware need to be replaced.

Interior fittings/hardware include black slate chalkboards with oak chalk trays or bulletin boards integral to the original dark oak folding wall partitions built into the folding panels. These units are no longer opened as they are heavy and most hinges and bearings are not operable. Wall panels need to be replaced with sturdier, safer, fixed partitions. Toilet room partitions are solid plastic replacement partitions. Some do not have doors. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) have been recently replaced. Some components are missing and others are not fully functional. Missing toilet partitions and partition components need to be added and full sets of toilet room accessories are required.

Stair construction consists of concrete treads, risers, and stringers with wood handrails (29” high), guards (36” high), and steel balusters with 3” spacing. Since handrail and guard heights are not in compliance with today’s codes, new handrail and guard systems are required.

Wall finishes in the old building are plaster which is cracked with surface crazing in a number of classroom and corridor locations. There is damage in most classrooms at doorways and corners. There are also many areas of water damage on upper floor plaster walls due to water penetration from coping or roof leaks or lintel leaks. Moveable partitions between some classrooms are the original dark stained oak or have been repainted white a number of years ago. Blackboards are embedded into wood panels but are not always used; many classrooms have smartboards which connect to the teacher’s laptop computers, used for teaching in lieu of blackboards. Folding wood panels are covered with staples and small gouges. Corridors have 48” high marble panel wainscots that are generally in good condition with isolated cracks or damages requiring repair. Stained wood trim in all rooms is damaged and worn requiring filling and refinishing. Toilet room walls are painted plaster; some have marble wainscots. The auditorium has a paneled wood wainscot that is in need of repair and refinishing. The queuing area outside the auditorium has marble columns and plaster walls with decorative plaster capitals on square columns. These historical marble and plaster decorative elements can be revitalized with some repair and new paint. There are a number of plaster wall areas in the auditorium that have been damaged from water entering the building through the roof or steel lintels. Assuming these leaks have been addressed after roof and lintel repairs, the plaster should be repaired. The wood wainscot in the auditorium has many surface scratches and some damaged panels; repairs can be made and the wood can be refinished to revitalize this space.

Floor finishes in the original building mostly consist of dark stained oak floors in classrooms and the auditorium. Most are in good enough condition to be stripped, sanded, and refinished. There are some rooms (main office and faculty lounge) with either 12”x12” vinyl composition tile (VCT) over the wood or 9”x9” VAT over wood. The gymnasium which also serves as the cafeteria is finished in VCT. All 12”x12” VCT floors need to be removed and replaced; 9”x9” floors may have asbestos and need to addressed as possible asbestos containing materials. They should be removed using proper asbestos abatement procedures if they are found to contain asbestos and replaced with 12”x12” VCT. Stair walking surfaces are finished in exposed concrete that have years of dirt ground into the surfaces; these should be stripped, cleaned and resealed. All corridor floors are finished with 4’x4’ (nominal size) concrete tiles which appear to be a monolithic system and highly durable. Edges along the walls are painted; These corridor floors have not recently been stripped and cleaned and have years of dirt sealed into the surface and corners, causing their color to be very dark and dingy. There is an especially large build-up of dirt at all corners. Basement toilet rooms have been recently refinished with new fixtures, plastic partitions and ceramic mosaic tile floors; a thorough cleaning of these rooms is required. The room in the basement originally designated as the cafeteria is now a food prep area finished with VCT; part of this space is being used as a teacher’s lounge area and is finished with carpet.

Ceiling finishes are mostly exposed plaster throughout the original building with suspended fluorescent lighting fixtures; minor cracking is evident throughout the building.

There is no elevator in this school. There is no handicap accessible entrance and ramp into this building.

Furnishings include the original folding wood seating in the auditorium is still in use; however many seats need to be repaired to operate properly and many are scratched; at least 75% are damaged. With the unavailability of parts for repair and the worn

condition of the seating, full replacement is required. Casework and storage cabinets in the classrooms and the office is damaged, worn and needs replacement.

Grounds

Paving and parking is constructed of 4'x4' (nominal) concrete panels; roughly half are in need of replacement and although they are not all contiguous, it may be possible to replace only those that are failing. This expansive paved area serves as the playground and parking area. Parking and play area striping is worn and almost invisible. Clear separation of play area and parking, to provide a safe area for the children to play, is lacking. The number of required parking spaces for school staff is unknown. Restriping of parking areas and better designation of play and parking areas are required. Granite block stairways into the building are need resetting and regrouting. New handrails and guards are required at all stairs.

Wrought iron fencing is generally in good condition. There are some damaged and bent fence panels in need of replacement. Most of the fence is rusted and requires repainting. The gates providing street and pedestrian access are either missing or inoperative and require replacement.

Landscaping is in need of trimming and maintenance along Harbison Avenue.

Mechanical

Plumbing Fixtures – It appears that all of the bathrooms, along with plumbing fixtures, were remodeled within the past 10 years. Fixtures in the restrooms on each floor consist of wall mounted water closets, wall hung urinals and lavatories with lever handle faucets. The plumbing fixtures appear to be in satisfactory condition and should not need replacement within the next 10 years.

Drinking fountains in the corridors and at the restrooms are wall hung with integral refrigerated coolers. Most appear to be beyond their service life. Replacement of all drinking fountains is recommended.

Janitor's closets are available throughout the building and appear to have been updated at the time of the bathroom remodeling. The Cafeteria has one three-compartment sink. Janitor's closets plumbing fixtures appear to be in satisfactory condition and should not need replacement within the next 10 years. Installing a three-compartment stainless steel sink with sanitizing chemicals in the kitchen is recommended.

Domestic Water Distribution - Domestic water distribution piping is soldered copper. Water service enters the building in the basement, with backflow preventers and the water meter on the main line after entering the building. There is a domestic water pressure pump skid with duplex pumps after the backflow preventers to increase the water pressure supplied to the building. Inspection of the domestic water distribution piping throughout the building is recommended.

One natural gas fired vertical water heater tank is installed in the basement with appropriate piping, controls, and venting. The water heater appears to be near the end of its service life and should need replacement within the next 10 years.

Sanitary Waste - The sanitary waste piping systems are threaded cast iron. There is a small sewer ejector pit is located in the basement with one pump. The complete sanitary system appears to be the original installed equipment and is well beyond its serviceable life. Inspection of the sanitary system throughout the main building is recommended.

Rain Water Drainage - The rain water drains from the roof are routed through mechanical chases in the building. There are no roof overflow drains. The District should consider adding overflow scuppers to the building to protect the roof from flooding.

Energy Supply - Duplex fuel oil supply pumps provide the required fuel to the boilers when operating on fuel oil. The concrete fuel tank is located in the basement alongside the fuel oil pumps. The pumps appear to be beyond their serviceable life and should be replaced. Inspection of the concrete fuel tank and the addition of required ventilation and fire suppression/alarm in the fuel storage area is recommended.

Heat Generating Systems - Steam is generated in the main building by two Weil McLain 94 series oil fired boilers installed in 1972. The boilers have Power Flame oil burners. The boilers and burners appear to be at the end of their serviceable life and should be replaced within the next 5 years.

Distribution Systems - The boiler feed water is treated with a combination of chemicals, controlled with a Master water treatment controller. This system has a condensate receiver with duplex pumps feeding the boiler. The condensate receiver package appears

to be beyond its service life and will need replacement within the next 10 years. The steam traps are failing throughout the building. The building engineer indicated that there is a constant stream of flash steam coming out of the boiler feed tank into the basement area; this situation needs to be remedied. The steam and condensate return lines are only occasionally insulated and are beyond their serviceable life.

Ventilation and additional heating for the main building is provided by a house fan in the basement which is operated occasionally. The air is pushed into the various rooms of the building through ducts built into the walls. The air is exhausted from other ducts built into the walls, up through the attic space, and out through roof mounted vents. This system is currently operational and the only other fresh air that the building receives is through the open windows. The house fan is well past its serviceable life. The bathrooms throughout the building have functional and operating exhaust fans.

Terminal & Package Units – About 1/3 of the rooms in the building have window air conditioning units and most of the units are in operation; there are approximately 20 units installed.

Controls & Instrumentation - There are some pneumatic thermostats on the walls that are not in service. The pneumatic control valves on the radiators are not in service. Most of the heating radiators are flowing 100% flow when the steam is on. This results in an "on-off" control for the whole building, i.e. when the boilers are on, the whole building has heat. And when the boilers are off, the whole building is without heat. Adding a new DDC system to the main building is recommended to provide the necessary control and comfort.

Sprinklers - There are no sprinklers in the main building. Installing a new sprinkler system is recommended.

Electrical

Site Electrical Service of the main building comes from medium voltage overhead lines on wooden utility poles located on Ditman Street. Two pole-mounted power transformers with medium voltage primary (Voltage level unknown at this time) and 120/240VAC secondary and at an estimated available power of 150KVA are installed, supplying power to facility.

The service entrance to the facility consist of a disconnect switch and utility meter located in a closet in the gymnasium, and a main switch board located in the Boiler Room in the basement. The switchboard is of an open switch type and its size is estimated to be 600A.

Power distribution is accomplished with a 400A, 240/120V two phase, 5-wire main distribution panel and several other lighting/receptacle panel boards throughout the building. There are three panel boards on first floor and two on the second and third floors. It appears that panel boards and branch circuit breakers are past their useful service lives and should be upgraded and replaced. There is one 150KVA phase converter transformer for converting 240VAC to 120/208VAC, three phase, for powering boilers and other 208-volts required loads.

Receptacles are not provided in adequate numbers in classrooms, computer room, etc. A minimum of two receptacles in each wall of each classroom is required. Adding a wire-mold system with receptacles every three feet is recommended for the computer room.

The majority of lighting fixtures in the classrooms are 1x4 surface/pendent mounted fluorescent fixtures with 2-T8 lamps. Some classrooms are equipped wilt 2x4 lay in grid fluorescent fixtures. Most of the lighting fixtures in the classrooms should be replaced. The lighting fixtures in corridor are 6x6 or 2x4 fluorescent fixtures and are not in a good condition. Lighting levels do not meet IES (Illuminating Engineering Society) recommended standards. Gymnasium is illuminated with 1x4 fluorescent with 2-T8 lamps; the lighting level in that space is also not in accordance with IES standards. Boiler, mechanical and electrical rooms are illuminated by old, suspended lighting fixtures with incandescent lamps or with suspended 1x4 industrial fluorescent fixtures. The lighting level in those mechanical rooms is very low and not safe for operations. Kitchen and dining areas are illuminated properly. Replacing the entire lighting system of the school with new fluorescent lighting fixtures using T-5 lamps is recommended.

Fire Alarm system is acceptable, system is installed in 2013 and working properly. Monitoring of fire is by smoke detectors in corridors and pull-stations at building egress points. There are sufficient number of horn/strobes installed in classrooms, corridors, offices and other areas in the school.

Telephone / LAN equipment/devices are located in the IT Room, located on the second floor (this room was not accessible). The computer room, some classrooms, and some offices are provided with data outlets. Overall, the telephone and Local Area Network system is adequate.

Public address / music are not provided by separate systems in this school. The telephone system is used for public announcements.

This system is working adequately.

Intercom System and paging is functioning adequately. The paging system consists of a one-way communication system from the office to all classrooms. Two-way communications is achieved through wall mounted phones in the classrooms and other areas.

Clock and program system is working properly.

Television System is not provided in the school.

Security System, access control, and video surveillance with an intrusion alarm are installed in the school and working adequately. The CCTV (Close Circuit Television) controller is located in the Principal's office.

Emergency power system (backup power generator) is provided in this school. A 15KVA diesel generator made by "Onan Electric Plant" is installed in the boiler room for providing power to the emergency lighting fixtures in the building. The diesel generator is old and has exceeded its useful life and should be replaced.

UPS (uninterruptable power supply) is provided for the Local Area Networking system.

Elevator is not provided in the school.

Emergency Lighting System / Exit Lighting is provided in the school and fed from existing backup generator. The system work properly.

Lightning Protection System is adequate. It consists of air terminals mounted on the chimney; however, some repairs are needed. A study is needed to verify that the air terminals provide the proper coverage.

Grounding system is present and appears to be adequate.

Site Lighting System is not adequate. Some additional lighting fixtures are needed to be installed around the exterior building.

Site Video Surveillance system is provided in main building. Cameras are installed on exterior walls of the building to cover the areas around the building. There are no cameras installed on the other buildings.

Site Paging System is provided and seems to be operating adequately.

RECOMMENDATIONS

Architectural

- Strip and repaint concrete foundation (basement) walls in mechanical rooms
- Clean and repaint basement floor in mechanical rooms; clean and reseal concrete floors in hallways and stairways
- Remove and replace all lintels and cracked masonry at basement windows and grade exit doorways and rooftop structures
- Replace all exterior windows with insulated single hung units
- Replace all exterior doors with ADA and code compliant exit hardware; repaint doors and frames.
- Remove and replace existing flat roof and insulation; 6 levels
- Remove and replace existing sloped asphalt shingle roof over auditorium
- Remove non-rated glass panels between classrooms and corridors; fill with fire rated gyp bd sys.
- Remove and replace all wood interior doors, frames and hardware in classrooms, closets, offices, etc.
- Provide security hardware for classrooms and offices, locking from inside classroom.
- Remove and replace all basement steel doors, frames, and hardware in mechanical rooms and stairways
- Remove folding wood partitions; replace with gypsum board and metal stud walls
- Provide toilet room accessories
- Repair water damage, cracks, and repaint some interior plaster walls
- Remove and replace stairway handrails and guards with code compliant systems 4 story
- Regrout all joints between limestone block tread/risers at exterior stairs
- Strip, sand, repair and refinish all wood floors in classrooms and in auditorium
- Remove and replace all 12"x12" VCT floors in gymnasium and other rooms
- Replace VAT floors using proper asbestos abatement procedures if determined asbestos is present.

- Repaint plaster ceilings where damaged by water
- Repair or replace damaged folding wood auditorium chairs
- Repave damaged sections of concrete parking / playground area
- Replace damaged wrought iron fencing
- Replace 7 wrought iron gates
- Add elevator to serve 4 floors (basement - 3rd floor)
- Add handicap accessible ramp

Mechanical

- Replace all drinking fountains in the building
- Install a three compartment stainless steel sink with sanitizing chemicals in the kitchen
- Inspection of the domestic water distribution piping throughout the building
- Replace gas fired domestic water heater
- Inspect sanitary system throughout the building.
- Replace duplex fuel oil pumps and skid
- Inspect the concrete fuel tank
- Add overflow scuppers to roof parapets
- Install the required ventilation and fire suppression/alarm in the fuel storage area
- The boilers appear to be at the end of their serviceable life and should be replaced within the next 5 years. Replace with hot water boiler.
- Install a new DDC system to the main building
- Install a new automatic fire-extinguishing sprinkler system
- Remove steam and condensate distribution and return system; install new hot water distribution system.
- Install chiller and chilled water distribution system
- Install unit ventilators in all classrooms and the IMC
- Install AHUs to condition the cafeteria\gymnasium
- Install AHUs to condition the auditorium

Electrical

- Upgrade the existing electrical service with a new service. Replace the existing switchboard with new1200A, 208/120V switchboard.
- Replace the entire distribution system with new panel boards. Replace all conductors feeding the panelboards. Provide arc flush label on the all panel boards. Estimated 16 lighting/receptacle panel boards.
- Install minimum two receptacles in each wall of classrooms and sufficient number of receptacles in other areas per NEC.
- Add a two-compartment surface mounted raceway, for data & power, for the computer lab room.
- Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamp.
- Replace existing master clock controller.
- Replace existing emergency generator 100KW diesel generator. Provide an auto transfer switch for the new emergency system.
- Perform lightning protection studies to ascertain adequacy of existing systems.

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S743001		

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	35.00 %	0.00 %	$0.00
A20 - Basement Construction	35.00 %	0.00 %	$0.00
B10 - Superstructure	35.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	59.04 %	56.64 %	$2,075,367.58
B30 - Roofing	103.72 %	89.00 %	$724,205.03
C10 - Interior Construction	22.95 %	35.33 %	$563,470.03
C20 - Stairs	15.00 %	161.37 %	$147,899.80
C30 - Interior Finishes	111.25 %	21.08 %	$740,323.35
D10 - Conveying	105.71 %	274.27 %	$670,322.07
D20 - Plumbing	106.50 %	79.15 %	$1,163,217.43
D30 - HVAC	103.08 %	114.05 %	$8,246,408.70
D40 - Fire Protection	105.71 %	177.49 %	$929,852.59
D50 - Electrical	110.11 %	63.98 %	$2,444,656.31
E10 - Equipment	21.21 %	0.00 %	$0.00
E20 - Furnishings	37.50 %	65.14 %	$90,190.55
G20 - Site Improvements	39.93 %	31.32 %	$478,035.21
G40 - Site Electrical Utilities	50.00 %	0.00 %	$0.00
Totals:	**73.17 %**	**52.46 %**	**$18,273,948.65**

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)
B743001;Sullivan	65,000	54.14	$5,788,355.56	$5,208,534.59	$2,941,065.71	$24,473.55	$3,833,484.03
G743001;Grounds	100,000	24.38	$0.00	$478,035.21	$0.00	$0.00	$0.00
Total:		**52.46**	**$5,788,355.56**	**$5,686,569.80**	**$2,941,065.71**	**$24,473.55**	**$3,833,484.03**

Deficiencies By Priority

Budget Estimate Total: $18,273,948.65

Executive Summary

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

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

Function:	Elementary School
Gross Area (SF):	65,000
Year Built:	1930
Last Renovation:	
Replacement Value:	$32,871,954
Repair Cost:	$17,795,913.44
Total FCI:	54.14 %
Total RSLI:	75.02 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B743001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S743001		

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	35.00 %	0.00 %	$0.00
A20 - Basement Construction	35.00 %	0.00 %	$0.00
B10 - Superstructure	35.00 %	0.00 %	$0.00
B20 - Exterior Enclosure	59.04 %	56.64 %	$2,075,367.58
B30 - Roofing	103.72 %	89.00 %	$724,205.03
C10 - Interior Construction	22.95 %	35.33 %	$563,470.03
C20 - Stairs	15.00 %	161.37 %	$147,899.80
C30 - Interior Finishes	111.25 %	21.08 %	$740,323.35
D10 - Conveying	105.71 %	274.27 %	$670,322.07
D20 - Plumbing	106.50 %	79.15 %	$1,163,217.43
D30 - HVAC	103.08 %	114.05 %	$8,246,408.70
D40 - Fire Protection	105.71 %	177.49 %	$929,852.59
D50 - Electrical	110.11 %	63.98 %	$2,444,656.31
E10 - Equipment	21.21 %	0.00 %	$0.00
E20 - Furnishings	37.50 %	65.14 %	$90,190.55
Totals:	**75.02 %**	**54.14 %**	**$17,795,913.44**

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.	65,000	100	1930	2030	2050	35.00 %	0.00 %	35			$1,196,000
A1030	Slab on Grade	$7.73	S.F.	65,000	100	1930	2030	2050	35.00 %	0.00 %	35			$502,450
A2010	Basement Excavation	$6.55	S.F.	65,000	100	1930	2030	2050	35.00 %	0.00 %	35			$425,750
A2020	Basement Walls	$12.70	S.F.	65,000	100	1930	2030	2050	35.00 %	0.00 %	35			$825,500
B1010	Floor Construction	$75.10	S.F.	65,000	100	1930	2030	2050	35.00 %	0.00 %	35			$4,881,500
B1020	Roof Construction	$13.88	S.F.	65,000	100	1930	2030	2050	35.00 %	0.00 %	35			$902,200
B2010	Exterior Walls	$36.91	S.F.	65,000	100	1930	2030	2050	35.00 %	5.98 %	35		$143,407.51	$2,399,150
B2020	Exterior Windows	$18.01	S.F.	65,000	40	1980	2020	2057	105.00 %	160.26 %	42		$1,876,061.84	$1,170,650
B2030	Exterior Doors	$1.45	S.F.	65,000	25	1930	1955	2040	100.00 %	59.31 %	25		$55,898.23	$94,250
B3010105	Built-Up	$37.76	S.F.	15,293	20	1990	2010	2037	110.00 %	89.77 %	22		$518,394.78	$577,464
B3010120	Single Ply Membrane	$38.73	S.F.	0	20				0.00 %	0.00 %				$0
B3010130	Preformed Metal Roofing	$54.22	S.F.	0	30				0.00 %	0.00 %				$0
B3010140	Shingle & Tile	$38.73	S.F.	6,000	25	1990	2015	2037	88.00 %	88.57 %	22		$205,810.25	$232,380
B3020	Roof Openings	$0.06	S.F.	65,000	20	1930	1950	2037	110.00 %	0.00 %	22			$3,900
C1010	Partitions	$17.91	S.F.	65,000	100	1930	2030		15.00 %	5.86 %	15		$68,179.44	$1,164,150
C1020	Interior Doors	$3.51	S.F.	65,000	40	1970	2010	2037	55.00 %	208.29 %	22		$475,222.72	$228,150
C1030	Fittings	$3.12	S.F.	65,000	40	1930	1970	2028	32.50 %	9.90 %	13		$20,067.87	$202,800
C2010	Stair Construction	$1.41	S.F.	65,000	100	1930	2030		15.00 %	161.37 %	15		$147,899.80	$91,650

Site Assessment Report - B743001;Sullivan

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
C3010230	Paint & Covering	$13.21	S.F.	65,000	10	1930	1940	2037	220.00 %	24.35 %	22		$209,064.54	$858,650
C3010231	Vinyl Wall Covering	$0.97	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$2.63	S.F.	65,000	30	1930	1960	2037	73.33 %	0.00 %	22			$170,950
C3020411	Carpet	$7.30	S.F.	1,000	10	1990	2000	2027	120.00 %	0.00 %	12			$7,300
C3020412	Terrazzo & Tile	$75.52	S.F.	4,000	50	1990	2040		50.00 %	0.00 %	25			$302,080
C3020413	Vinyl Flooring	$9.68	S.F.	8,000	20	1990	2010	2037	110.00 %	137.86 %	22		$106,756.92	$77,440
C3020414	Wood Flooring	$22.27	S.F.	32,000	25	1930	1955	2030	60.00 %	43.81 %	15		$312,241.26	$712,640
C3020415	Concrete Floor Finishes	$0.97	S.F.	20,000	50	1930	1980	2067	104.00 %	240.41 %	52		$46,640.22	$19,400
C3030	Ceiling Finishes	$20.97	S.F.	65,000	25	1930	1955	2037	88.00 %	4.81 %	22		$65,620.41	$1,363,050
D1010	Elevators and Lifts	$3.76	S.F.	65,000	35			2052	105.71 %	274.27 %	37		$670,322.07	$244,400
D2010	Plumbing Fixtures	$13.52	S.F.	65,000	35	1930	1965	2052	105.71 %	21.43 %	37		$188,314.75	$878,800
D2020	Domestic Water Distribution	$3.87	S.F.	65,000	25	1930	1955	2042	108.00 %	257.02 %	27		$646,533.92	$251,550
D2030	Sanitary Waste	$2.90	S.F.	65,000	25	1930	1955	2042	108.00 %	146.43 %	27		$276,029.43	$188,500
D2040	Rain Water Drainage	$2.32	S.F.	65,000	30	1930	1960	2047	106.67 %	34.71 %	32		$52,339.33	$150,800
D3020	Heat Generating Systems	$18.67	S.F.	65,000	35	1970	2005	2052	105.71 %	108.10 %	37		$1,311,840.72	$1,213,550
D3030	Cooling Generating Systems	$24.48	S.F.	65,000	30			2047	106.67 %	67.94 %	32		$1,081,056.68	$1,591,200
D3040	Distribution Systems	$42.99	S.F.	65,000	25	1930	1955	2042	108.00 %	167.81 %	27		$4,689,270.46	$2,794,350
D3050	Terminal & Package Units	$11.60	S.F.	65,000	20	1930	1950	2028	65.00 %	0.00 %	13			$754,000
D3060	Controls & Instrumentation	$13.50	S.F.	65,000	20	1970	1990	2037	110.00 %	132.68 %	22		$1,164,240.84	$877,500
D4010	Sprinklers	$7.05	S.F.	65,000	35			2052	105.71 %	202.91 %	37		$929,852.59	$458,250
D4020	Standpipes	$1.01	S.F.	65,000	35			2052	105.71 %	0.00 %	37			$65,650
D5010	Electrical Service/Distribution	$9.70	S.F.	65,000	30	1930	1960	2047	106.67 %	150.92 %	32		$951,554.56	$630,500
D5020	Lighting and Branch Wiring	$34.68	S.F.	65,000	20	1930	1950	2037	110.00 %	46.71 %	22		$1,052,847.17	$2,254,200
D5030	Communications and Security	$12.99	S.F.	65,000	15	1930	1945	2032	113.33 %	19.53 %	17		$164,874.77	$844,350
D5090	Other Electrical Systems	$1.41	S.F.	65,000	30	1930	1960	2047	106.67 %	300.47 %	32		$275,379.81	$91,650
E1020	Institutional Equipment	$4.82	S.F.	65,000	35	1930	1965	2028	37.14 %	0.00 %	13			$313,300
E1090	Other Equipment	$11.10	S.F.	65,000	35	1930	1965	2020	14.29 %	0.00 %	5			$721,500
E2010	Fixed Furnishings	$2.13	S.F.	65,000	40	1930	1970	2030	37.50 %	65.14 %	15		$90,190.55	$138,450
								Total	**75.02 %**	**54.14 %**			**$17,795,913.44**	**$32,871,954**

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: B3010105 - Built-Up — This system contains no images

Note: built-up roof 72%

System: B3010140 - Shingle & Tile — This system contains no images

Note: asphalt shingle roof 28%

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

Note:
painted plaster or block 85%
marble wainscot in corridors 6%
glazed brick 8%
ceramic tile 1%

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

Note:
carpet 1.5%
ceramic tile 6%
vinyl tile (VCT) 11%
VAT (vinyl asbestos tile) 1.5%
stained wood with clear finish 50%
concrete (sealed) 30%

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

Note:
painted plaster or concrete 98%
2x4 acoustical tile 2%

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:	**$17,795,913**	**$0**	**$0**	**$0**	**$0**	**$920,058**	**$0**	**$0**	**$0**	**$0**	**$0**	**$18,715,971**
*** 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	$143,408	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$143,408**
B2020 - Exterior Windows	$1,876,062	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,876,062**
B2030 - Exterior Doors	$55,898	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$55,898**
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	$518,395	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$518,395**
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	$205,810	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$205,810**
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	$68,179	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$68,179**

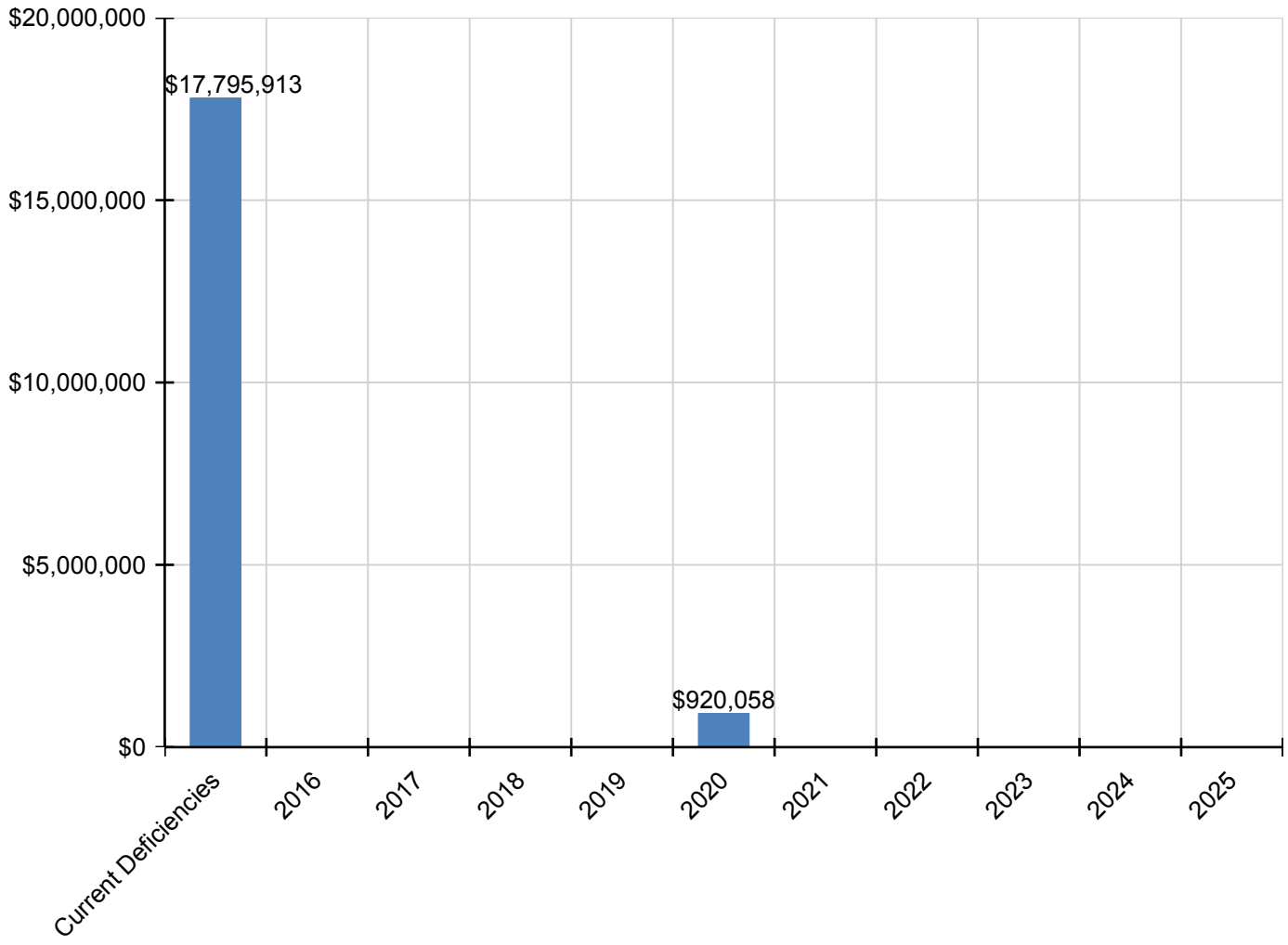
C1020 - Interior Doors	$475,223	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$475,223**
C1030 - Fittings	$20,068	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$20,068**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$147,900	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$147,900**
C30 - Interior Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010 - Wall Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010230 - Paint & Covering	$209,065	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$209,065**
C3010231 - Vinyl Wall Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3010232 - Wall Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020 - Floor Finishes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020411 - Carpet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$106,757	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$106,757**
C3020414 - Wood Flooring	$312,241	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$312,241**
C3020415 - Concrete Floor Finishes	$46,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$46,640**
C3030 - Ceiling Finishes	$65,620	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$65,620**
D - Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D10 - Conveying	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D1010 - Elevators and Lifts	$670,322	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$670,322**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$188,315	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$188,315**
D2020 - Domestic Water Distribution	$646,534	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$646,534**
D2030 - Sanitary Waste	$276,029	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$276,029**
D2040 - Rain Water Drainage	$52,339	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$52,339**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$1,311,841	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,311,841**
D3030 - Cooling Generating Systems	$1,081,057	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,081,057**
D3040 - Distribution Systems	$4,689,270	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$4,689,270**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$1,164,241	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,164,241**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$929,853	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$929,853**
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	$951,555	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$951,555**
D5020 - Lighting and Branch Wiring	$1,052,847	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,052,847**
D5030 - Communications and Security	$164,875	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$164,875**
D5090 - Other Electrical Systems	$275,380	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$275,380**
E - Equipment & Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E10 - Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1020 - Institutional Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$920,058	$0	$0	$0	$0	$0	**$920,058**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$90,191	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$90,191**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

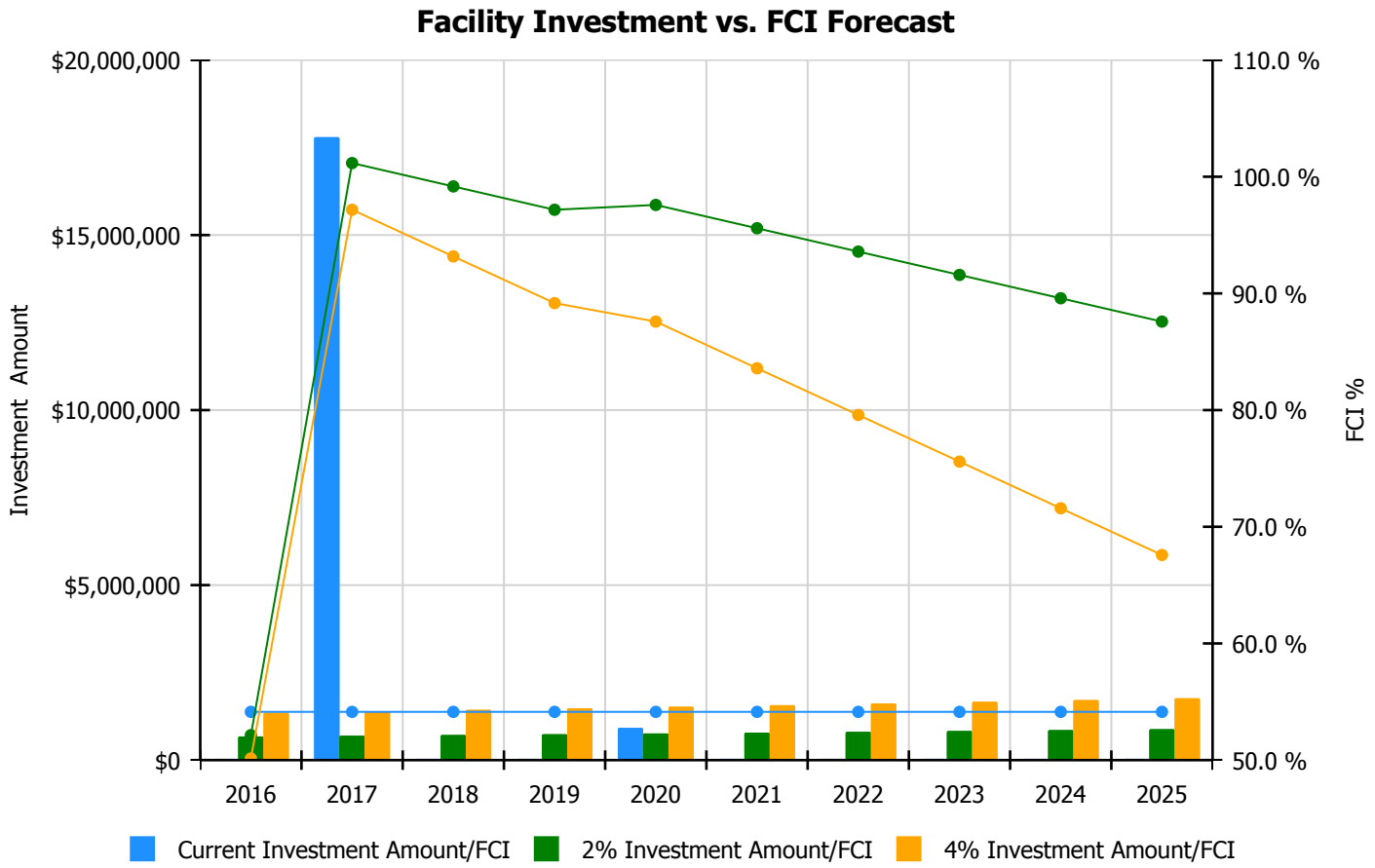
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

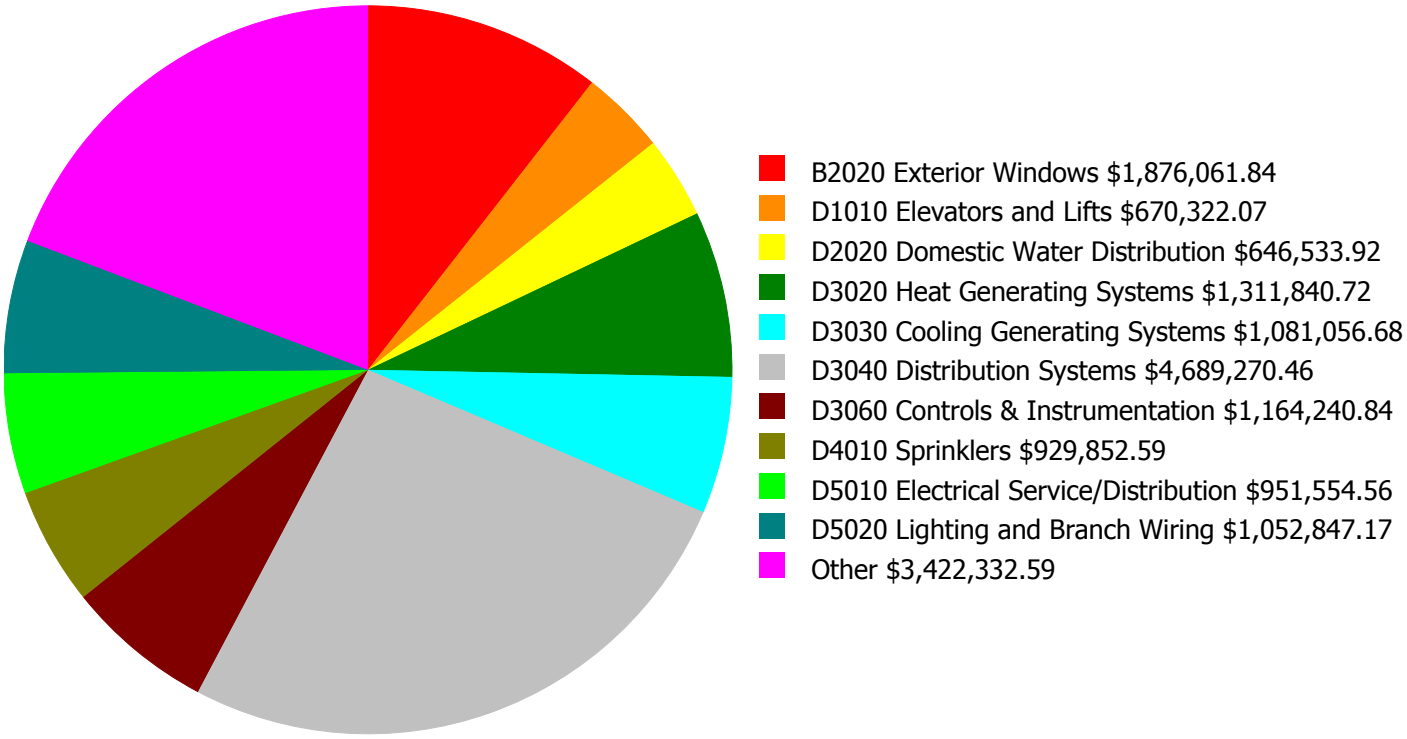
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 54.14%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$677,162.00	52.14 %	$1,354,325.00	50.14 %
2017	$17,796,660	$697,477.00	101.17 %	$1,394,954.00	97.17 %
2018	$0	$718,401.00	99.17 %	$1,436,803.00	93.17 %
2019	$0	$739,953.00	97.17 %	$1,479,907.00	89.17 %
2020	$920,058	$762,152.00	97.58 %	$1,524,304.00	87.58 %
2021	$0	$785,017.00	95.58 %	$1,570,033.00	83.58 %
2022	$0	$808,567.00	93.58 %	$1,617,134.00	79.58 %
2023	$0	$832,824.00	91.58 %	$1,665,648.00	75.58 %
2024	$0	$857,809.00	89.58 %	$1,715,618.00	71.58 %
2025	$0	$883,543.00	87.58 %	$1,767,086.00	67.58 %
Total:	**$18,716,718**	**$7,762,905.00**		**$15,525,812.00**	

Deficiency Summary by System

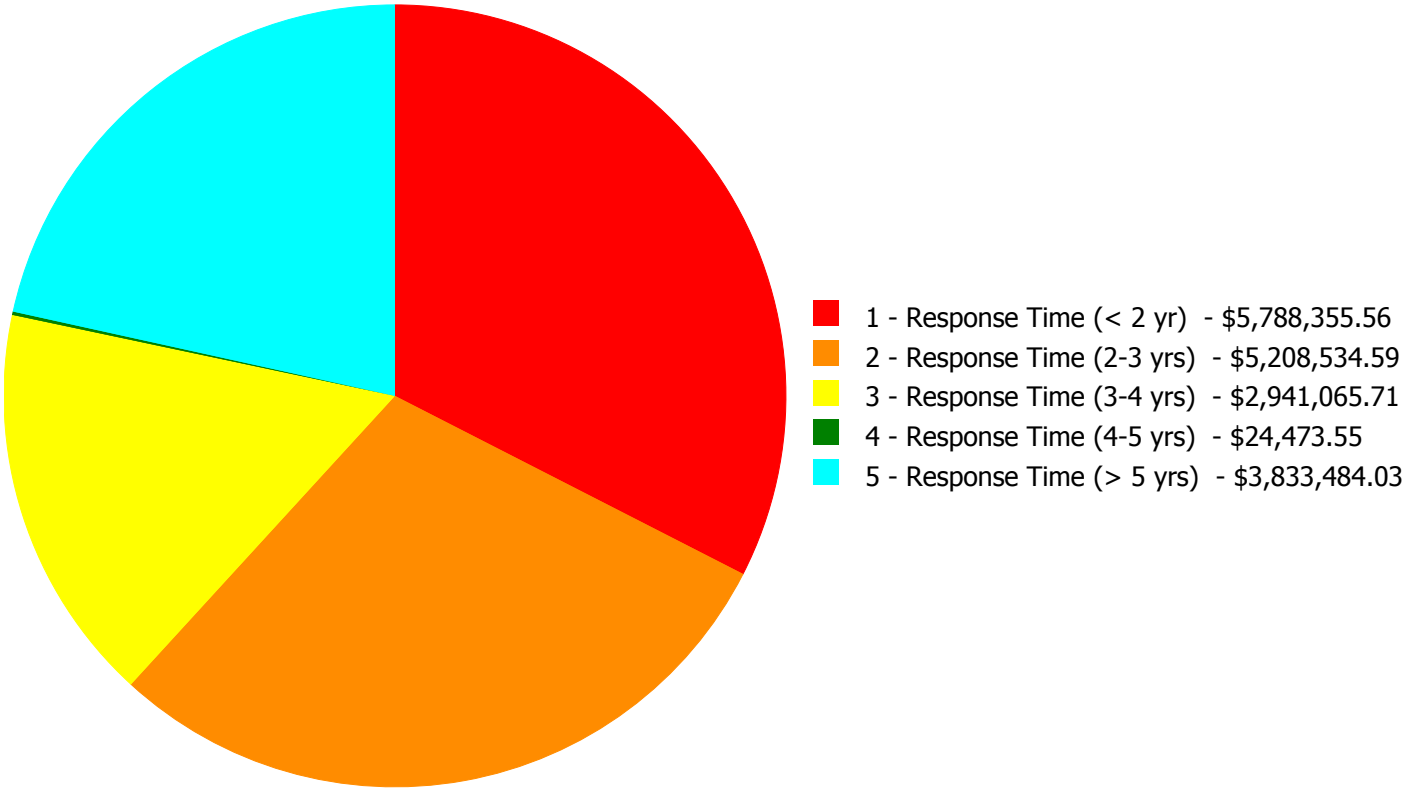
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $17,795,913.44

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: $17,795,913.44

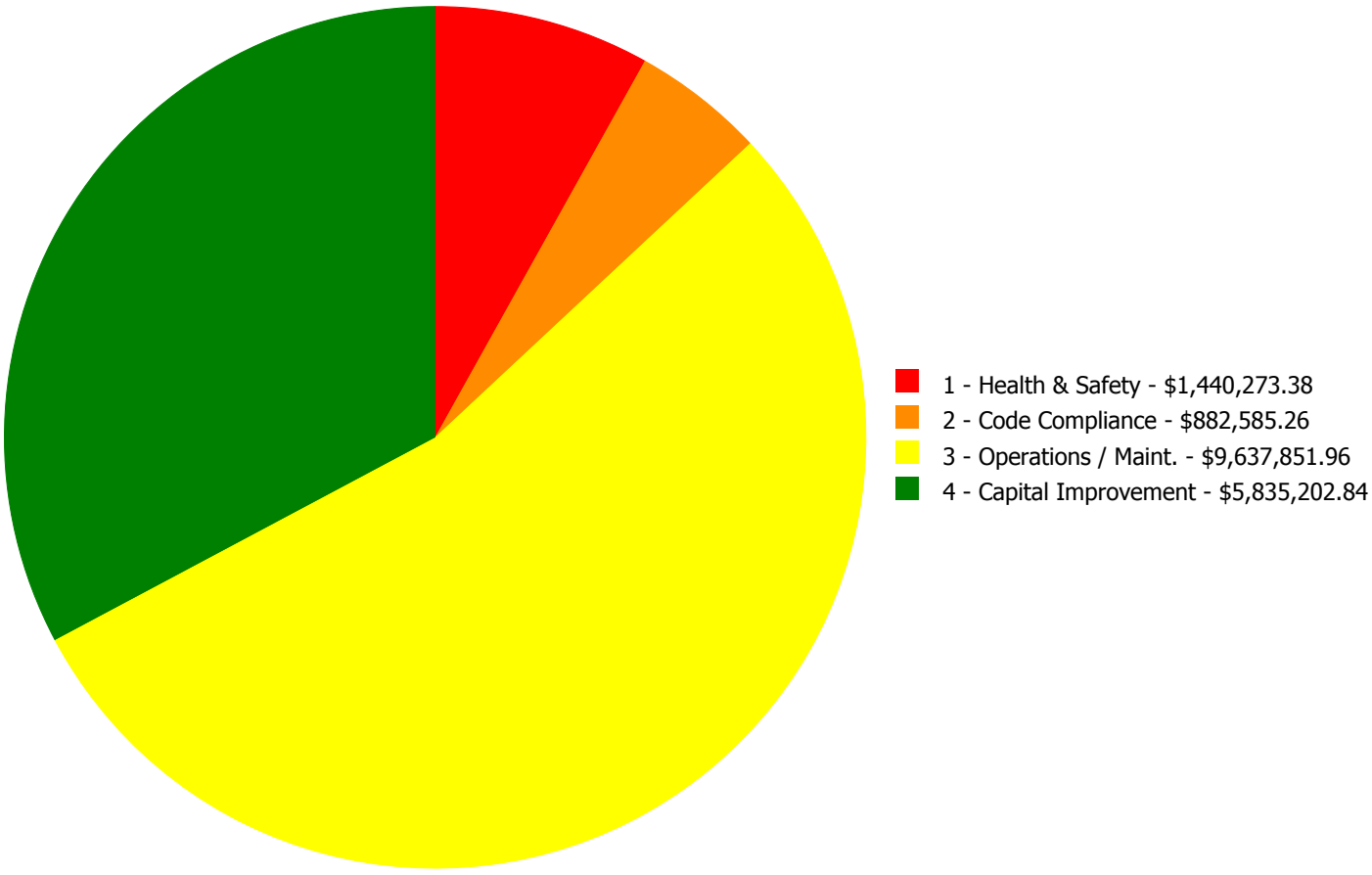
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$0.00	$143,407.51	$0.00	$0.00	$0.00	$143,407.51
B2020	Exterior Windows	$0.00	$1,876,061.84	$0.00	$0.00	$0.00	$1,876,061.84
B2030	Exterior Doors	$0.00	$55,898.23	$0.00	$0.00	$0.00	$55,898.23
B3010105	Built-Up	$518,394.78	$0.00	$0.00	$0.00	$0.00	$518,394.78
B3010140	Shingle & Tile	$0.00	$205,810.25	$0.00	$0.00	$0.00	$205,810.25
C1010	Partitions	$0.00	$68,179.44	$0.00	$0.00	$0.00	$68,179.44
C1020	Interior Doors	$0.00	$475,222.72	$0.00	$0.00	$0.00	$475,222.72
C1030	Fittings	$0.00	$20,067.87	$0.00	$0.00	$0.00	$20,067.87
C2010	Stair Construction	$140,427.23	$7,472.57	$0.00	$0.00	$0.00	$147,899.80
C3010230	Paint & Covering	$0.00	$209,064.54	$0.00	$0.00	$0.00	$209,064.54
C3020413	Vinyl Flooring	$0.00	$106,756.92	$0.00	$0.00	$0.00	$106,756.92
C3020414	Wood Flooring	$0.00	$312,241.26	$0.00	$0.00	$0.00	$312,241.26
C3020415	Concrete Floor Finishes	$0.00	$46,640.22	$0.00	$0.00	$0.00	$46,640.22
C3030	Ceiling Finishes	$0.00	$65,620.41	$0.00	$0.00	$0.00	$65,620.41
D1010	Elevators and Lifts	$0.00	$670,322.07	$0.00	$0.00	$0.00	$670,322.07
D2010	Plumbing Fixtures	$0.00	$188,314.75	$0.00	$0.00	$0.00	$188,314.75
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$24,473.55	$622,060.37	$646,533.92
D2030	Sanitary Waste	$0.00	$0.00	$276,029.43	$0.00	$0.00	$276,029.43
D2040	Rain Water Drainage	$0.00	$52,339.33	$0.00	$0.00	$0.00	$52,339.33
D3020	Heat Generating Systems	$0.00	$0.00	$1,050,121.66	$0.00	$261,719.06	$1,311,840.72
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$1,081,056.68	$1,081,056.68
D3040	Distribution Systems	$3,135,551.02	$614,924.11	$0.00	$0.00	$938,795.33	$4,689,270.46
D3060	Controls & Instrumentation	$0.00	$0.00	$1,164,240.84	$0.00	$0.00	$1,164,240.84
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$929,852.59	$929,852.59
D5010	Electrical Service/Distribution	$500,880.78	$0.00	$450,673.78	$0.00	$0.00	$951,554.56
D5020	Lighting and Branch Wiring	$1,052,847.17	$0.00	$0.00	$0.00	$0.00	$1,052,847.17
D5030	Communications and Security	$164,874.77	$0.00	$0.00	$0.00	$0.00	$164,874.77
D5090	Other Electrical Systems	$275,379.81	$0.00	$0.00	$0.00	$0.00	$275,379.81
E2010	Fixed Furnishings	$0.00	$90,190.55	$0.00	$0.00	$0.00	$90,190.55
	Total:	$5,788,355.56	$5,208,534.59	$2,941,065.71	$24,473.55	$3,833,484.03	$17,795,913.44

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: $17,795,913.44

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: B3010105 - Built-Up

Location: main roof
Distress: Failing
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and Replace Built Up Roof
Qty: 15,300.00
Unit of Measure: S.F.
Estimate: $518,394.78
Assessor Name: System
Date Created: 08/04/2015

Notes: Remove and replace existing flat roof and insulation; 6 levels

System: C2010 - Stair Construction

Location: stairways
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: 300.00
Unit of Measure: L.F.
Estimate: $140,427.23
Assessor Name: System
Date Created: 08/04/2015

Notes: Remove and replace stairway handrails and guards with code compliant systems wall mounted handrails, center mounted railings and balustrade

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

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

Qty: 65,000.00

Unit of Measure: S.F.

Estimate: $3,135,551.02

Assessor Name: System

Date Created: 08/06/2015

Notes: Install unit ventilators in all classrooms and the IMC

System: D5010 - Electrical Service/Distribution

Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Electrical Distribution System (U)

Qty: 1.00

Unit of Measure: Ea.

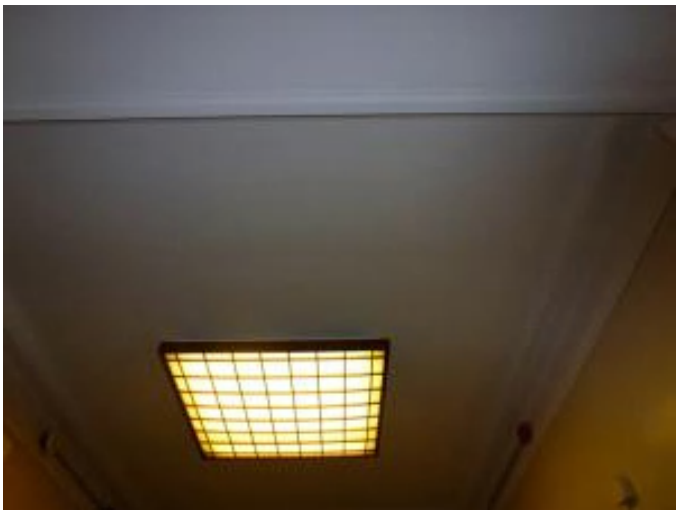
Estimate: $500,880.78

Assessor Name: System

Date Created: 08/04/2015

Notes: Replace the entire distribution system with new panel boards. Replace all conductors feeding the panel boards. Provide arc flash label on the all panel boards. Estimated, one 600A, main distribution and 14 lighting/receptacle panel boards.

System: D5020 - Lighting and Branch Wiring



Location: Entire Building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Lighting Fixtures (SF)

Qty: 1.00

Unit of Measure: S.F.

Estimate: $651,097.78

Assessor Name: System

Date Created: 08/04/2015

Notes: Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamp.

System: D5020 - Lighting and Branch Wiring

Location: Classrooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

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

Qty: 1.00

Unit of Measure: S.F.

Estimate: $373,047.36

Assessor Name: System

Date Created: 08/04/2015

Notes: Install minimum two receptacles in each wall of class rooms and sufficient number of receptacles in other areas per NEC. We recommend adding a two-compartment surface mounted raceway, for data power, for the computer lab room.

System: D5020 - Lighting and Branch Wiring

Location: Exterior Building
Distress: Inadequate
Category: 4 - Capital Improvement
Priority: 1 - Response Time (< 2 yr)
Correction: Add Exterior Lighting
Qty: 1.00
Unit of Measure: Ea.
Estimate: $28,702.03
Assessor Name: System
Date Created: 02/10/2016

Notes: Provide 10 more flood lights on exterior wall.

System: D5030 - Communications and Security

Location: Entire Building
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Add/Replace Clock System or Components
Qty: 1.00
Unit of Measure: Ea.
Estimate: $164,874.77
Assessor Name: System
Date Created: 08/04/2015

Notes: Replace existing master clock controller.

System: D5090 - Other Electrical Systems

Location: Exterior Building
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 1 - Response Time (< 2 yr)
Correction: Replace standby generator system
Qty: 1.00
Unit of Measure: Ea.
Estimate: $248,110.21
Assessor Name: System
Date Created: 08/04/2015

Notes: Replace existing emergency generator 100KW diesel generator. Provide an auto transfer switch for the new Emergency system.

System: D5090 - Other Electrical Systems

Location: Roof
Distress: Life Safety / NFPA / PFD
Category: 1 - Health & Safety
Priority: 1 - Response Time (< 2 yr)
Correction: Repair Lightning Protection System
Qty: 1.00
Unit of Measure: Job
Estimate: $27,269.60
Assessor Name: System
Date Created: 08/04/2015

Notes: Perform lightning protection studies to ascertain adequacy of existing systems.

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

System: B2010 - Exterior Walls

Location: windows - lintels

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replacing failing steel lintels in brick wall construction

Qty: 300.00

Unit of Measure: L.F.

Estimate: $143,407.51

Assessor Name: System

Date Created: 08/04/2015

Notes: Remove and replace all lintels and cracked masonry at basement windows and grade exit doorways and rooftop structures

System: B2020 - Exterior Windows

Location: windows

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 300.00

Unit of Measure: Ea.

Estimate: $1,876,061.84

Assessor Name: System

Date Created: 08/04/2015

Notes: Replace all exterior windows with insulated single hung units

System: B2030 - Exterior Doors

Location: exterior doors

Distress: Obsolete

Category: 3 - Operations / Maint.

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

Correction: Replace hardware with compliant hardware, paint and weatherstrip - per leaf

Qty: 16.00

Unit of Measure: Ea.

Estimate: $55,898.23

Assessor Name: System

Date Created: 08/04/2015

Notes: Replace all exterior doors with ADA and code compliant exit hardware; repaint doors and frames

System: B3010140 - Shingle & Tile

Location: auditorium roof

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace asphalt shingle roof - partial area

Qty: 6,000.00

Unit of Measure: S.F.

Estimate: $205,810.25

Assessor Name: System

Date Created: 08/04/2015

Notes: Remove and replace existing sloped asphalt shingle roof over auditorium

System: C1010 - Partitions

Location: classrooms

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove folding wood partitions; replace with metal studs and gypsum board painted

Qty: 2,700.00

Unit of Measure: S.F.

Estimate: $60,154.64

Assessor Name: System

Date Created: 08/04/2015

Notes: Remove folding wood partitions; replace with gypsum board and metal stud

System: C1010 - Partitions

Location: corridors

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Remove non-rated interior glass panels and replace with studs, gypsum board, paint (E) wall

Qty: 300.00

Unit of Measure: S.F.

Estimate: $8,024.80

Assessor Name: System

Date Created: 08/04/2015

Notes: Remove non-rated glass panels between classrooms and corridors; fill with fire rated gyp bd sys.

System: C1020 - Interior Doors

Location: interior doors

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 80.00

Unit of Measure: Ea.

Estimate: $372,347.12

Assessor Name: System

Date Created: 08/04/2015

Notes: Remove and replace all wood interior doors, frames and hardware in classrooms, closets, offices, etc.

System: C1020 - Interior Doors

Location: mechanical rooms and stairways

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace hollow metal frames and doors

Qty: 18.00

Unit of Measure: Ea.

Estimate: $91,403.77

Assessor Name: System

Date Created: 08/04/2015

Notes: Remove and replace all basement steel doors, frames, and hardware in mechanical rooms and stairways

System: C1020 - Interior Doors

Location: classrooms

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Provide security hardware for classroom and office doors

Qty: 50.00

Unit of Measure: Ea.

Estimate: $11,471.83

Assessor Name: System

Date Created: 08/04/2015

Notes: Provide security hardware for classrooms and offices, locking from inside classroom.

System: C1030 - Fittings

Location: toilet rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Replace toilet accessories - select accessories and quantity

Qty: 8.00

Unit of Measure: Ea.

Estimate: $20,067.87

Assessor Name: System

Date Created: 08/04/2015

Notes: Provide toilet room accessories

System: C2010 - Stair Construction

Location: exterior stairs

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Regrout joints between stone treads and risers - LF of grout

Qty: 500.00

Unit of Measure: L.F.

Estimate: $7,472.57

Assessor Name: System

Date Created: 08/04/2015

Notes: Regrout all joints between limestone block tread/risers at exterior stairs

System: C3010230 - Paint & Covering

Location: interior walls

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 30,000.00

Unit of Measure: S.F.

Estimate: $162,317.43

Assessor Name: System

Date Created: 08/04/2015

Notes: Repair water damage, cracks, and repaint some interior plaster walls

System: C3010230 - Paint & Covering

Location: mechanical rooms

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Repair substrate and repaint interior concrete or CMU walls - SF of wall surface

Qty: 10,000.00

Unit of Measure: S.F.

Estimate: $46,747.11

Assessor Name: System

Date Created: 08/04/2015

Notes: Strip and repaint concrete foundation (basement) walls in mechanical rooms

System: C3020413 - Vinyl Flooring

Location: gym and other areas

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Remove and replace VCT

Qty: 8,000.00

Unit of Measure: S.F.

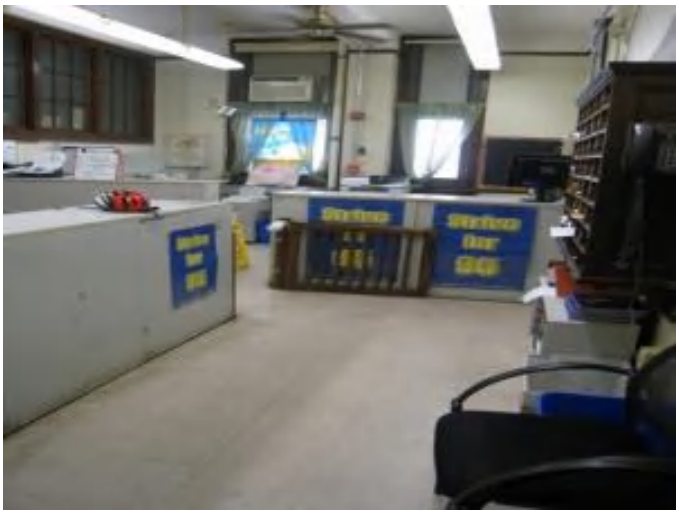
Estimate: $96,140.25

Assessor Name: System

Date Created: 08/04/2015

Notes: Remove and replace all 12”x12” VCT floors in gymnasium and other rooms

System: C3020413 - Vinyl Flooring



Location: offices

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 700.00

Unit of Measure: S.F.

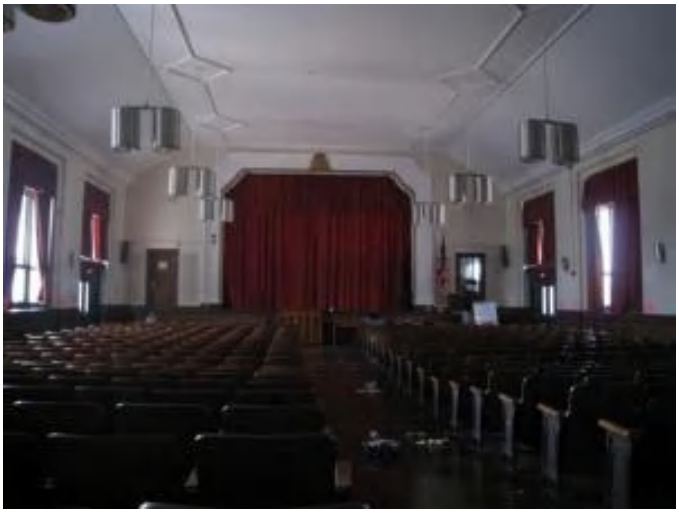
Estimate: $10,616.67

Assessor Name: System

Date Created: 08/04/2015

Notes: Replace VAT floors using proper asbestos abatement procedures if determined asbestos is present.

System: C3020414 - Wood Flooring



Location: classrooms and auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Refinish wood floors

Qty: 29,000.00

Unit of Measure: S.F.

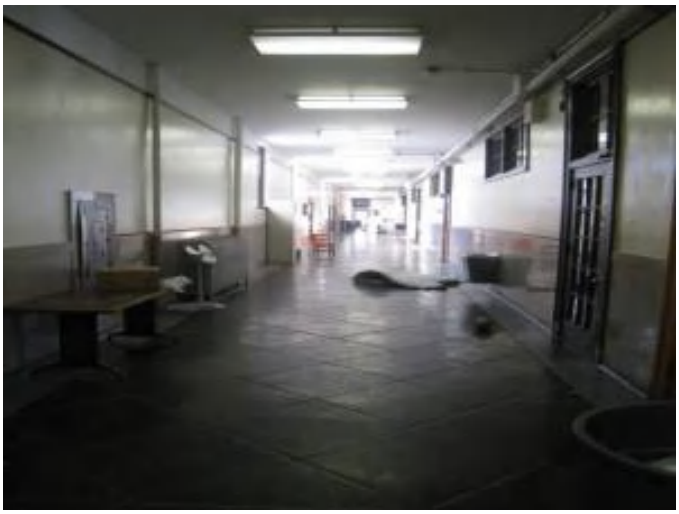
Estimate: $312,241.26

Assessor Name: System

Date Created: 08/04/2015

Notes: Strip, sand, repair and refinish all wood floors in classrooms and in auditorium

System: C3020415 - Concrete Floor Finishes



Location: mechanical rooms, corridors, stairways

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 16,000.00

Unit of Measure: S.F.

Estimate: $46,640.22

Assessor Name: System

Date Created: 08/04/2015

Notes: Clean and repaint basement floor in mechanical rooms; clean and reseal concrete floors in hallways and stairways

System: C3030 - Ceiling Finishes

Location: auditorium lobby

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair and resurface plaster ceilings - 2 coats plaster

Qty: 5,000.00

Unit of Measure: S.F.

Estimate: $65,620.41

Assessor Name: System

Date Created: 08/04/2015

Notes: Repaint plaster and concrete ceilings in the building upper floors and basement where accessible.

System: D1010 - Elevators and Lifts

This deficiency has no image.

Location: to be determined

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

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

Qty: 1.00

Unit of Measure: Ea.

Estimate: $670,322.07

Assessor Name: System

Date Created: 08/07/2015

Notes: add elevator to serve 4 floors (basement - 3rd floor)

System: D2010 - Plumbing Fixtures

Location: corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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: 12.00

Unit of Measure: Ea.

Estimate: $188,314.75

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace all drinking fountains in the building

System: D2040 - Rain Water Drainage

Location: roof

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Create new overflow scupper through a parapet with up to 100' downspout

Qty: 5.00

Unit of Measure: Ea.

Estimate: $52,339.33

Assessor Name: System

Date Created: 10/23/2015

Notes: Add overflow scuppers to roof parapets

System: D3040 - Distribution Systems

Location: Throughout Building

Distress: Failing

Category: 3 - Operations / Maint.

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

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

Qty: 65,000.00

Unit of Measure: S.F.

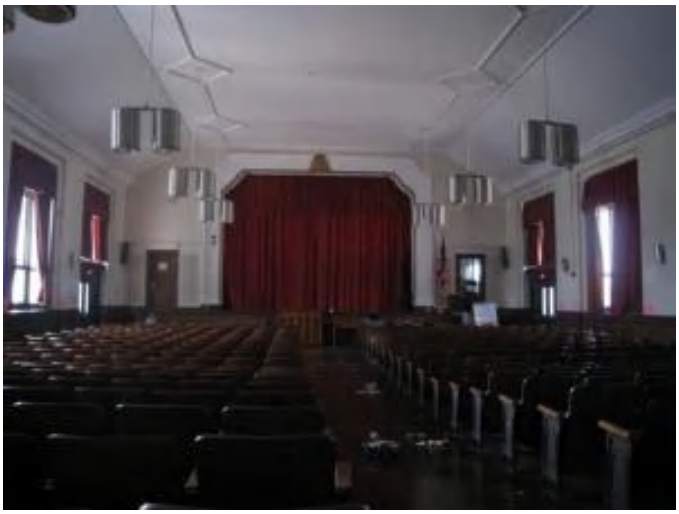
Estimate: $614,924.11

Assessor Name: System

Date Created: 08/06/2015

Notes: Steam and condensate distribution and return system is failing.

System: E2010 - Fixed Furnishings



Location: auditorium

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 100.00

Unit of Measure: Ea.

Estimate: $90,190.55

Assessor Name: System

Date Created: 08/04/2015

Notes: Repair and replace (if necessary) folding wood auditorium chairs with new chairs

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

System: D2030 - Sanitary Waste

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 65,000.00

Unit of Measure: S.F.

Estimate: $276,029.43

Assessor Name: System

Date Created: 08/06/2015

Notes: Inspect sanitary system throughout the building

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 (150 HP)

Qty: 2.00

Unit of Measure: Ea.

Estimate: $1,050,121.66

Assessor Name: System

Date Created: 08/06/2015

Notes: The boilers appear to be at the end of their serviceable life and should be replaced within the next 5 years

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (150KSF)

Qty: 65,000.00

Unit of Measure: S.F.

Estimate: $1,164,240.84

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new DDC system to the main building

System: D5010 - Electrical Service/Distribution

Location: Boiler Room in the basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

Estimate: $450,673.78

Assessor Name: System

Date Created: 08/04/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchboard with new2000A, 208/120V switchboard.

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

System: D2020 - Domestic Water Distribution

Location: boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace instantaneous water heater

Qty: 1.00

Unit of Measure: Ea.

Estimate: $24,473.55

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace gas fired domestic water heater

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace domestic water piping (150 KSF)

Qty: 150,000.00

Unit of Measure: S.F.

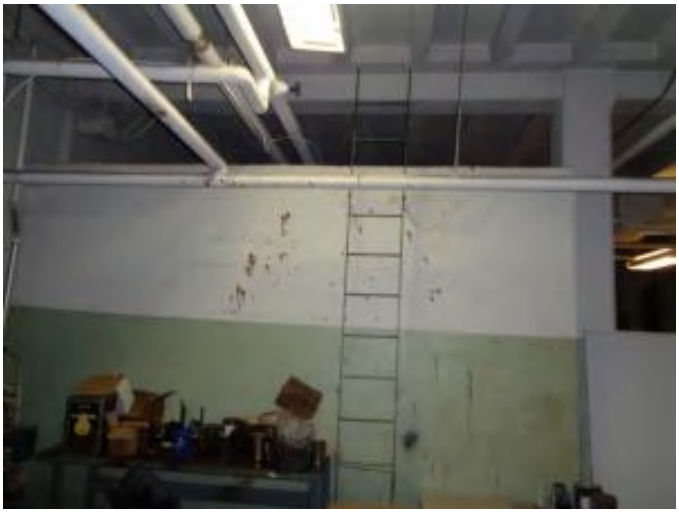
Estimate: $622,060.37

Assessor Name: System

Date Created: 08/06/2015

Notes: Inspection of the domestic water distribution piping throughout the building

System: D3020 - Heat Generating Systems



Location: Locate new tank underground outside, location TBD

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

Priority: 5 - Response Time (> 5 yrs)

Correction: Provide fuel oil tank, above ground concrete encased (8,000 gal)

Qty: 1.00

Unit of Measure: Ea.

Estimate: $235,040.98

Assessor Name: System

Date Created: 08/06/2015

Notes: Recommend an inspection of the concrete fuel tank

System: D3020 - Heat Generating Systems

Location: Boiler Mechanical Equipment Room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace fuel oil pumps

Qty: 1.00

Unit of Measure: Ea.

Estimate: $26,678.08

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace duplex fuel oil pumps and skid

System: D3030 - Cooling Generating Systems

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 65,000.00

Unit of Measure: S.F.

Estimate: $1,081,056.68

Assessor Name: System

Date Created: 08/06/2015

Notes: Install chiller and chilled water distribution system

System: D3040 - Distribution Systems

Location: auditorium

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

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

Qty: 450.00

Unit of Measure: Seat

Estimate: $641,442.21

Assessor Name: System

Date Created: 08/06/2015

Notes: Install AHU to condition the auditorium.

System: D3040 - Distribution Systems

Location: cafeteria

Distress: Inadequate

Category: 4 - Capital Improvement

Priority: 5 - Response Time (> 5 yrs)

Correction: Install HVAC unit for Cafeteria (850 students).

Qty: 636.00

Unit of Measure: Pr.

Estimate: $297,353.12

Assessor Name: System

Date Created: 08/06/2015

Notes: Install AHU to condition the gym/cafeteria

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: 65,000.00

Unit of Measure: S.F.

Estimate: $929,852.59

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new sprinkler system

Equipment Inventory

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

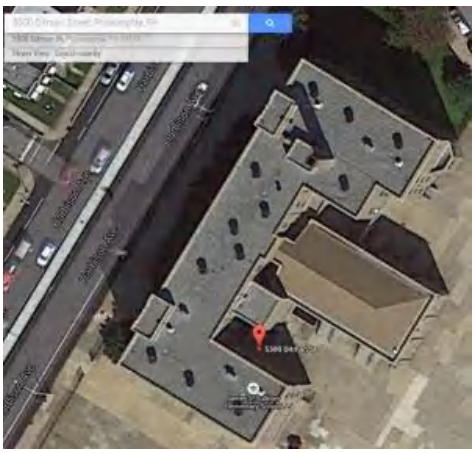
Subsystem	Inventory	Qty	UoM	Location	Manufacturer	Model Number	Serial Number	Barcode	Life	Install Date	Next Renewal	Raw Cost	Inventory Cost
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 2044 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	boiler room	Weil McLain	94	0066637B		35	1972	2007	$62,552.00	$68,807.20
D3020 Heat Generating Systems	Boiler, gas/oil combination, cast iron, hot water, gross output, 2044 MBH, includes burners, controls and insulated jacket, packaged	1.00	Ea.	boiler room	Weil McLain	94	066636B		35	1972	2007	$62,552.00	$68,807.20
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, subfeed lug-rated, 400 amp, excl breakers	1.00	Ea.	Boiler room					30	1930	2017	$3,167.10	$3,483.81
												Total:	**$141,098.21**

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):	100,000
Year Built:	1930
Last Renovation:	
Replacement Value:	$1,961,080
Repair Cost:	$478,035.21
Total FCI:	24.38 %
Total RSLI:	42.17 %



Description:

Attributes:

General Attributes:

Bldg ID:	S743001	Site ID:	S743001

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	39.93 %	31.32 %	$478,035.21
G40 - Site Electrical Utilities	50.00 %	0.00 %	$0.00
Totals:	**42.17 %**	**24.38 %**	**$478,035.21**

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	1990	2020		16.67 %	0.00 %	5			$0
G2020	Parking Lots	$7.65	S.F.		30	1990	2020		16.67 %	0.00 %	5			$0
G2030	Pedestrian Paving	$11.52	S.F.	92,000	40	1990	2030		37.50 %	40.63 %	15		$430,589.51	$1,059,840
G2040	Site Development	$4.36	S.F.	100,000	25	1990	2015	2026	44.00 %	10.88 %	11		$47,445.70	$436,000
G2050	Landscaping & Irrigation	$3.78	S.F.	8,000	15	1990	2005	2025	66.67 %	0.00 %	10			$30,240
G4020	Site Lighting	$3.58	S.F.	100,000	30	1990	2020	2030	50.00 %	0.00 %	15			$358,000
G4030	Site Communications & Security	$0.77	S.F.	100,000	30	1990	2020	2030	50.00 %	0.00 %	15			$77,000
								Total	**42.17 %**	**24.38 %**			**$478,035.21**	**$1,961,080**

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.

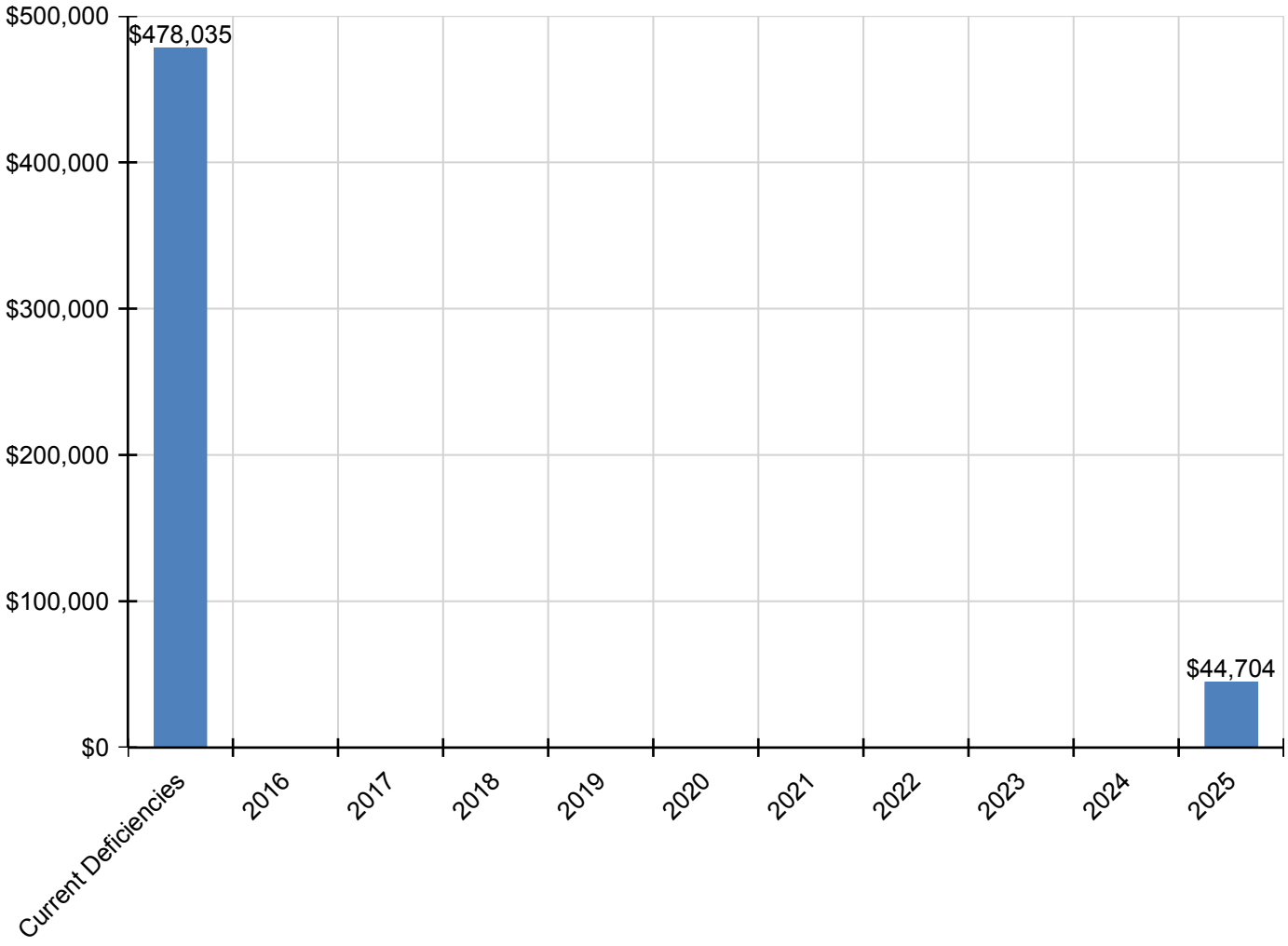
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$478,035**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$44,704**	**$522,739**
G - Building Sitework	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G20 - Site Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2010 - Roadways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2020 - Parking Lots	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G2030 - Pedestrian Paving	$430,590	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$430,590**
G2040 - Site Development	$47,446	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$47,446**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$44,704	**$44,704**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

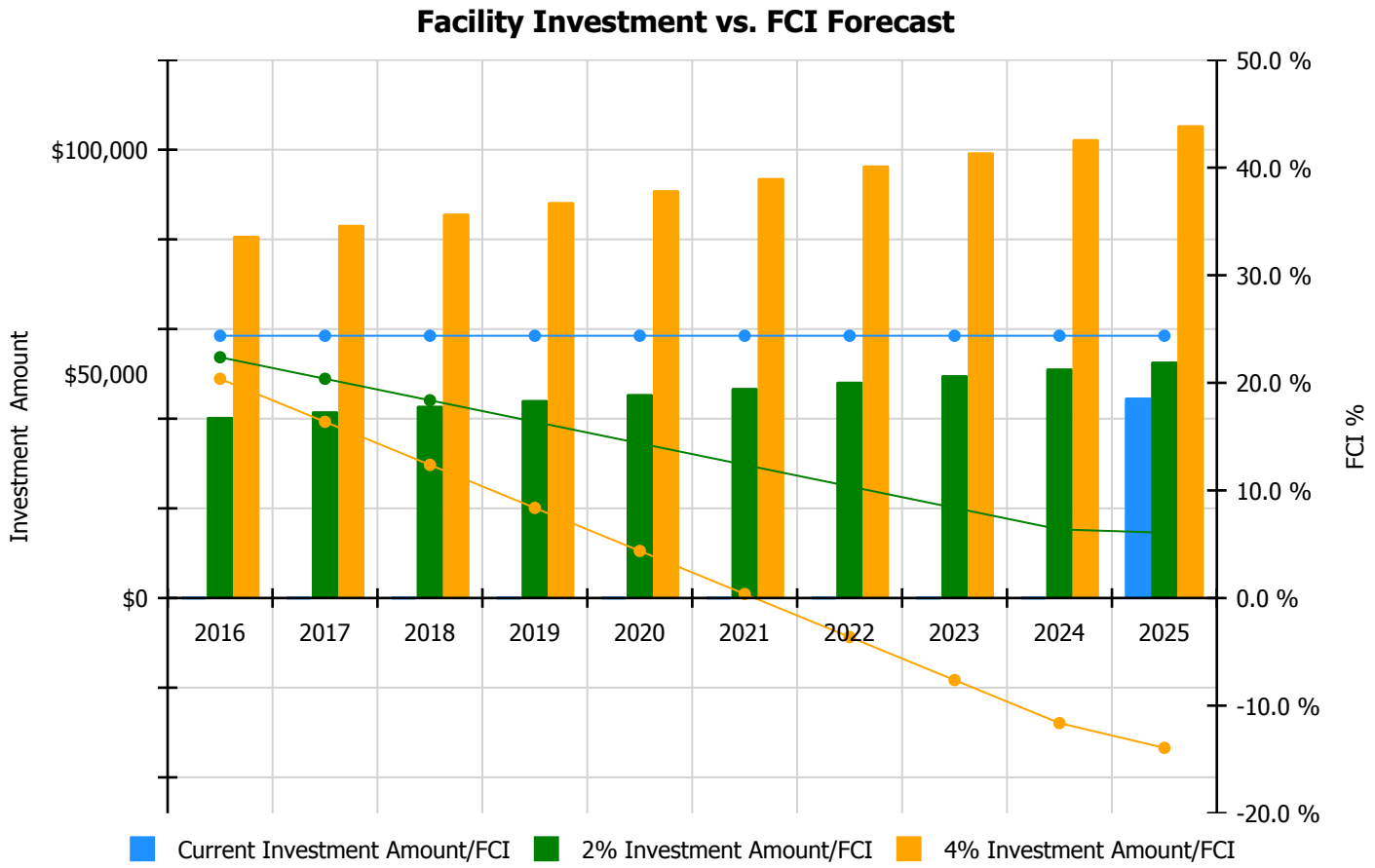
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



10 Year FCI Forecast by Investment Scenario

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

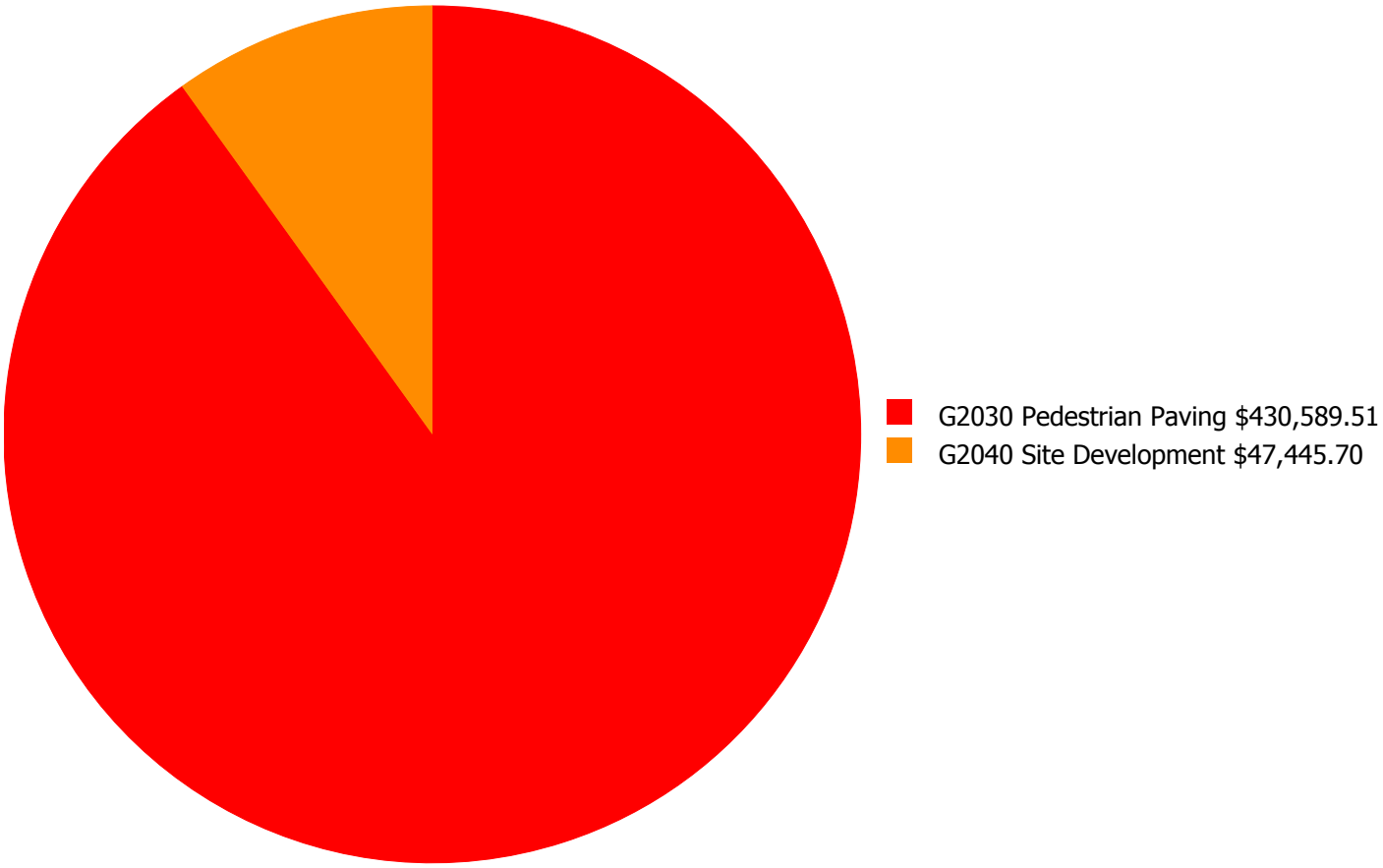
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 24.38%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$40,398.00	22.38 %	$80,796.00	20.38 %
2017	$0	$41,610.00	20.38 %	$83,220.00	16.38 %
2018	$0	$42,859.00	18.38 %	$85,717.00	12.38 %
2019	$0	$44,144.00	16.38 %	$88,289.00	8.38 %
2020	$0	$45,469.00	14.38 %	$90,937.00	4.38 %
2021	$0	$46,833.00	12.38 %	$93,665.00	0.38 %
2022	$0	$48,238.00	10.38 %	$96,475.00	-3.62 %
2023	$0	$49,685.00	8.38 %	$99,369.00	-7.62 %
2024	$0	$51,175.00	6.38 %	$102,351.00	-11.62 %
2025	$44,704	$52,711.00	6.07 %	$105,421.00	-13.93 %
Total:	**$44,704**	**$463,122.00**		**$926,240.00**	

Deficiency Summary by System

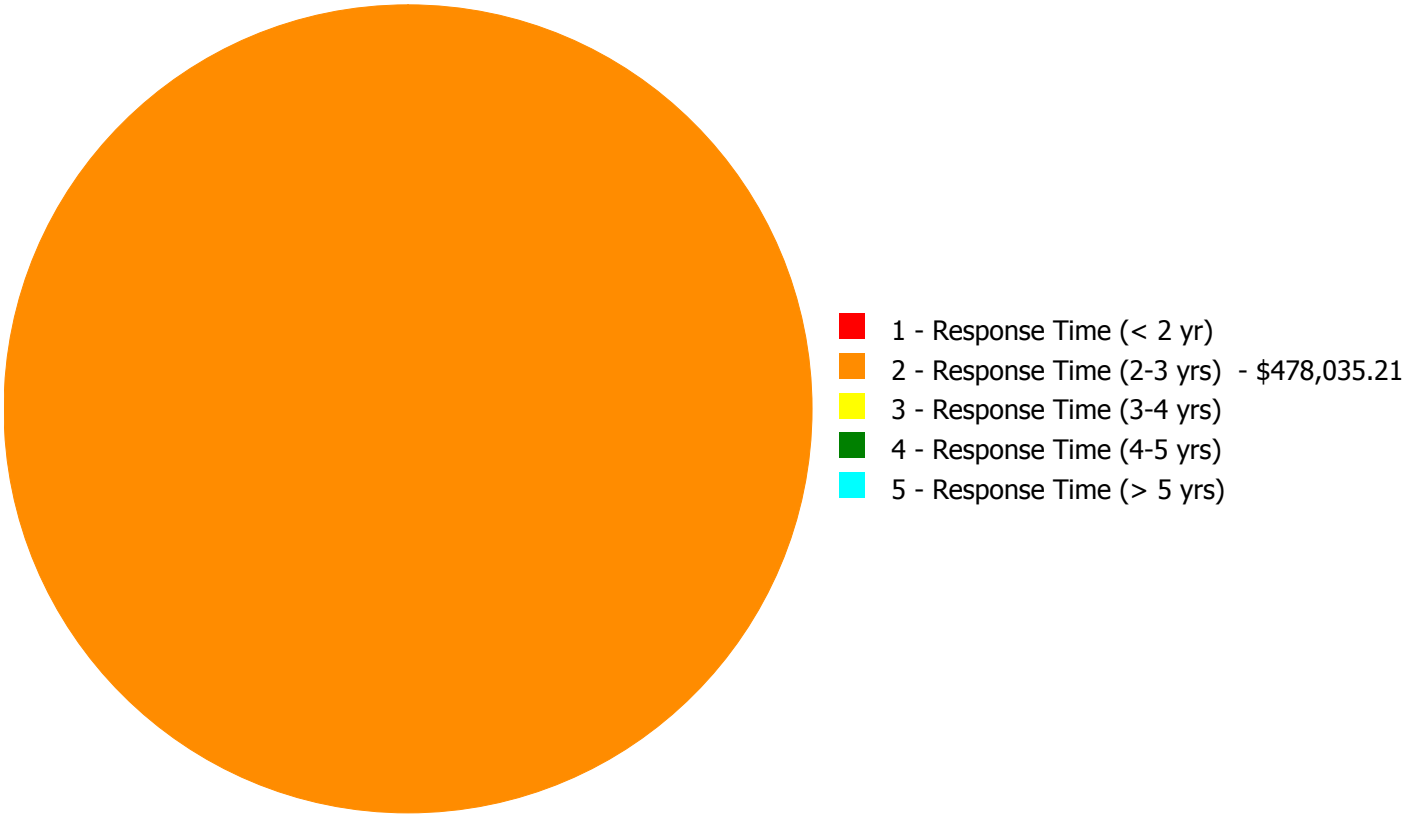
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $478,035.21

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: $478,035.21

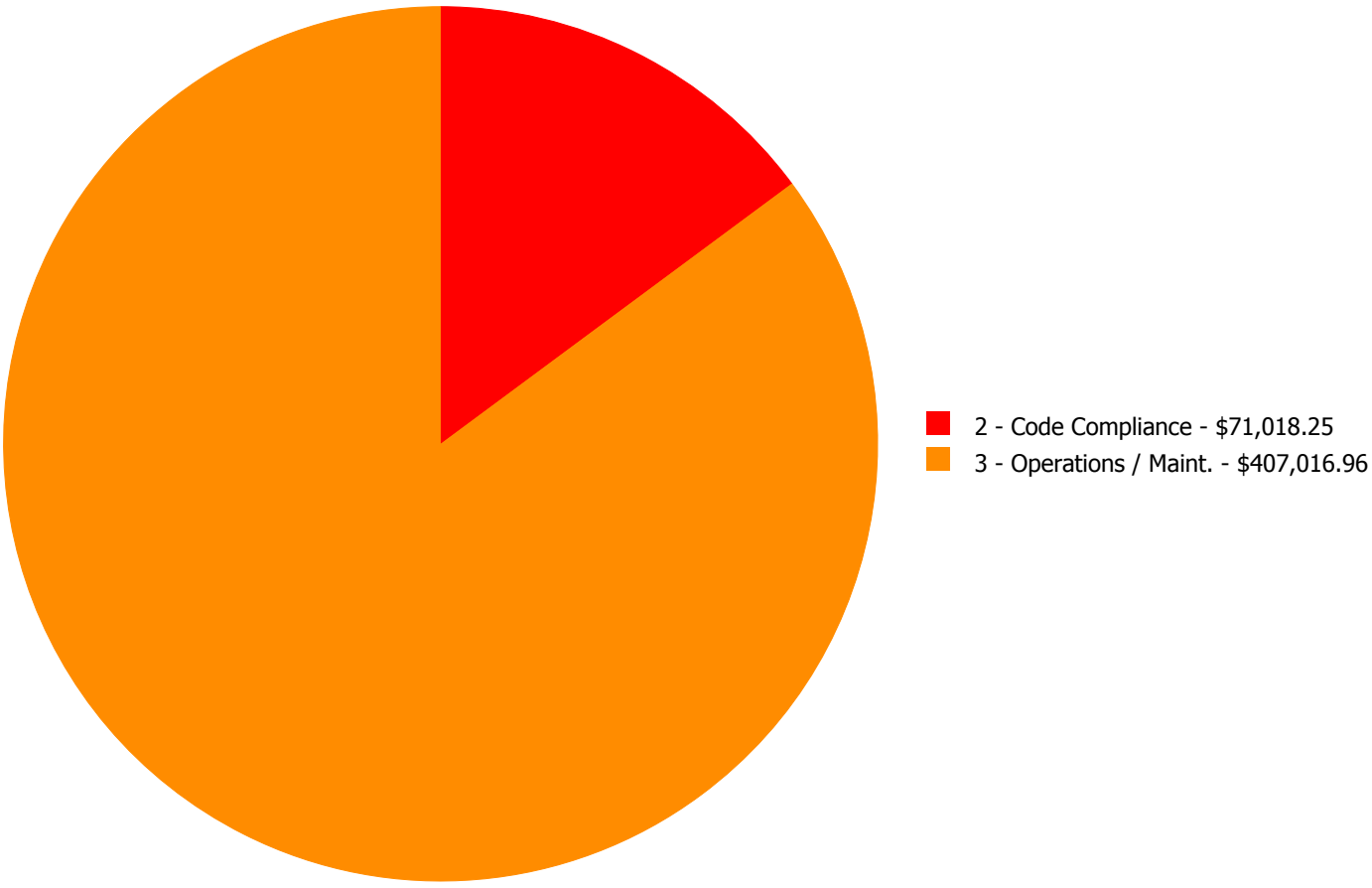
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
G2030	Pedestrian Paving	$0.00	$430,589.51	$0.00	$0.00	$0.00	$430,589.51
G2040	Site Development	$0.00	$47,445.70	$0.00	$0.00	$0.00	$47,445.70
	Total:	$0.00	$478,035.21	$0.00	$0.00	$0.00	$478,035.21

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: $478,035.21

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: G2030 - Pedestrian Paving

Location: parking and play area

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 25,000.00

Unit of Measure: S.F.

Estimate: $359,571.26

Assessor Name: Steven Litman

Date Created: 08/04/2015

Notes: Repave damaged sections of concrete parking / playground area

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System: G2030 - Pedestrian Paving

This deficiency has no image.

Location: to be determined

Distress: Building / MEP Codes

Category: 2 - Code Compliance

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

Correction: Install an exterior ADA ramp - based on 5' wide by the linear foot - up to 84" rise - per LF of ramp - figure 1 LF of ramp per inch of rise

Qty: 30.00

Unit of Measure: L.F.

Estimate: $71,018.25

Assessor Name: Steven Litman

Date Created: 08/07/2015

Notes: add handicap accessible ramp into building

System: G2040 - Site Development

Location: site

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace metal picket fence - input number of gates

Qty: 100.00

Unit of Measure: L.F.

Estimate: $47,445.70

Assessor Name: Steven Litman

Date Created: 08/04/2015

Notes: Replace damaged wrought iron fencing

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