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.

Olney Elementary School

Governance	DISTRICT	Report Type	Elementarymiddle
Address	5301 N. Water St.	Enrollment	836
	Philadelphia, Pa 19120	Grade Range	'00-08'
Phone/Fax	215-456-3003 / 215-456-5566	Admissions Category	Neighborhood
Website	Www.Philasd.Org/Schools/Olney	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	**55.32%**	**$12,330,581**	**$22,289,114**
Building	56.61 %	$12,012,968	$21,221,789
Grounds	29.76 %	$317,613	$1,067,325

Major Building Systems

Building System	System FCI	Repair Costs	Replacement Cost
Roof (Shows physical condition of roof)	30.93 %	$190,803	$616,974
Exterior Walls (Shows condition of the structural condition of the exterior facade)	02.96 %	$46,158	$1,557,528
Windows (Shows functionality of exterior windows)	109.78 %	$834,337	$759,986
Exterior Doors (Shows condition of exterior doors)	45.68 %	$27,949	$61,187
Interior Doors (Classroom doors)	192.05 %	$284,460	$148,115
Interior Walls (Paint and Finishes)	20.84 %	$147,817	$709,348
Plumbing Fixtures	93.63 %	$534,175	$570,517
Boilers	199.94 %	$1,575,182	$787,837
Chillers/Cooling Towers	66.85 %	$690,540	$1,033,007
Radiators/Unit Ventilators/HVAC	144.08 %	$2,613,748	$1,814,092
Heating/Cooling Controls	161.92 %	$922,437	$569,673
Electrical Service and Distribution	155.70 %	$637,326	$409,321
Lighting	54.52 %	$797,873	$1,463,427
Communications and Security (Cameras, Pa System and Fire Alarm)	77.99 %	$427,488	$548,152

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

S740001;Olney ES

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):	42,198
Year Built:	1900
Last Renovation:	
Replacement Value:	$22,289,114
Repair Cost:	$12,330,581.14
Total FCI:	55.32 %
Total RSLI:	69.87 %

Description:

Facility Condition Assessment
July 2015

School District of Philadelphia
Olney Elementary School
5301 N. Water Street
Philadelphia, PA 19120

42,198sf / 537 students / LN 07

General

Olney Elementary School is located at 5301 North Water Street. The main entrance faces North Water Street. The building has 42,198 square feet, and is 2 stories tall, with a full basement with grade level access in the rear. Although the school has a concrete plaque embedded in the Tabor Road elevation that says "1850 Olney Public School 1900", information from the Historic Educational Resources of Pennsylvania indicates the building was initially constructed in 1900, not 1850, which still makes it the oldest building on the list of Facility Condition Assessment schools. Floor plans provided by the School District of Philadelphia indicate that there are two

sections called "Element 1" and "Element 2". The timing of the construction of these sections could not be verified, however there is a difference in first floor materials - Element 1 has wood floors and Element 2 has concrete tile floors with a marble wainscot in corridors, consistent with the schools built during the 1920's and 1930's. The Olney Elementary School can be found on the National Historical Register, number 88003311 with the address of Tabor Road and Water Street. Bryan Smith, the Building Engineer accompanied the team during the building inspection. Michael Roth, the Principal spoke with Parsons by phone the day before the inspection.

Architectural/Structural

Foundations are constructed of concrete and brick. Joints are in good condition with no major settlement cracks observed. Peeling paint was observed on some basement walls and ceilings, possible 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.

Floor slabs in the basement are in good condition although covered with dirt and in need of stripping, cleaning and repainting or resealing. First and second floors in Element 1 are constructed of wood floor decking probably over heavy wood construction on loadbearing concrete and masonry walls. Element 2 has concrete "tiles" over cast-in-place concrete slabs on cast-in-place concrete beams over concrete and masonry walls and columns. Both sections of the building showed no evidence of settlement, cracking, or weakness in structure.

Roof construction is heavy wood construction bearing on masonry walls. The roof deck consists of a flat top section above all parts of Elements 1 and 2 with pitched sides and gutters along all eaves. Roof access is via a roof top hatch in the top flat part of the roof, at the top of a wall mounted wood ladder with very tight access up from a 2nd floor closet. The wood superstructure appeared to be in very good condition as observed in the attic space. It was surprising to realize this structure is over 100 years old.

Exterior walls are constructed of limestone blocks in the front, left and right side elevations. Rear elevations have some limestone blocks and mostly brick wall construction. Limestone walls are in fair condition with some areas of mortar missing from the limestone block joints. Lintels in limestone walls are smooth limestone with first and second floor windows have loadbearing limestone blocks with center keystones; basement windows have single limestone block lintels. It could not be determined if there were any steel lintels behind the limestone lintels, it is presumed that the lintels are constructed of full-depth loadbearing limestone block. There is some material degredation along some of the window heads. Brick walls have steel lintels which are not aging as well as the limestone lintels. Cracks were seen beyond the lintel bearing points in brick walls. Cracks were also seen above vents in brick walls and under limestone sills. Some areas of brick walls have been repaired which can be determined by the different color grout in some wall panels. The old, Element 1 section of the brick wall in the rear has limestone lintels which are in better condition than the steel lintels over the windows in the newer, Element 2 section. Brick chimneys appear to be in good condition with one of the chimneys possibly having been rebuilt a number of years ago. A more detailed inspection of the masonry and limestone is required to determine if there are joints that might be cracking and failing, to ensure a minimum of leaks through the envelope.

Exterior windows were replaced in the 1980'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. Single pane plexiglas units do not meet today's energy code requirements and are large sources of heat loss. Basement level windows have galvanized steel security screens attached to the windows.

Exterior doors are painted steel framed flush hollow metal units with steel frames. The main entrance and secondary main entrance on N. Water and Tabor Streets have classical-style limestone columns and pediments over door openings. They should be cleaned to highlight their style. 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 coverings on the flat roof sections is a ceramic granule impregnated, fully adhered rolled asphalt sheet system. Brick rooftop structures through flat roofs are flashed with metal flashing with an asphaltic backing. Cylindrical 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. The sloping sides of the roofs are covered with lightweight "residential-type, 3-tab" asphalt roofing shingles sloping down to pitched metal troughs with vertical internal leaders on the low sides of the roof. Leaks along the exterior walls in classrooms have created large water-damaged, effloresced areas in plaster walls and ceilings; they have been

reportedly repaired, but this has not been proven true, yet. Troughs along the walls could be ongoing sources of leaks, should be inspected, and subsequently repaired. There is continuous aluminum coping along the edge of the top part of the asphalt shingle roof and the flat roof, which appears to be in good condition.

Partitions in basements are constructed of brick masonry in Element 2 and concrete in Element 1. The upper 2 floors of the building have plaster on wood lath that appear to be installed on concrete partitions in Element 1 and wood walls in Element 2. 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, no longer in use.

Interior doors are the original wood and plate glass (not fire rated or wired) raised panel doors with original hardware or replacement hardware at least 20 years of age. Most wood doors regardless of age or type are damaged, have broken glass, and marginally operational hardware. Some interior basement doors and all interior stairway doors are hollow metal in hollow metal frames with narrow lite vision panels; 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, although some consideration might be given to preserving some of the original wood doors in good condition (replacing glass with fire-rated safety glass). This possibility should be studied further before implanting full door replacement.

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. If unstable, these wall panels need to be replaced with sturdier, safer, fixed partitions; otherwise, they should be stabilized since they are never operated. Toilet room partitions appear to be the original marble partitions with wood doors on most toilet stalls. Toilet room accessories (toilet paper dispensers, soap, paper towel or dryers, grab bars, door latches) have been recently replaced, but are not in good condition as some components are missing and others are not fully functional. Toilet partitions and doors need to be replaced and toilet room accessories need to be added or replaced where broken.

Element 1 has two stairs. One is constructed of concrete treads, risers, and stringers with steel handrails (29” high) and full height glass and steel walls between stair runs. The other stair has wood treads with steel nosing/tread inserts, wood risers, wood stringers, wood handrails on walls and wood handrails on tall (60” high) wood ballusters @ less than 3” spacing and tall wood guards at platforms. A stair enclosure wall was added to this stair to provide partial code compliance, however the platforms at the top and bottom of the stair are too short to meet code creating a dangerous tight-space condition where someone could get hit when doors are opened into stairways. Stair construction in Element 2 consists of concrete treads, risers, and stringers with wood handrails (29” high), guards (36” high), and steel balusters with 3” spacing. Wall mounted railings are either wood or steel in other stairs throughout the building. None of the stairs in this building comply with today’s code requirements. Additional floor space is needed for the Element 1 stair at first floor and second floor landings. Additionally, fire rated enclosures must be provided for all stairs and new handrail and guard systems are required for all stairs.

Wall finishes in the old building are plaster which is damaged from impact and 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 exterior walls and stairway walls due to water penetration from above the windows or from the roof drainage trough above. There are a few classrooms with moveable partitions between that 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. Element 1 corridors are all plaster with a wood trim “chair rail” piece for accent or wall protection. Element 2 Corridors have 48” high marble panel wainscots that are generally in good condition with isolated cracks or damages requiring repair. Some wood door, window and wall trim has been painted and some remains the original stained finish. All rooms require filling and refinishing of plaster walls and refinishing or repainting of wood trim. Toilet room walls are painted plaster above marble wainscots in first and second floors; basement toilet rooms have glazed brick wainscots and painted brick above, the same as basement corridors and classrooms. Some doorways in Element 1 have decorative plaster and raised wood panel arches and corner detail work that should be repaired and repainted to maintain the character of this historical building.

Floor finishes in Element 1 are mostly consist of dark stained oak floors in classrooms and corridors. Most are in good enough condition to be stripped, sanded, and refinished. There are some rooms (main office and faculty lounge) with 12”x12” vinyl composition tile (VCT) over the wood floor. In the basement, the gymnasium which also serves as a lunch room is finished in sealed concrete. All 12”x12” VCT floors need to be removed and replaced. The basement space called the Lunch Room has 9”x9” vinyl asbestos tile (VAT). Nine by nine inch tile 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. Element 2 corridors are finished with 2’x2’ sealed concrete tiles. 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. Element 2 classrooms like those in Element 1 are finished with dark stained oak floors, that should be stripped, sanded and refinished. Stair walking surfaces are finished in exposed concrete that have years of dirt ground into the surfaces; these should be stripped, cleaned and resealed. Toilet room floors are painted or sealed concrete; most require a thorough cleaning. A library was created by use of two adjacent classrooms with the dividing wall removed. Floor finish in the library is new carpet.

Ceiling finishes are either exposed plaster with surface mounted fluorescent lighting fixtures, suspended acoustical tile ceiling with recessed fluorescent lighting fixtures or gypsum board with surface mounted fluorescent lighting fixtures. Ceiling are in fair condition and should be repaired or repainted where other work is done in those spaces.

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

Furnishings include some of the original wood built-ins most of which have been repainted. Some classrooms have metal or plastic laminate storage cabinets in various levels of good and worn condition.

Mechanical

Plumbing Fixtures - Many of the original plumbing fixtures remain in service, both in the original building and in the addition. Some of the fixtures may have been updated in the 1960s. Fixtures in the restrooms on each floor consist of wall mounted water closets, wall hung urinals or floor mounted urinals, and lavatories with wheel handle faucets. All fixtures are well beyond their intended service life. The replacement of all plumbing fixtures is recommended.

Drinking fountains in the corridors and at the restrooms are wall hung. Most appear to be original installed equipment with some updates in the 1960s. Replacement is recommended for all drinking fountains in building. No service sinks were seen during the assessment nor were any janitor closets found. It is recommended to install service sinks and janitor closets in the building. The building has only a warm-up kitchen; there are no wash sinks present in the kitchen.

Domestic Water Distribution - Domestic water distribution piping is soldered copper. It appears that some of the pipe was replaced within the past 20 years and some piping is older. Water service enters the building in the basement, with backflow preventers and the water meter on the main line after entering the building. A thorough inspection of the domestic water distribution system is recommended due to its age.

One Bradford White natural gas fired vertical water heater tank is installed in the basement with appropriate piping, controls, and venting. The water heater appears to be in satisfactory condition and should not need replacement for the next 10 years.

Sanitary Waste - The sanitary waste piping systems are hub and spigot cast iron pipe and appear to be the original equipment. An inspection of the complete sanitary system is recommended due to the age of the equipment.

Rain Water Drainage – The facility has a sloped roof with gutters and downspouts external to the building. The downspouts appear to be in satisfactory condition and should not need replacement for the next 10 years.

Energy Supply - The facility uses both natural gas and fuel oil for a heat source. The natural gas enters the building in the basement with a gas meter shortly after the wall penetration. The facility uses a buried 10,000 gallon fuel oil tank with controls and indicators inside the building in the basement. A fuel oil pump skid with duplex pumps delivers the fuel to the boilers.

Heat Generating Systems - Steam is generated in the basement of the by three Burnham model EL 80 boilers with dual fuel Webster burners. The boilers sit on 6" concrete pads and each have a gross output of 2,821 MBH each. The boilers appear to be nearing the end of their serviceable life and should be replaced within the next 5-10 years.

Distribution Systems - The boiler feed water is treated with a combination of chemicals. There is a boiler feed tank with integrated controls and triplex pumps serving the boiler. There is a blowdown tank with controls that tempers the blowdown water with domestic cold water before it is drained into the municipal network. The steam traps are failing throughout the building. Only isolated steam and condensate return lines are insulated. All steam piping is beyond its serviceable life.

Ventilation and additional heating for the main building was at one time provided by a house fan in the basement. The air was pushed into the various rooms of the building through ducts built into the walls. The air was exhausted from other ducts built into the walls, up through the attic space, and out through roof mounted vents. Remnants of this system are still present in the building, although it is no longer operational. Steam radiators still provide the facility with heat while some rooms have steam unit ventilators

to provide heat and fresh air to select rooms.

Terminal & Package Units – Approximately half of the rooms in the facility have window air conditioning units. Most of these units the air conditioning units are in service. There is a ductless mini split system that provides cooling to the server room.

Controls & Instrumentation - There are some pneumatic thermostats on the walls that are not in service. The pneumatic control valves on the radiators in the original building 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. This system is not working properly and ultimately is not functional. Remove all existing controls and replace with new DDC system.

Sprinklers - There are no sprinklers in the building. It is recommended to install a new sprinkler system.

Electrical

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

The service entrance to the facility consists of a disconnect switch and utility meter and old 400A.240/120V open bus, distribution panel located in the Boiler Room in the basement of the building.

Power distribution system is constructed with two different voltages. A 240/120-volt system is connected to lighting/receptacle panel boards located in the corridors. There are two flush mounted panel boards, located on each floor. There is one 75KVA phase converter transformer for converting 240VAC to 120/208VAC three phase providing power to the kitchen, AC units, and other 208-volts required loads. It appears that 240/120-volt system distribution including main distribution panel and all other panel boards with their respective branch circuit breakers have out-lived their useful lives and are thus ready for upgrade/replacement.

There are inadequate numbers of receptacles in classrooms, the computer room, and other rooms. There is a mix of grounding type and non-grounding type receptacles observed in the class rooms; additionally, receptacles are missing on majority of class room walls. A minimum two receptacles on each classroom and office wall is required. Adding a wire-mold system with receptacles at 3' on-center is required for the computer room.

Majority of the lighting fixtures (over 95%) are outfitted with outdated T12 fluorescent lamps. Lighting levels do not meet IES (Illuminating Engineering Society) recommended levels.

Fire Alarm System is old and outdated. Building is equipped with 120V manual fire alarm system made by Couch Company. The company has been out of business since 1985 and spare parts have not found since 2003. The existing system does not meet current fire alarm codes.

Telephone / LAN equipment/devices are located in the school information technology room. The computer room and some classrooms and offices have data outlets. The system is new and working properly.

Public address/ Music- Separate PA system does not exist. School uses the telephone system for public announcements. This system is working adequately.

Intercom and paging systems are present and completely functional. The paging system is one way communication from office to classrooms. Two way communications are obtained through wall mounted phones in the classrooms and other areas.

Clock and Program system- The present clocks are not functioning properly. A new clock system is needed. The present bell system is working adequately.

Television System is not provided in the school.

Security Systems-access control, video surveillance is provided with adequate video surveillance. Sufficient numbers of cameras are installed at exit doors, corridors, and other critical areas and controlled by a Closed Circuit Television system (CCTV). The system is working properly.

Emergency power systems (backup power generator) are not provided in this school.

UPS (uninterruptable power supply) is provided for the local area network system.

Emergency lighting system, including exit lighting is not in good condition. None of the exit lights are on emergency power. Emergency battery pack lighting fixtures are not sufficient – additional fixtures are required.

Lightning Protection System is adequate. It is accomplished by use 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.

Elevator is not provided in this school.

Site Lighting System is not adequate. There are no lighting fixtures installed on exterior walls. Exterior lighting should be provided.

Grounds

Paving and parking is constructed of 4'x4' (nominal) concrete panels; there is no asphalt and no vegetation on the site. There are approximately 10 car parking spaces in the front of the building; there are 3 portable trailer-classrooms parked in the rear - the condition of the pavement under these units could not be ascertained. The remaining concrete areas are painted as playgrounds and used by the children. Roughly 25% of the concrete panels are in need of replacement and although they are not all contiguous, it may be possible to replace only those that are failing. Parking and play area striping is worn and almost invisible. The number of required parking spaces for school staff is unknown. New handrails and guards are required at all stairs.

Wrought iron fencing surrounding the site is mostly rusted and in need of repainting. There are some damaged and bent fence panels in need of replacement. Four gates providing street and pedestrian access are either missing or inoperative and require replacement.

RECOMMENDATIONS

Architectural

- Strip and repaint concrete foundation (basement) walls in mechanical rooms and lunch rooms (6,000sf)
- Clean and repaint basement floor in mechanical rooms; clean and reseal concrete floors in hallways and stairways (150x10x3 +1000=5,500sf)
- Replace all exterior windows with insulated single hung units (200)3.5x8
- Replace all exterior doors with ADA and code compliant exit hardware; repaint doors and frames.(8)3x7
- Clean graffiti from foundations (1000sf)
- Repaint brick foundation
- Powerwash limestone facades
- Remove and replace existing flat roof and insulation; 2 levels (6,000sf)
- Remove and replace existing drainage gutter trough aound perimeter of building (700ft)
- Remove non-rated glass panels between classrooms and corridors; fill with fire rated gyp bd sys. (20 @ 6sf)
- Remove and replace all wood interior doors, frames and hardware in classrooms, closets, offices, etc. (40)
- Provide security hardware for classrooms and offices, locking from inside classroom. (30)
- Remove and replace all basement steel doors, frames, and hardware in mechanical rooms and stairways (18 3x7 doors)
- Remove folding wood partitions; replace with gypsum board and metal stud walls (5) @300sf ea =1500sf
- Provide toilet room accessories (12 sets)
- Provide toilet room partitions (12)
- Repair water damage, cracks, and repaint all interior plaster walls (12,000sf)
- Provide new 3-story stairway with code compliant platform and landing clearances.
- Remove and replace stairway handrails and guards with code compliant systems (4) 3 story;=50x12=600lf
- Regrout all joints between limestone block tread/risers at exterior stairs (30 treads)
- New handrails and guardrails on exterior stairs (30 treads)
- Strip, sand, repair and refinish all wood floors in classrooms and in Element 1 corridor (15000sf)
- Remove and replace all 12"x12" VCT floors in office rooms (500sf)
- Replace VAT floors in using proper asbestos abatement procedures if determined asbestos is present. (1000sf)
- Repaint plaster ceilings where damaged by water in stairs and 1st floor rooms(1,000sf)

- Replace suspended acoustical ceilings where damaged by water in classrooms (10,000sf)
- Provide new hydraulic elevator, 3 floor service.

Mechanical

- Replace all lavatories throughout building
- Replace all water closets throughout building
- Replace all urinals throughout building
- Replace all service sinks throughout the building
- Replace all drinking fountains throughout the building
- Inspect sanitary system throughout the building and repair/replace as necessary.
- Inspect domestic water distribution system throughout the building and repair/replace as necessary.
- The boilers appear to be at the end of their serviceable life and should be replaced within the next 5 years
- Install a new DDC system and provide training for maintenance personnel
- Install a new sprinkler system
- Remove existing steam distribution system. Install hot water distribution system.
- Install chiller and chilled water distribution system
- Install unit ventilators in all classrooms
- Install AHUs to condition the cafeteria.

Electrical

- Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 1200A, 208/120, 3PH, 4 wire switchboard.
- Replace the entire distribution system with new panels and new wiring/conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flush label on the electrical equipments. Estimated 15 panel boards.
- Install minimum two receptacles on each wall of all class rooms and provide sufficient numbers of receptacles in other areas per NEC. Add a two-compartment surface mounted raceway, for data & power, for the computer lab room. Estimated 300 receptacles.
- Replace all lighting fixtures with new fluorescent lighting fixtures with T-5 lamps throughout the building.
- Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas as per electrical codes.
- Replace existing master clock controller.
- Install a new emergency power system including 30KW diesel generator and respective transfer switch.
- Provide lighting fixtures on exterior walls. Estimated 15 each.
- Perform lightning protection studies to ascertain adequacy of existing systems.

Grounds

- Repave damaged sections of concrete parking / playground area (6,000sf)
- Provide new ADA accessible handicap ramp into building.
- Repaint wrought iron fencing (5400sf)
- Replace 7 wrought iron gates and sections of damaged fence

Attributes:

General Attributes:

Active:	Open	Bldg Lot Tm:	Lot 1 / Tm 2
Status:	Accepted by SDP	Team:	Tm 2
Site ID:	S740001		

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	59.24 %	38.19 %	$908,444.68
B30 - Roofing	65.25 %	30.93 %	$190,803.05
C10 - Interior Construction	53.91 %	35.26 %	$365,174.60
C20 - Stairs	35.00 %	266.80 %	$158,741.24
C30 - Interior Finishes	95.73 %	19.61 %	$426,103.05
D10 - Conveying	105.71 %	300.01 %	$450,688.02
D20 - Plumbing	96.11 %	111.76 %	$963,018.05
D30 - HVAC	107.77 %	123.60 %	$5,801,908.58
D40 - Fire Protection	0.00 %	180.86 %	$615,135.62
D50 - Electrical	110.11 %	85.99 %	$2,132,950.97
E10 - Equipment	14.29 %	0.00 %	$0.00
E20 - Furnishings	12.50 %	0.00 %	$0.00
G20 - Site Improvements	23.69 %	40.14 %	$317,613.28
G40 - Site Electrical Utilities	16.67 %	0.00 %	$0.00
Totals:	**69.87 %**	**55.32 %**	**$12,330,581.14**

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)
B740001;Olney ES	42,198	56.61	$2,214,590.21	$4,247,085.55	$1,567,157.09	$2,320,304.42	$1,663,830.59
G740001;Grounds	47,500	29.76	$74,878.12	$242,735.16	$0.00	$0.00	$0.00
Total:		**55.32**	**$2,289,468.33**	**$4,489,820.71**	**$1,567,157.09**	**$2,320,304.42**	**$1,663,830.59**

Deficiencies By Priority

1 - Response Time (< 2 yr) - $2,289,468.33
2 - Response Time (2-3 yrs) - $4,489,820.71
3 - Response Time (3-4 yrs) - $1,567,157.09
4 - Response Time (4-5 yrs) - $2,320,304.42
5 - Response Time (> 5 yrs) - $1,663,830.59

Budget Estimate Total: $12,330,581.14

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):	42,198
Year Built:	1900
Last Renovation:	
Replacement Value:	$21,221,789
Repair Cost:	$12,012,967.86
Total FCI:	56.61 %
Total RSLI:	72.28 %

Description:

Attributes:

General Attributes:

Active:	Open	Bldg ID:	B740001
Sewage Ejector:	No	Status:	Accepted by SDP
Site ID:	S740001		

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	59.24 %	38.19 %	$908,444.68
B30 - Roofing	65.25 %	30.93 %	$190,803.05
C10 - Interior Construction	53.91 %	35.26 %	$365,174.60
C20 - Stairs	35.00 %	266.80 %	$158,741.24
C30 - Interior Finishes	95.73 %	19.61 %	$426,103.05
D10 - Conveying	105.71 %	300.01 %	$450,688.02
D20 - Plumbing	96.11 %	111.76 %	$963,018.05
D30 - HVAC	107.77 %	123.60 %	$5,801,908.58
D40 - Fire Protection	0.00 %	180.86 %	$615,135.62
D50 - Electrical	110.11 %	85.99 %	$2,132,950.97
E10 - Equipment	14.29 %	0.00 %	$0.00
E20 - Furnishings	12.50 %	0.00 %	$0.00
Totals:	**72.28 %**	**56.61 %**	**$12,012,967.86**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
A1010	Standard Foundations	$18.40	S.F.	42,198	100	1900	2000	2050	35.00 %	0.00 %	35			$776,443
A1030	Slab on Grade	$7.73	S.F.	42,198	100	1900	2000	2050	35.00 %	0.00 %	35			$326,191
A2010	Basement Excavation	$6.55	S.F.	42,198	100	1900	2000	2050	35.00 %	0.00 %	35			$276,397
A2020	Basement Walls	$12.70	S.F.	42,198	100	1900	2000	2050	35.00 %	0.00 %	35			$535,915
B1010	Floor Construction	$75.10	S.F.	42,198	100	1900	2000	2050	35.00 %	0.00 %	35			$3,169,070
B1020	Roof Construction	$13.88	S.F.	42,198	100	1900	2000	2050	35.00 %	0.00 %	35			$585,708
B2010	Exterior Walls	$36.91	S.F.	42,198	100	1900	2000	2050	35.00 %	2.96 %	35		$46,158.41	$1,557,528
B2020	Exterior Windows	$18.01	S.F.	42,198	40	1985	2025	2057	105.00 %	109.78 %	42		$834,337.15	$759,986
B2030	Exterior Doors	$1.45	S.F.	42,198	25	1985	2010	2042	108.00 %	45.68 %	27		$27,949.12	$61,187
B3010105	Built-Up	$37.76	S.F.	5,280	20	1985	2005	2037	110.00 %	83.79 %	22		$167,050.08	$199,373
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.	10,717	25	1985	2010	2026	44.00 %	5.72 %	11		$23,752.97	$415,069
B3020	Roof Openings	$0.06	S.F.	42,198	20	1900	1920	2020	25.00 %	0.00 %	5			$2,532
C1010	Partitions	$17.91	S.F.	42,198	100	1900	2000	2050	35.00 %	5.13 %	35		$38,769.12	$755,766
C1020	Interior Doors	$3.51	S.F.	42,198	40	1900	1940	2057	105.00 %	192.05 %	42		$284,460.43	$148,115
C1030	Fittings	$3.12	S.F.	42,198	40	1900	1940	2057	105.00 %	31.86 %	42		$41,945.05	$131,658
C2010	Stair Construction	$1.41	S.F.	42,198	100	1900	2000	2050	35.00 %	266.80 %	35		$158,741.24	$59,499

Site Assessment Report - B740001;Olney ES

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	$13.44	S.F.	42,198	10	1900	1910	2027	120.00 %	26.06 %	12		$147,816.92	$567,141
C3010231	Vinyl Wall Covering	$0.00	S.F.		15				0.00 %	0.00 %				$0
C3010232	Wall Tile	$3.37	S.F.	42,198	30	1900	1930	2030	50.00 %	0.00 %	15			$142,207
C3020411	Carpet	$7.30	S.F.	1,500	10	2012	2022		70.00 %	0.00 %	7			$10,950
C3020412	Terrazzo & Tile	$75.52	S.F.	0	50				0.00 %	0.00 %				$0
C3020413	Vinyl Flooring	$9.68	S.F.	1,500	20	1980	2000	2037	110.00 %	130.50 %	22		$18,948.46	$14,520
C3020414	Wood Flooring	$22.27	S.F.	24,198	25	1900	1925	2042	108.00 %	29.97 %	27		$161,504.10	$538,889
C3020415	Concrete Floor Finishes	$0.97	S.F.	15,000	50	1900	1950	2067	104.00 %	317.07 %	52		$46,134.40	$14,550
C3030	Ceiling Finishes	$20.97	S.F.	42,198	25	1900	1925	2035	80.00 %	5.84 %	20		$51,699.17	$884,892
D1010	Elevators and Lifts	$3.56	S.F.	42,198	35			2052	105.71 %	300.01 %	37		$450,688.02	$150,225
D2010	Plumbing Fixtures	$13.52	S.F.	42,198	35	1900	1935	2052	105.71 %	93.63 %	37		$534,174.67	$570,517
D2020	Domestic Water Distribution	$1.68	S.F.	42,198	25	1900	1925	2042	108.00 %	307.36 %	27		$217,896.12	$70,893
D2030	Sanitary Waste	$2.90	S.F.	42,198	25	1900	1925	2042	108.00 %	172.38 %	27		$210,947.26	$122,374
D2040	Rain Water Drainage	$2.32	S.F.	42,198	30	1900	1930	2020	16.67 %	0.00 %	5			$97,899
D3020	Heat Generating Systems	$18.67	S.F.	42,198	35	1900	1935	2052	105.71 %	199.94 %	37		$1,575,182.49	$787,837
D3030	Cooling Generating Systems	$24.48	S.F.	42,198	30	1900	1930	2047	106.67 %	66.85 %	32		$690,540.19	$1,033,007
D3040	Distribution Systems	$42.99	S.F.	42,198	25	1900	1925	2042	108.00 %	144.08 %	27		$2,613,748.47	$1,814,092
D3050	Terminal & Package Units	$11.60	S.F.	42,198	20	1900	1920	2037	110.00 %	0.00 %	22			$489,497
D3060	Controls & Instrumentation	$13.50	S.F.	42,198	20	1900	1920	2037	110.00 %	161.92 %	22		$922,437.43	$569,673
D4010	Sprinklers	$7.05	S.F.	42,198	35				0.00 %	206.77 %			$615,135.62	$297,496
D4020	Standpipes	$1.01	S.F.	42,198	35				0.00 %	0.00 %				$42,620
D5010	Electrical Service/Distribution	$9.70	S.F.	42,198	30	1900	1930	2047	106.67 %	155.70 %	32		$637,326.33	$409,321
D5020	Lighting and Branch Wiring	$34.68	S.F.	42,198	20	1900	1920	2037	110.00 %	54.52 %	22		$797,872.60	$1,463,427
D5030	Communications and Security	$12.99	S.F.	42,198	15	1900	1915	2032	113.33 %	77.99 %	17		$427,488.28	$548,152
D5090	Other Electrical Systems	$1.41	S.F.	42,198	30	1900	1930	2047	106.67 %	454.23 %	32		$270,263.76	$59,499
E1020	Institutional Equipment	$4.82	S.F.	42,198	35	1900	1935	2020	14.29 %	0.00 %	5			$203,394
E1090	Other Equipment	$11.10	S.F.	42,198	35	1900	1935	2020	14.29 %	0.00 %	5			$468,398
E2010	Fixed Furnishings	$2.13	S.F.	42,198	40	1900	1940	2020	12.50 %	0.00 %	5			$89,882
								Total	**72.28 %**	**56.61 %**			**$12,012,967.86**	**$21,221,789**

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:	B3010 - Roof Coverings	This system contains no images
Note:	asphalt shingles and metal trough gutters 67% of roof area built-up asphalt paper roof 33%	
System:	C3010 - Wall Finishes	This system contains no images
Note:	glazed brick 15% painted concrete or plaster 85%	
System:	C3020 - Floor Finishes	This system contains no images
Note:	sealed concrete 36% stained oak floor with clear finish 57% VAT and VCT 4% (inspect VAT for asbestos containment) carpet 3%	
System:	C3030 - Ceiling Finishes	This system contains no images
Note:	acoustical tile ceiling 75% painted plaster or concrete 25%	
System:	D5090 - Other Electrical Systems	This system contains no images
Note:	1-75KVA phase changer transformer	

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:	**$12,012,968**	**$0**	**$0**	**$0**	**$0**	**$1,099,358**	**$0**	**$14,814**	**$0**	**$0**	**$0**	**$13,127,140**
*** 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	$46,158	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$46,158**
B2020 - Exterior Windows	$834,337	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$834,337**
B2030 - Exterior Doors	$27,949	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$27,949**
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	$167,050	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$167,050**
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	$23,753	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$23,753**
B3020 - Roof Openings	$0	$0	$0	$0	$0	$3,229	$0	$0	$0	$0	$0	**$3,229**
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	$38,769	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$38,769**

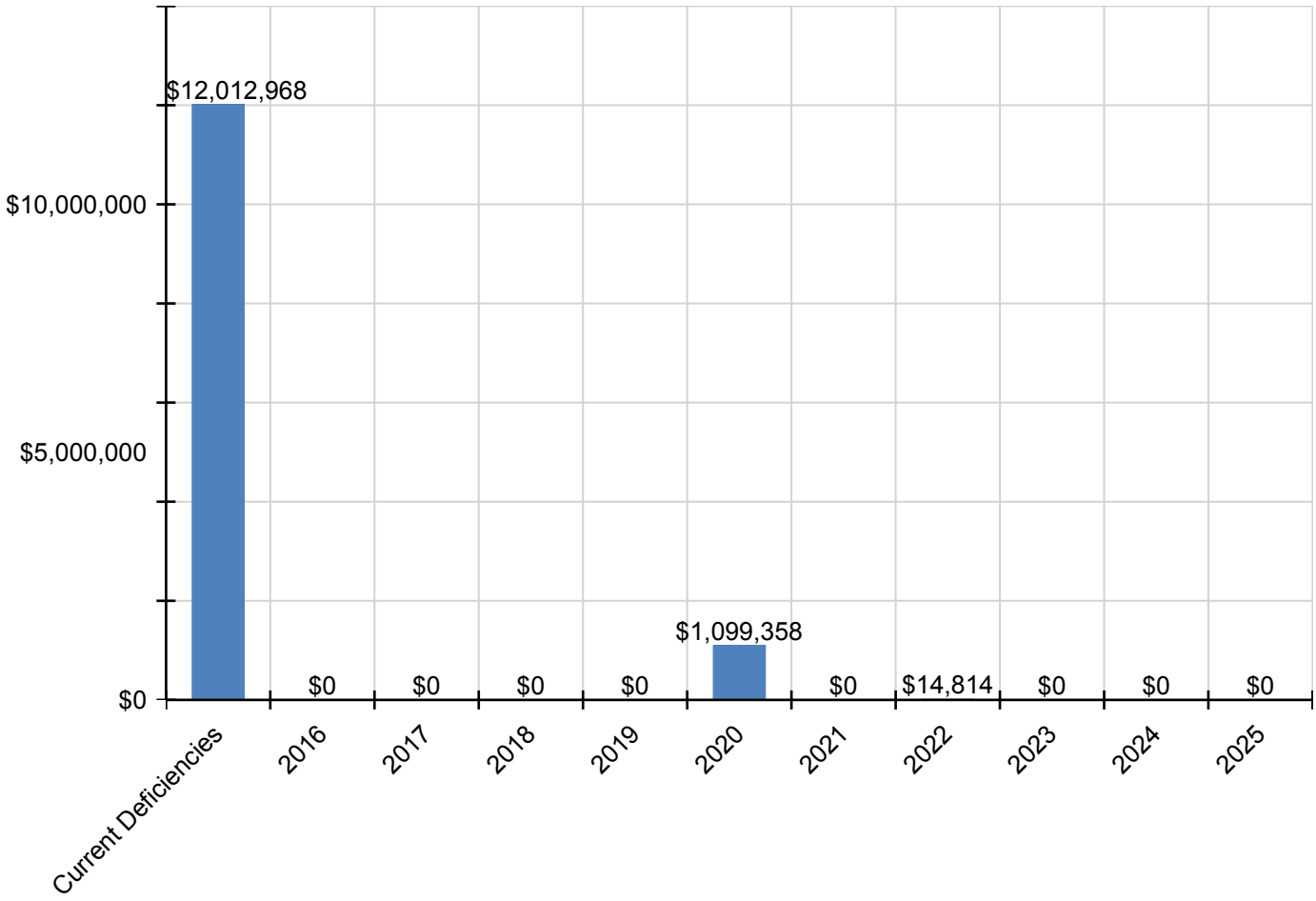
C1020 - Interior Doors	$284,460	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$284,460**
C1030 - Fittings	$41,945	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$41,945**
C20 - Stairs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C2010 - Stair Construction	$158,741	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$158,741**
C30 - Interior Finishes	$0	$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	$147,817	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$147,817**
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	$14,814	$0	$0	$0	**$14,814**
C3020412 - Terrazzo & Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
C3020413 - Vinyl Flooring	$18,948	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$18,948**
C3020414 - Wood Flooring	$161,504	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$161,504**
C3020415 - Concrete Floor Finishes	$46,134	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$46,134**
C3030 - Ceiling Finishes	$51,699	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$51,699**
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	$450,688	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$450,688**
D20 - Plumbing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D2010 - Plumbing Fixtures	$534,175	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$534,175**
D2020 - Domestic Water Distribution	$217,896	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$217,896**
D2030 - Sanitary Waste	$210,947	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$210,947**
D2040 - Rain Water Drainage	$0	$0	$0	$0	$0	$124,841	$0	$0	$0	$0	$0	**$124,841**
D30 - HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3020 - Heat Generating Systems	$1,575,182	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,575,182**
D3030 - Cooling Generating Systems	$690,540	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$690,540**
D3040 - Distribution Systems	$2,613,748	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,613,748**
D3050 - Terminal & Package Units	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D3060 - Controls & Instrumentation	$922,437	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$922,437**
D40 - Fire Protection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
D4010 - Sprinklers	$615,136	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$615,136**
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	$637,326	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$637,326**
D5020 - Lighting and Branch Wiring	$797,873	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$797,873**
D5030 - Communications and Security	$427,488	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$427,488**
D5090 - Other Electrical Systems	$270,264	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$270,264**
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	$259,369	$0	$0	$0	$0	$0	**$259,369**
E1090 - Other Equipment	$0	$0	$0	$0	$0	$597,302	$0	$0	$0	$0	$0	**$597,302**
E20 - Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
E2010 - Fixed Furnishings	$0	$0	$0	$0	$0	$114,617	$0	$0	$0	$0	$0	**$114,617**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

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

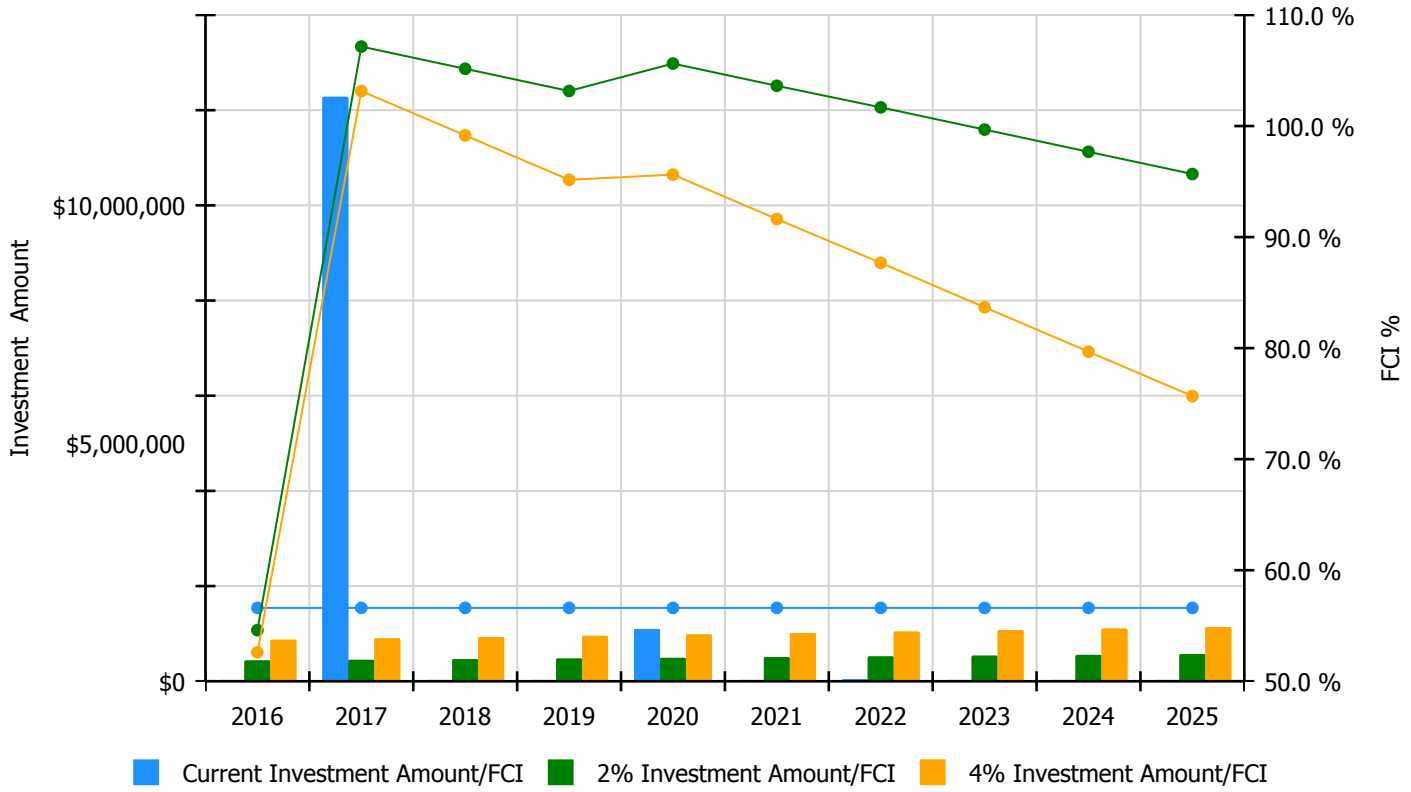


10 Year FCI Forecast by Investment Scenario

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

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

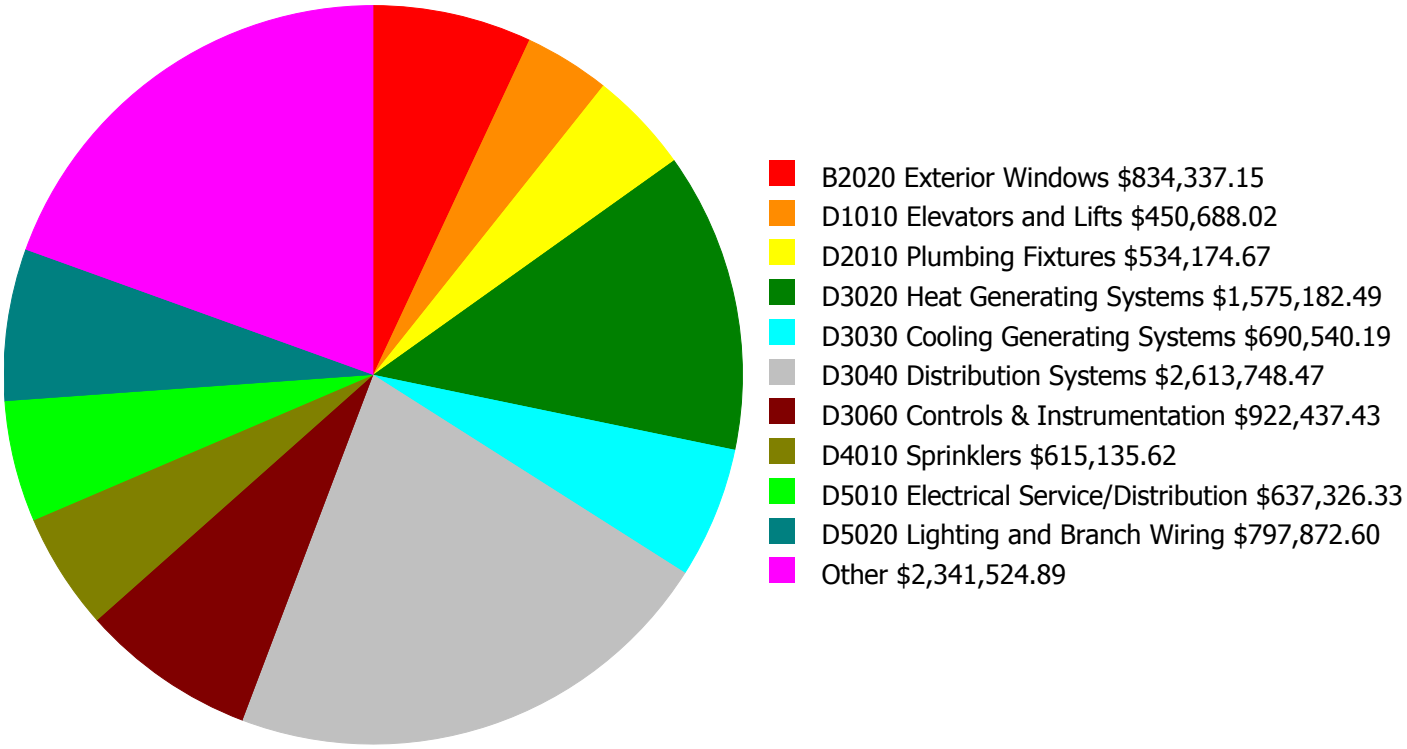
Facility Investment vs. FCI Forecast



Year	Investment Amount Current FCI - 56.61%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$437,169.00	54.61 %	$874,338.00	52.61 %
2017	$12,281,322	$450,284.00	107.16 %	$900,568.00	103.16 %
2018	$0	$463,792.00	105.16 %	$927,585.00	99.16 %
2019	$0	$477,706.00	103.16 %	$955,412.00	95.16 %
2020	$1,099,358	$492,037.00	105.62 %	$984,075.00	95.62 %
2021	$0	$506,799.00	103.62 %	$1,013,597.00	91.62 %
2022	$14,814	$522,002.00	101.68 %	$1,044,005.00	87.68 %
2023	$0	$537,663.00	99.68 %	$1,075,325.00	83.68 %
2024	$0	$553,792.00	97.68 %	$1,107,585.00	79.68 %
2025	$0	$570,406.00	95.68 %	$1,140,812.00	75.68 %
Total:	**$13,395,494**	**$5,011,650.00**		**$10,023,302.00**	

Deficiency Summary by System

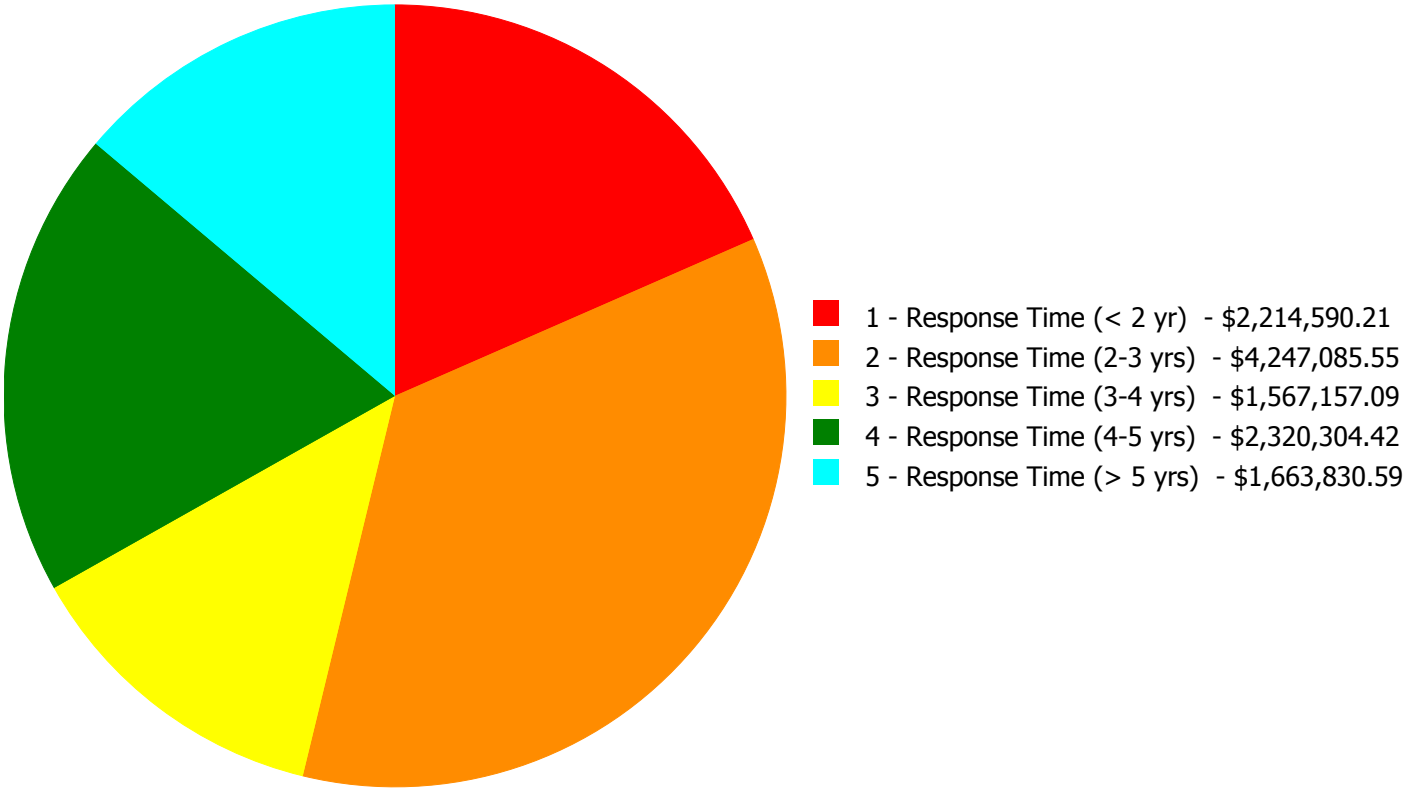
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $12,012,967.86

Deficiency Summary by Priority

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



Budget Estimate Total: $12,012,967.86

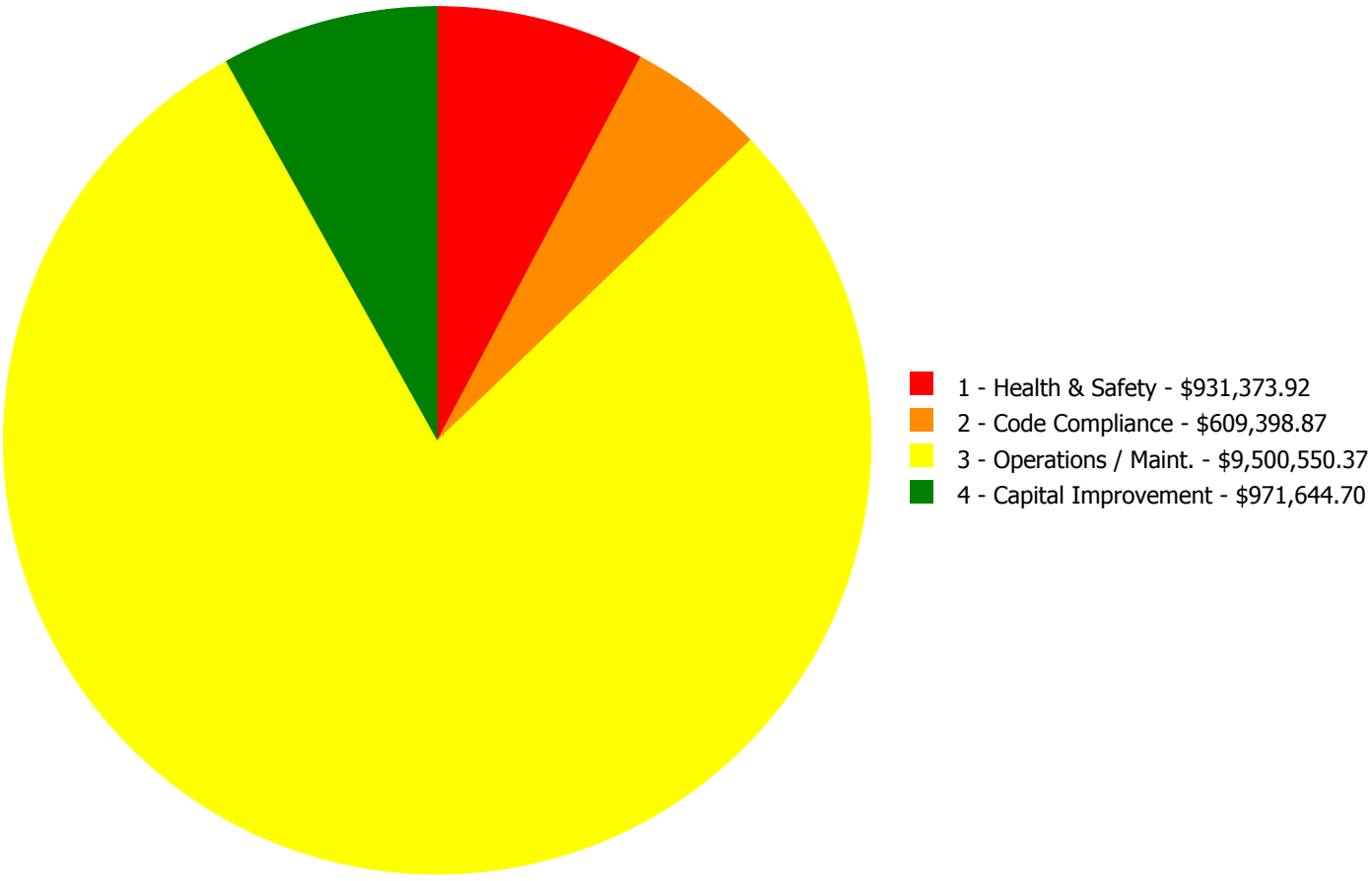
Deficiency By Priority Investment Table

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

System Code	System Description	1 - Response Time (< 2 yr)	2 - Response Time (2-3 yrs)	3 - Response Time (3-4 yrs)	4 - Response Time (4-5 yrs)	5 - Response Time (> 5 yrs)	Total
B2010	Exterior Walls	$6,739.02	$39,419.39	$0.00	$0.00	$0.00	$46,158.41
B2020	Exterior Windows	$0.00	$834,337.15	$0.00	$0.00	$0.00	$834,337.15
B2030	Exterior Doors	$0.00	$27,949.12	$0.00	$0.00	$0.00	$27,949.12
B3010105	Built-Up	$167,050.08	$0.00	$0.00	$0.00	$0.00	$167,050.08
B3010140	Shingle & Tile	$0.00	$23,752.97	$0.00	$0.00	$0.00	$23,752.97
C1010	Partitions	$0.00	$38,769.12	$0.00	$0.00	$0.00	$38,769.12
C1020	Interior Doors	$0.00	$284,460.43	$0.00	$0.00	$0.00	$284,460.43
C1030	Fittings	$0.00	$41,945.05	$0.00	$0.00	$0.00	$41,945.05
C2010	Stair Construction	$153,360.98	$5,380.26	$0.00	$0.00	$0.00	$158,741.24
C3010230	Paint & Covering	$0.00	$147,816.92	$0.00	$0.00	$0.00	$147,816.92
C3020413	Vinyl Flooring	$0.00	$18,948.46	$0.00	$0.00	$0.00	$18,948.46
C3020414	Wood Flooring	$0.00	$161,504.10	$0.00	$0.00	$0.00	$161,504.10
C3020415	Concrete Floor Finishes	$0.00	$46,134.40	$0.00	$0.00	$0.00	$46,134.40
C3030	Ceiling Finishes	$0.00	$51,699.17	$0.00	$0.00	$0.00	$51,699.17
D1010	Elevators and Lifts	$0.00	$450,688.02	$0.00	$0.00	$0.00	$450,688.02
D2010	Plumbing Fixtures	$0.00	$0.00	$0.00	$534,174.67	$0.00	$534,174.67
D2020	Domestic Water Distribution	$0.00	$0.00	$0.00	$0.00	$217,896.12	$217,896.12
D2030	Sanitary Waste	$0.00	$0.00	$0.00	$210,947.26	$0.00	$210,947.26
D3020	Heat Generating Systems	$0.00	$0.00	$0.00	$1,575,182.49	$0.00	$1,575,182.49
D3030	Cooling Generating Systems	$0.00	$0.00	$0.00	$0.00	$690,540.19	$690,540.19
D3040	Distribution Systems	$0.00	$2,074,280.99	$399,208.82	$0.00	$140,258.66	$2,613,748.47
D3060	Controls & Instrumentation	$0.00	$0.00	$922,437.43	$0.00	$0.00	$922,437.43
D4010	Sprinklers	$0.00	$0.00	$0.00	$0.00	$615,135.62	$615,135.62
D5010	Electrical Service/Distribution	$637,326.33	$0.00	$0.00	$0.00	$0.00	$637,326.33
D5020	Lighting and Branch Wiring	$797,872.60	$0.00	$0.00	$0.00	$0.00	$797,872.60
D5030	Communications and Security	$427,488.28	$0.00	$0.00	$0.00	$0.00	$427,488.28
D5090	Other Electrical Systems	$24,752.92	$0.00	$245,510.84	$0.00	$0.00	$270,263.76
	Total:	$2,214,590.21	$4,247,085.55	$1,567,157.09	$2,320,304.42	$1,663,830.59	$12,012,967.86

Deficiency Summary by Category

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



Budget Estimate Total: $12,012,967.86

Deficiency Details by Priority

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

Priority 1 - Response Time (< 2 yr):

System: B2010 - Exterior Walls

Location: exterior - rear play area
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove graffiti - power wash and paint
Qty: 1,000.00
Unit of Measure: S.F.
Estimate: $6,739.02
Assessor Name: System
Date Created: 08/12/2015

Notes: Clean graffiti from foundations

System: B3010105 - Built-Up

Location: roof
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 1 - Response Time (< 2 yr)
Correction: Remove and Replace Built Up Roof
Qty: 6,000.00
Unit of Measure: S.F.
Estimate: $167,050.08
Assessor Name: System
Date Created: 08/12/2015

Notes: Remove and replace existing flat roof and insulation; 2 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: 08/12/2015

Notes: Remove and replace stairway handrails and guards with code compliant systems (3) 3 story; wall mounted handrails, center mounted railings and balustrade

System: C2010 - Stair Construction

Location: stairway

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Repair exterior stairs

Qty: 21.00

Unit of Measure: Riser

Estimate: $8,618.45

Assessor Name: System

Date Created: 08/12/2015

Notes: Provide new 3-story stairway with code compliant platform and landing clearances.

System: C2010 - Stair Construction

Location: exterior stairs

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: 30.00

Unit of Measure: L.F.

Estimate: $4,315.30

Assessor Name: System

Date Created: 08/12/2015

Notes: New handrails and guardrails on exterior stairs

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: $350,437.44

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace the entire distribution system with new panels and new wiring/conduits. Our recommendation is to replace existing conduits and wiring to new Junction boxes, receptacles, and lighting. Provide arc flush label on the electrical equipment. Estimated 15 panel boards.

System: D5010 - Electrical Service/Distribution

Location: Boiler Room in the basement

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Switchboard

Qty: 1.00

Unit of Measure: Ea.

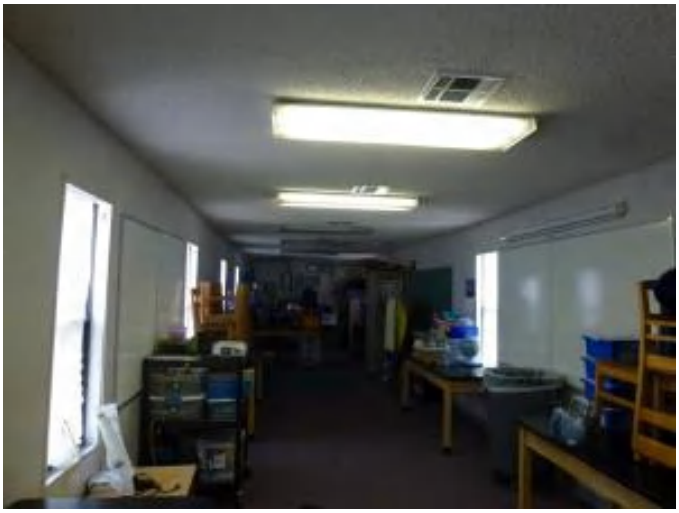
Estimate: $286,888.89

Assessor Name: System

Date Created: 08/06/2015

Notes: Upgrade the existing electrical service with a new service. Replace the existing switchboard with new 1600A, 208/120, 3PH, 4 wire switchboard.

System: D5020 - Lighting and Branch Wiring



Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace Lighting Fixtures (SF)

Qty: 1.00

Unit of Measure: S.F.

Estimate: $490,616.34

Assessor Name: System

Date Created: 08/06/2015

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

System: D5020 - Lighting and Branch Wiring

Location: entire building

Distress: Inadequate

Category: 4 - Capital Improvement

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: $281,104.51

Assessor Name: System

Date Created: 08/06/2015

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. Estimated 300 receptacles.

System: D5020 - Lighting and Branch Wiring

Location: Exterior Building

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

Priority: 1 - Response Time (< 2 yr)

Correction: Add Exterior Lighting

Qty: 1.00

Unit of Measure: Ea.

Estimate: $26,151.75

Assessor Name: System

Date Created: 08/06/2015

Notes: Provide lighting fixtures on exterior walls. Estimated 15each

System: D5030 - Communications and Security

Location: Entire Building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 1 - Response Time (< 2 yr)

Correction: Replace fire alarm system

Qty: 1.00

Unit of Measure: S.F.

Estimate: $262,613.51

Assessor Name: System

Date Created: 08/06/2015

Notes: Replace existing fire alarm system with an automatic fire alarm system including smoke detectors in corridors and other recommended areas per NEC. Install horn/strobes in class rooms, corridors, offices, toilets, library and other recommended areas per codes.

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: 08/06/2015

Notes: Replace existing master clock controller.

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: $24,752.92

Assessor Name: System

Date Created: 08/06/2015

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

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

System: B2010 - Exterior Walls

Location: exterior walls
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Sooty and dirty walls - powerwash
Qty: 20,000.00
Unit of Measure: S.F.
Estimate: $21,874.70
Assessor Name: System
Date Created: 08/12/2015

Notes: Powerwash limestone facades

System: B2010 - Exterior Walls

Location: exterior - rear play area
Distress: Appearance
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Repaint exterior walls - CMU
Qty: 2,000.00
Unit of Measure: S.F.
Estimate: $17,544.69
Assessor Name: System
Date Created: 08/12/2015

Notes: Repaint brick foundation

System: B2020 - Exterior Windows

Location: windows

Distress: Failing

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: 200.00

Unit of Measure: Ea.

Estimate: $834,337.15

Assessor Name: System

Date Created: 08/12/2015

Notes: Replace all exterior windows with insulated single hung units

System: B2030 - Exterior Doors

Location: exterior doors

Distress: Appearance

Category: 3 - Operations / Maint.

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

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

Qty: 8.00

Unit of Measure: Ea.

Estimate: $27,949.12

Assessor Name: System

Date Created: 08/12/2015

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

System: B3010140 - Shingle & Tile

Location: roof

Distress: Failing

Category: 3 - Operations / Maint.

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

Correction: Rain gutter replacment - select the type of material and number of mitres

Qty: 700.00

Unit of Measure: L.F.

Estimate: $23,752.97

Assessor Name: System

Date Created: 08/12/2015

Notes: Remove and replace existing drainage gutter trough aound perimeter of building

System: C1010 - Partitions

Location: classrooms

Distress: Damaged

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: 1,500.00

Unit of Measure: S.F.

Estimate: $33,419.25

Assessor Name: System

Date Created: 08/12/2015

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

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: 200.00

Unit of Measure: S.F.

Estimate: $5,349.87

Assessor Name: System

Date Created: 08/12/2015

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: Damaged

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: 40.00

Unit of Measure: Ea.

Estimate: $186,173.56

Assessor Name: System

Date Created: 08/12/2015

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

System: C1020 - Interior Doors

Location: basement and mechanical room

Distress: Damaged

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: 08/12/2015

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

System: C1020 - Interior Doors

Location: classrooms, offices

Distress: Security Issue

Category: 1 - Health & Safety

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

Correction: Provide security hardware for classroom and office doors

Qty: 30.00

Unit of Measure: Ea.

Estimate: $6,883.10

Assessor Name: System

Date Created: 08/12/2015

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: 12.00

Unit of Measure: Ea.

Estimate: $30,210.79

Assessor Name: System

Date Created: 08/12/2015

Notes: Provide toilet room accessories

System: C1030 - Fittings

Location: toilet rooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace damaged toilet paritions - handicap units

Qty: 12.00

Unit of Measure: Ea.

Estimate: $11,734.26

Assessor Name: System

Date Created: 08/12/2015

Notes: Provide toilet room partitions

System: C2010 - Stair Construction

Location: exterior stairs

Distress: Damaged

Category: 3 - Operations / Maint.

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

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

Qty: 360.00

Unit of Measure: L.F.

Estimate: $5,380.26

Assessor Name: System

Date Created: 08/12/2015

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: 12,000.00

Unit of Measure: S.F.

Estimate: $102,804.91

Assessor Name: System

Date Created: 08/12/2015

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

System: C3010230 - Paint & Covering

Location: mechanical room, lunch room

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: 6,000.00

Unit of Measure: S.F.

Estimate: $45,012.01

Assessor Name: System

Date Created: 08/12/2015

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

System: C3020413 - Vinyl Flooring

Location: cafeteria, basement

Distress: Health Hazard / Risk

Category: 1 - Health & Safety

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

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

Qty: 1,000.00

Unit of Measure: S.F.

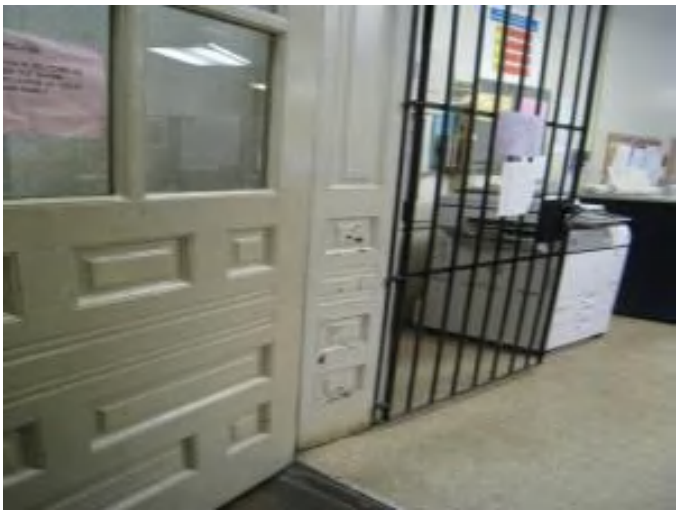
Estimate: $12,939.69

Assessor Name: System

Date Created: 08/12/2015

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

System: C3020413 - Vinyl Flooring



Location: school offices
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Remove and replace VCT
Qty: 500.00
Unit of Measure: S.F.
Estimate: $6,008.77
Assessor Name: System
Date Created: 08/12/2015

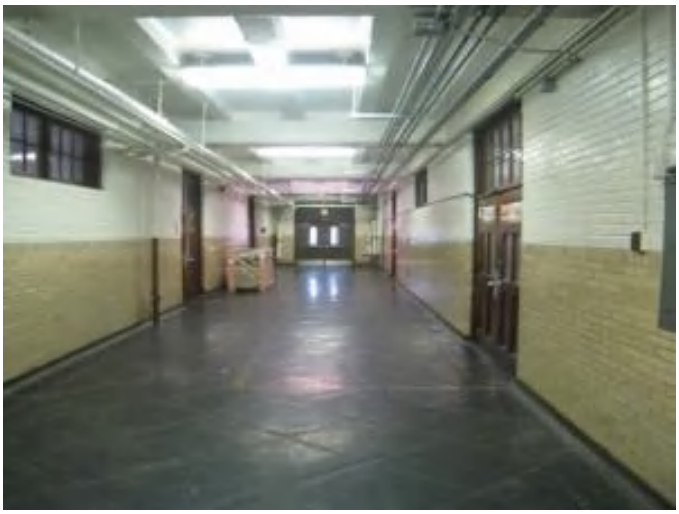
Notes: Remove and replace all 12”x12” VCT floors in school offices

System: C3020414 - Wood Flooring

Location: corridors and classrooms
Distress: Damaged
Category: 3 - Operations / Maint.
Priority: 2 - Response Time (2-3 yrs)
Correction: Refinish wood floors
Qty: 15,000.00
Unit of Measure: S.F.
Estimate: $161,504.10
Assessor Name: System
Date Created: 08/12/2015

Notes: Refinish wood floors in corridors and classrooms

System: C3020415 - Concrete Floor Finishes



Location: basement, corridors, toilet rooms, stairways

Distress: Appearance

Category: 3 - Operations / Maint.

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

Correction: Clean and reseal concrete floors

Qty: 12,000.00

Unit of Measure: S.F.

Estimate: $46,134.40

Assessor Name: System

Date Created: 08/12/2015

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

System: C3030 - Ceiling Finishes

Location: classrooms

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Remove and replace ceiling tiles only in suspended ceiling - pick the proper material

Qty: 5,000.00

Unit of Measure: S.F.

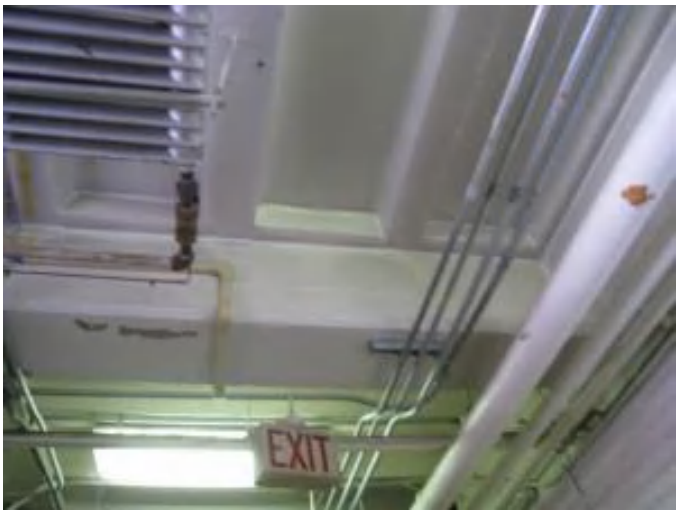
Estimate: $38,575.08

Assessor Name: System

Date Created: 08/12/2015

Notes: Replace suspended acoustical ceilings where damaged by water in classrooms

System: C3030 - Ceiling Finishes



Location: stair and 1st floor ceilings

Distress: Damaged

Category: 3 - Operations / Maint.

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

Correction: Repair and resurface plaster ceilings - 2 coats plaster

Qty: 1,000.00

Unit of Measure: S.F.

Estimate: $13,124.09

Assessor Name: System

Date Created: 08/12/2015

Notes: Repaint plaster ceilings where damaged by water in stairs and 1st floor rooms

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 hydraulic elevator - 3 floors - adjust the electrical run lengths to hook up the elevator

Qty: 1.00

Unit of Measure: Ea.

Estimate: $450,688.02

Assessor Name: System

Date Created: 08/12/2015

Notes: Provide new hydraulic elevator, 3 floor service.

System: D3040 - Distribution Systems

Location: classrooms

Distress: Obsolete

Category: 3 - Operations / Maint.

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

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

Qty: 43,000.00

Unit of Measure: S.F.

Estimate: $2,074,280.99

Assessor Name: System

Date Created: 08/27/2015

Notes: Install unit ventilators in all classrooms

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

System: D3040 - Distribution Systems

Location: Throughout the building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 42,198.00

Unit of Measure: S.F.

Estimate: $399,208.82

Assessor Name: System

Date Created: 08/27/2015

Notes: Remove existing steam distribution system. Install hot water distribution system

System: D3060 - Controls & Instrumentation

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace pneumatic controls with DDC (75KSF)

Qty: 43,000.00

Unit of Measure: S.F.

Estimate: $922,437.43

Assessor Name: System

Date Created: 08/27/2015

Notes: Install a new DDC system and provide training for maintenance personnel

System: D5090 - Other Electrical Systems

This deficiency has no image.

Location: Boiler Room in the basement

Distress: Life Safety / NFPA / PFD

Category: 1 - Health & Safety

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

Correction: Add Standby Generator System

Qty: 1.00

Unit of Measure: Ea.

Estimate: $245,510.84

Assessor Name: System

Date Created: 08/06/2015

Notes: Install a new emergency power system including 100KW diesel generator and respective transfer switch.

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

System: D2010 - Plumbing Fixtures

Location: toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 31.00

Unit of Measure: Ea.

Estimate: $231,326.58

Assessor Name: System

Date Created: 08/27/2015

Notes: Replace all water closets throughout building

System: D2010 - Plumbing Fixtures

Location: corridors

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 10.00

Unit of Measure: Ea.

Estimate: $156,928.96

Assessor Name: System

Date Created: 08/27/2015

Notes: Replace all drinking fountains throughout the building

System: D2010 - Plumbing Fixtures

Location: toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 14.00

Unit of Measure: Ea.

Estimate: $66,668.80

Assessor Name: System

Date Created: 08/27/2015

Notes: Replace all lavatories throughout building

System: D2010 - Plumbing Fixtures

Location: toilet rooms

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Remove and replace or replace wall hung urinals

Qty: 14.00

Unit of Measure: Ea.

Estimate: $46,467.17

Assessor Name: System

Date Created: 08/27/2015

Notes: Replace all urinals throughout building

System: D2010 - Plumbing Fixtures

Location: janitor closets

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace lavatory - with finishes

Qty: 4.00

Unit of Measure: Ea.

Estimate: $32,783.16

Assessor Name: System

Date Created: 08/27/2015

Notes: Replace all service sinks throughout the building

System: D2030 - Sanitary Waste

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 43,000.00

Unit of Measure: S.F.

Estimate: $210,947.26

Assessor Name: System

Date Created: 08/27/2015

Notes: Inspect sanitary system throughout the building and repair/replace as necessary

System: D3020 - Heat Generating Systems

Location: boiler room

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

Correction: Replace boiler, cast iron sectional (150 HP)

Qty: 3.00

Unit of Measure: Ea.

Estimate: $1,575,182.49

Assessor Name: System

Date Created: 08/27/2015

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

Priority 5 - Response Time (> 5 yrs):

System: D2020 - Domestic Water Distribution

Location: entire building

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

Priority: 5 - Response Time (> 5 yrs)

Correction: Replace domestic water piping (75 KSF)

Qty: 43,000.00

Unit of Measure: S.F.

Estimate: $217,896.12

Assessor Name: System

Date Created: 08/27/2015

Notes: Inspect domestic water distribution system throughout the building and repair/replace as necessary

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. (+75KSF)

Qty: 43,000.00

Unit of Measure: S.F.

Estimate: $690,540.19

Assessor Name: System

Date Created: 08/27/2015

Notes: Install chiller and chilled water distribution system

System: D3040 - Distribution Systems

Location: cafeteria
Distress: Beyond Service Life
Category: 3 - Operations / Maint.
Priority: 5 - Response Time (> 5 yrs)
Correction: Install HVAC unit for Cafeteria (850 students).
Qty: 300.00
Unit of Measure: Pr.
Estimate: $140,258.66
Assessor Name: System
Date Created: 08/27/2015

Notes: Install AHUs to condition the 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: 43,000.00
Unit of Measure: S.F.
Estimate: $615,135.62
Assessor Name: System
Date Created: 08/27/2015

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
D5010 Electrical Service/Distribution	Switchboards, distribution section, aluminum bus bars, subfeed lug-rated, 400 amp, excl breakers	1.00	Ea.	Boiler Room					30	1900	2017	$3,167.10	$3,483.81
												Total:	**$3,483.81**

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):	47,500
Year Built:	1900
Last Renovation:	
Replacement Value:	$1,067,325
Repair Cost:	$317,613.28
Total FCI:	29.76 %
Total RSLI:	21.88 %

Description:

Attributes:

General Attributes:

Bldg ID:	S740001	Site ID:	S740001

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	23.69 %	40.14 %	$317,613.28
G40 - Site Electrical Utilities	16.67 %	0.00 %	$0.00
Totals:	**21.88 %**	**29.76 %**	**$317,613.28**

Condition Detail

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

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

System Listing

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

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

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

System Code	System Description	Unit Price $	UoM	Qty	Life	Year Installed	Calc Next Renewal Year	Next Renewal Year	RSLI%	FCI%	RSL	eCR	Deficiency $	Replacement Value $
G2010	Roadways	$11.52	S.F.		30				0.00 %	0.00 %				$0
G2020	Parking Lots	$8.50	S.F.		30				0.00 %	0.00 %				$0
G2030	Pedestrian Paving	$12.30	S.F.	47,500	40	1980	2020	2025	25.00 %	27.59 %	10		$161,175.22	$584,250
G2040	Site Development	$4.36	S.F.	47,500	25	1980	2005	2020	20.00 %	75.54 %	5		$156,438.06	$207,100
G2050	Landscaping & Irrigation	$4.36	S.F.		15				0.00 %	0.00 %				$0
G4020	Site Lighting	$4.84	S.F.	47,500	30	1980	2010	2020	16.67 %	0.00 %	5			$229,900
G4030	Site Communications & Security	$0.97	S.F.	47,500	30	1980	2010	2020	16.67 %	0.00 %	5			$46,075
								Total	**21.88 %**	**29.76 %**			**$317,613.28**	**$1,067,325**

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.

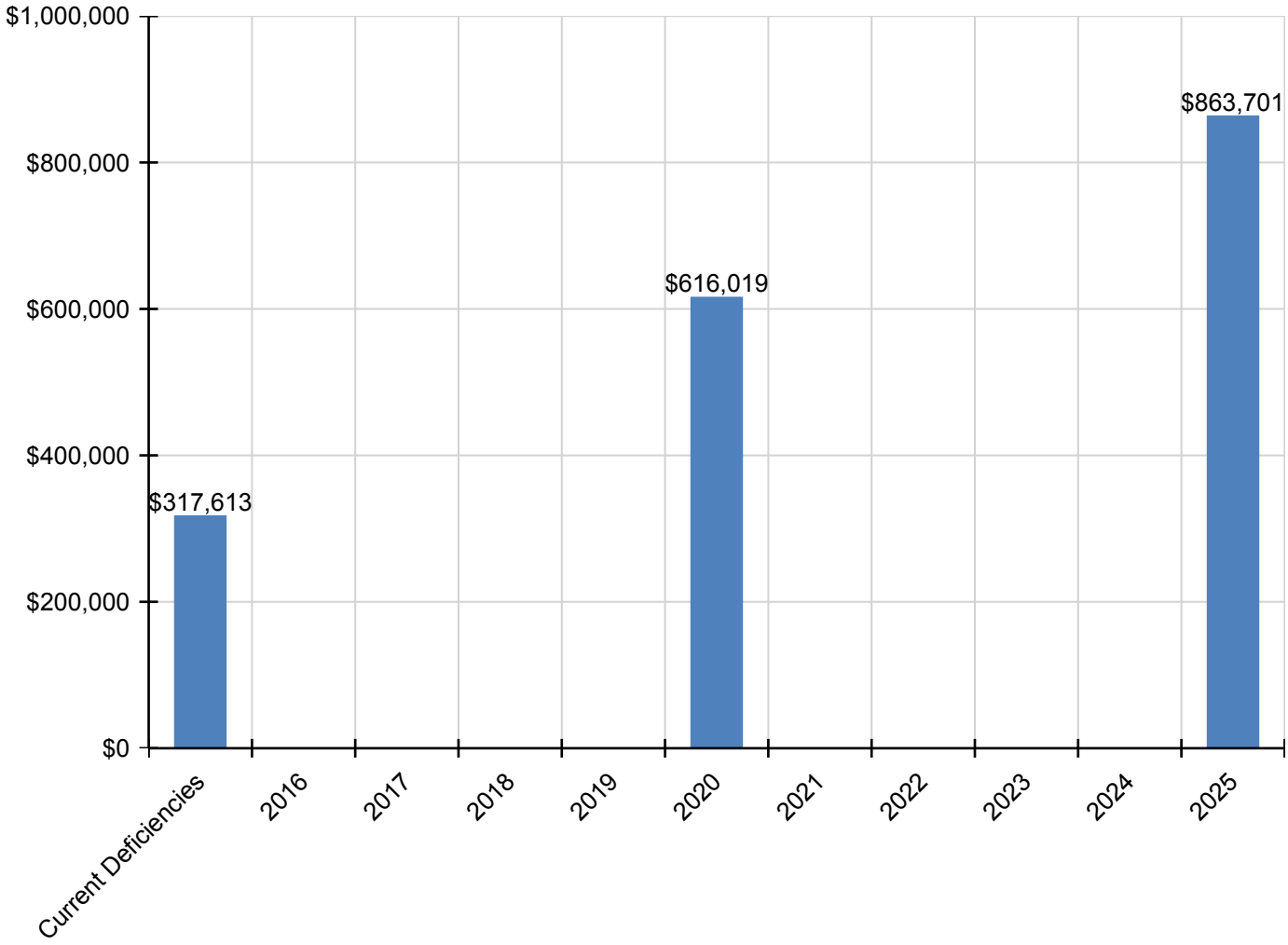
Inflation Rate: 3%

System	Current Deficiencies	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Total:	**$317,613**	**$0**	**$0**	**$0**	**$0**	**$616,019**	**$0**	**$0**	**$0**	**$0**	**$863,701**	**$1,797,333**
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	$161,175	$0	$0	$0	$0	$0	$0	$0	$0	$0	$863,701	**$1,024,877**
G2040 - Site Development	$156,438	$0	$0	$0	$0	$264,094	$0	$0	$0	$0	$0	**$420,532**
G2050 - Landscaping & Irrigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G40 - Site Electrical Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
G4020 - Site Lighting	$0	$0	$0	$0	$0	$293,169	$0	$0	$0	$0	$0	**$293,169**
G4030 - Site Communications & Security	$0	$0	$0	$0	$0	$58,755	$0	$0	$0	$0	$0	**$58,755**

** Indicates non-renewable system*

Forecasted Sustainment Requirement

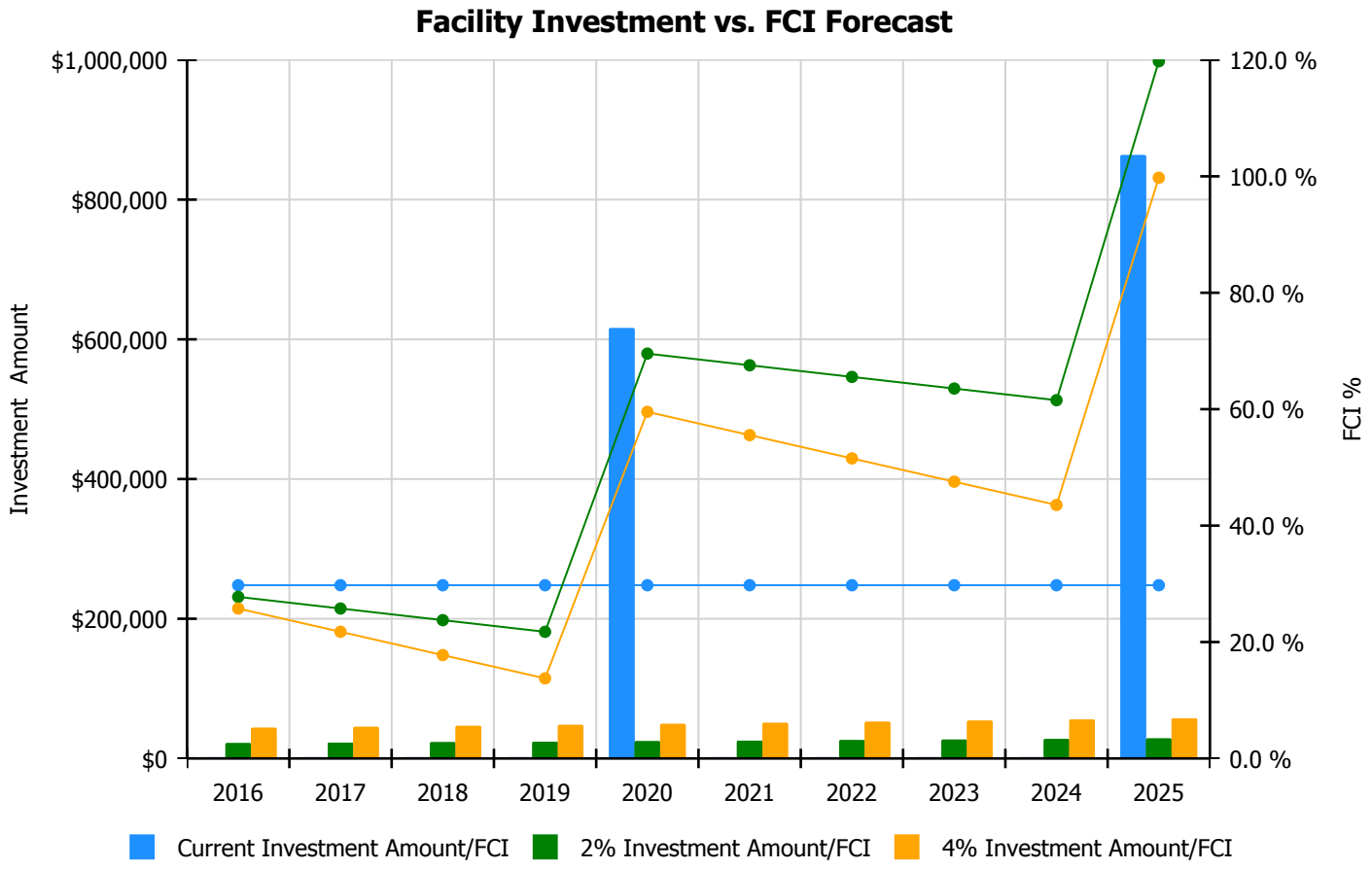
The following chart shows the current building deficiencies and forecasting sustainment requirements over the next ten years.



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:

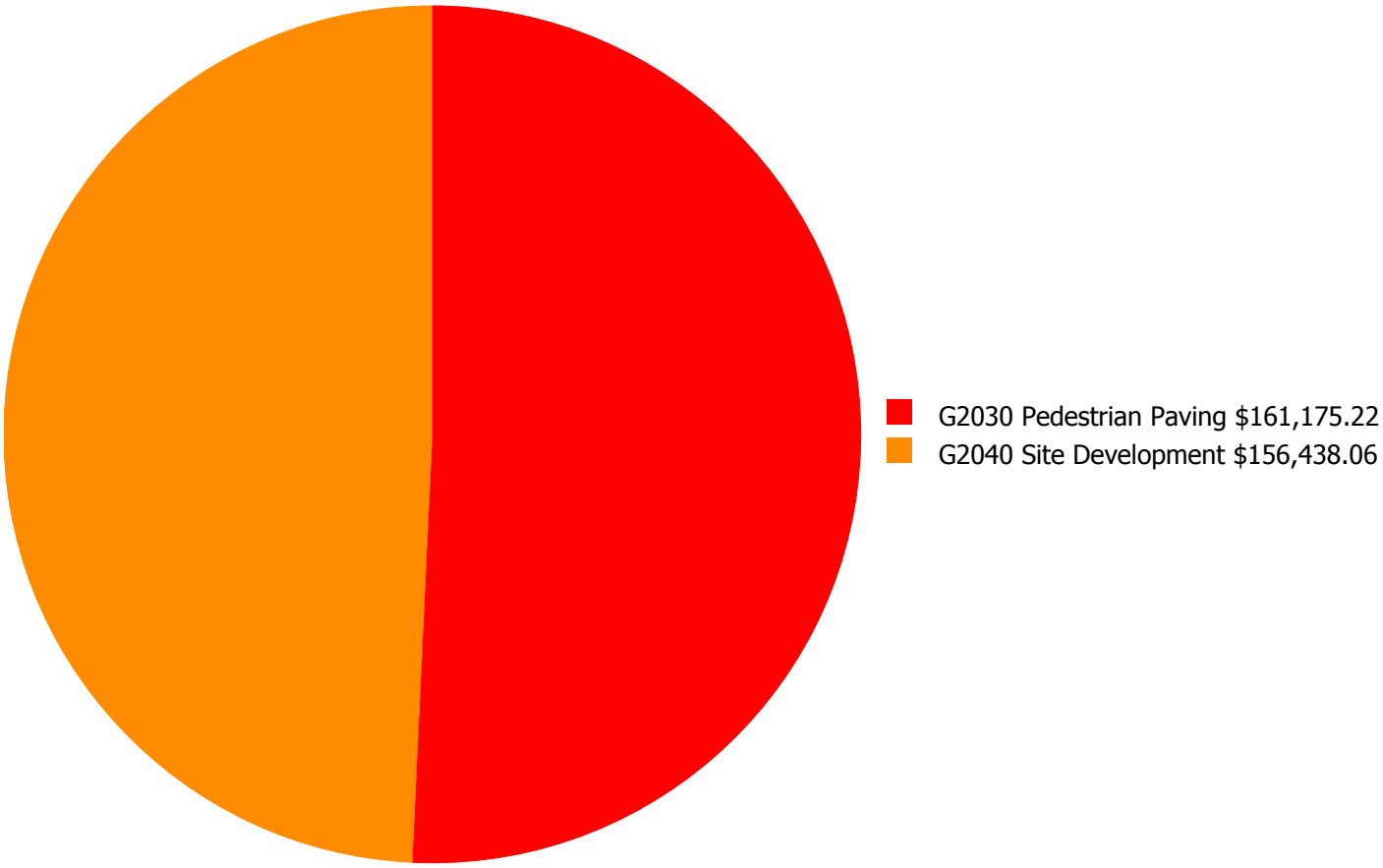
- Current FCI: a variable investment amount based on renewing expired systems to maintain the current FCI for the building
- 2% Investment: an annual investment of 2% of the replacement value of the building, escalated for inflation
- 4% Investment: an annual investment of 4% of the replacement value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



Year	Investment Amount Current FCI - 29.76%	2% Investment		4% Investment	
		Amount	FCI	Amount	FCI
2016	$0	$21,987.00	27.76 %	$43,974.00	25.76 %
2017	$0	$22,647.00	25.76 %	$45,293.00	21.76 %
2018	$0	$23,326.00	23.76 %	$46,652.00	17.76 %
2019	$0	$24,026.00	21.76 %	$48,051.00	13.76 %
2020	$616,019	$24,746.00	69.54 %	$49,493.00	59.54 %
2021	$0	$25,489.00	67.54 %	$50,978.00	55.54 %
2022	$0	$26,254.00	65.54 %	$52,507.00	51.54 %
2023	$0	$27,041.00	63.54 %	$54,082.00	47.54 %
2024	$0	$27,852.00	61.54 %	$55,705.00	43.54 %
2025	$863,701	$28,688.00	119.76 %	$57,376.00	99.76 %
Total:	**$1,479,720**	**$252,056.00**		**$504,111.00**	

Deficiency Summary by System

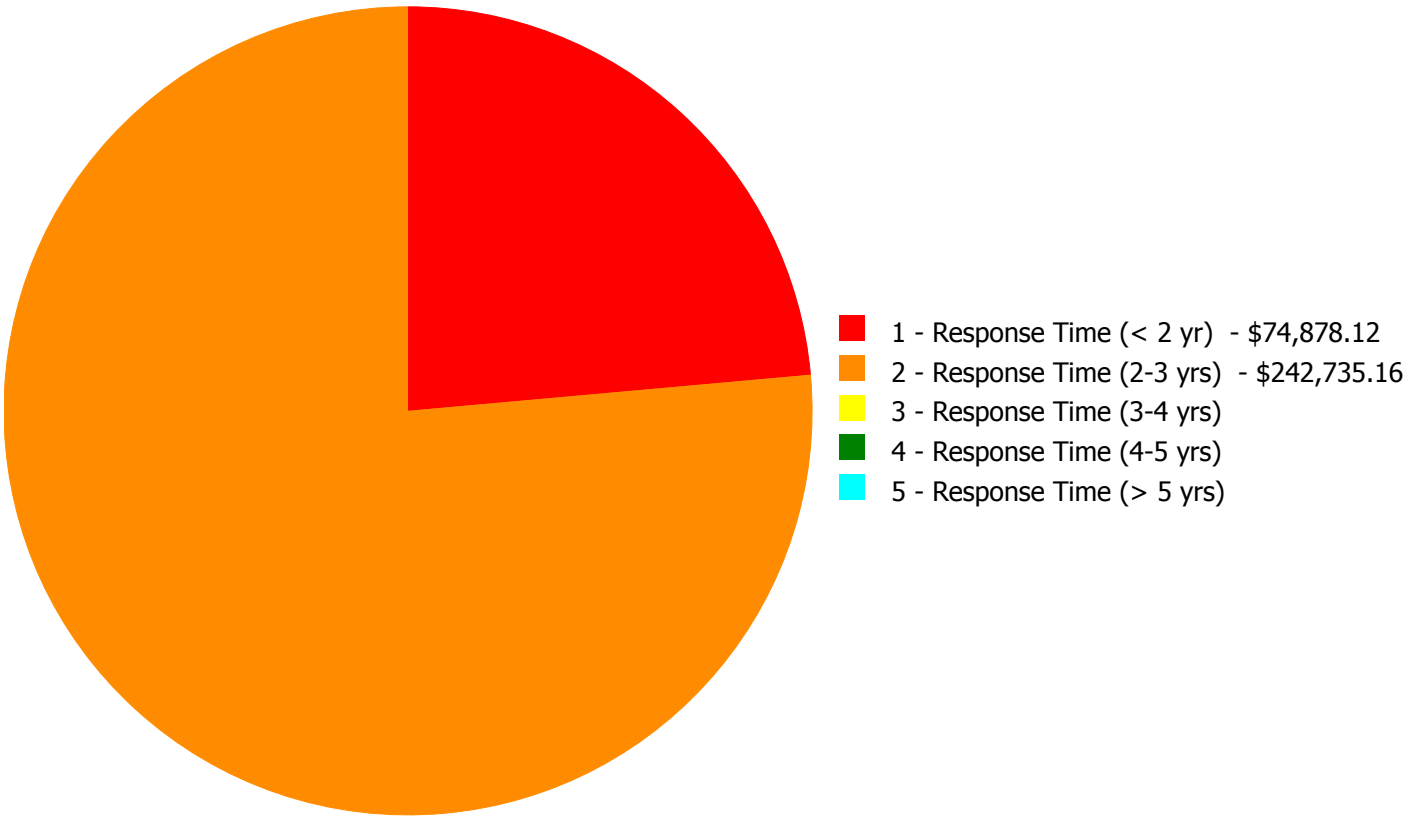
Current deficiencies included assemblies that have reached or exceeded their design life or components of the assemblies that are in need of repair. Assemblies that have reached their design life are identified as current deficiencies and assigned the distress 'Beyond Useful Life'. The following chart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



Budget Estimate Total: $317,613.28

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: $317,613.28

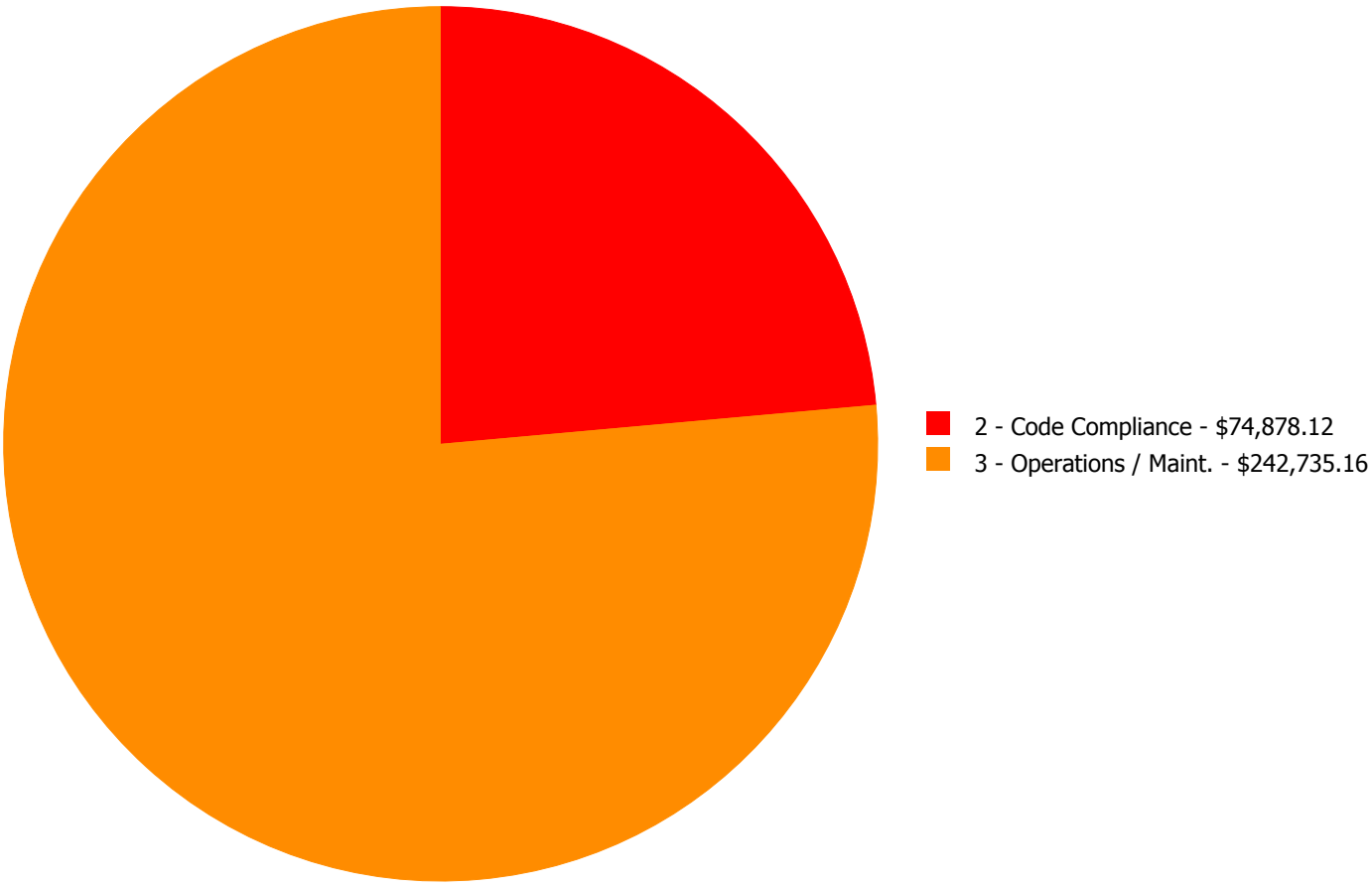
Deficiency By Priority Investment Table

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	$74,878.12	$86,297.10	$0.00	$0.00	$0.00	$161,175.22
G2040	Site Development	$0.00	$156,438.06	$0.00	$0.00	$0.00	$156,438.06
	Total:	$74,878.12	$242,735.16	$0.00	$0.00	$0.00	$317,613.28

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: $317,613.28

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: G2030 - Pedestrian Paving

This deficiency has no image.

Location: to be determined

Distress: Building / MEP Codes

Category: 2 - Code Compliance

Priority: 1 - Response Time (< 2 yr)

Correction: Install an exterior ADA ramp - based on 5' wide by the linear foot - up to a 48" rise - per LF of ramp - figure 1 LF per inch of rise

Qty: 60.00

Unit of Measure: L.F.

Estimate: $74,878.12

Assessor Name: Steven Litman

Date Created: 09/07/2015

Notes: Provide new ADA accessible handicap ramp into building.

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

System: G2030 - Pedestrian Paving

Location: parking/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: 6,000.00

Unit of Measure: S.F.

Estimate: $86,297.10

Assessor Name: Steven Litman

Date Created: 08/12/2015

Notes: Repave damaged sections of concrete parking / playground area

System: G2040 - Site Development

Location: site

Distress: Beyond Service Life

Category: 3 - Operations / Maint.

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

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

Qty: 900.00

Unit of Measure: L.F.

Estimate: $156,438.06

Assessor Name: Steven Litman

Date Created: 08/12/2015

Notes: Repaint 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